

Institutions And Financing Alternatives For Drinking Water Supply Systems (SPAM) In East Kotawaringin District, Central Kalimantan Province

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ABSTRACT: The achievement of safe drinking water services in Indonesia in 2017 only reached 72% or fulfillment is still less than 28%. "It takes hard work to achieve this target, both through the construction of pipelines and non-pipeline networks. The problems faced in the provision of drinking water today include the low coverage of drinking water services. The low coverage of operational services is a reflection of the lack of funds for the development of existing systems, inefficient management, or the absence of a Drinking Water Supply System (SPAM) implementing agency in the newly expanded area or the Regional Technical Implementation Unit (UPTD)/Regional Public Service Agency. (BLUD) that has been formed still needs improvement/improvement in terms of managerial, human resources, facilities and infrastructure. Study of Drinking Water Tariffs, based on Minister of Home Affairs Regulation No. 71 of 2016 concerning Calculation and Determination of Drinking Water Tariffs, states that drinking water tariffs are based on recovery of operational costs and development of the drinking water business. water service.

It is necessary to understand the internal institutional / organizational structure of the Regional Drinking Water Company (PDAM), can help place the right human resources in their field and can improve PDAM performance, the calculation of PDAM Water Tariff which has been carried out so far in the East Kotawaringin Regency PDAM is only up to Basic Cost = Basic Tariff, not to Low Tariff and Full Fare.

Keywords: Institutional, Drinking Water Tariff, Low Tariff, Full Fare

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I. INTRODUCTION AND LITERATURE REVIEW

The East Kotawaringin District Government always strives for the people of East Kotawaringin District to achieve the best basic needs and health. PDAM Kotawaringin Timur District is one of the companies providing clean water services for the community who are regular users or consumers of PDAM Kotawaringin Timur District.

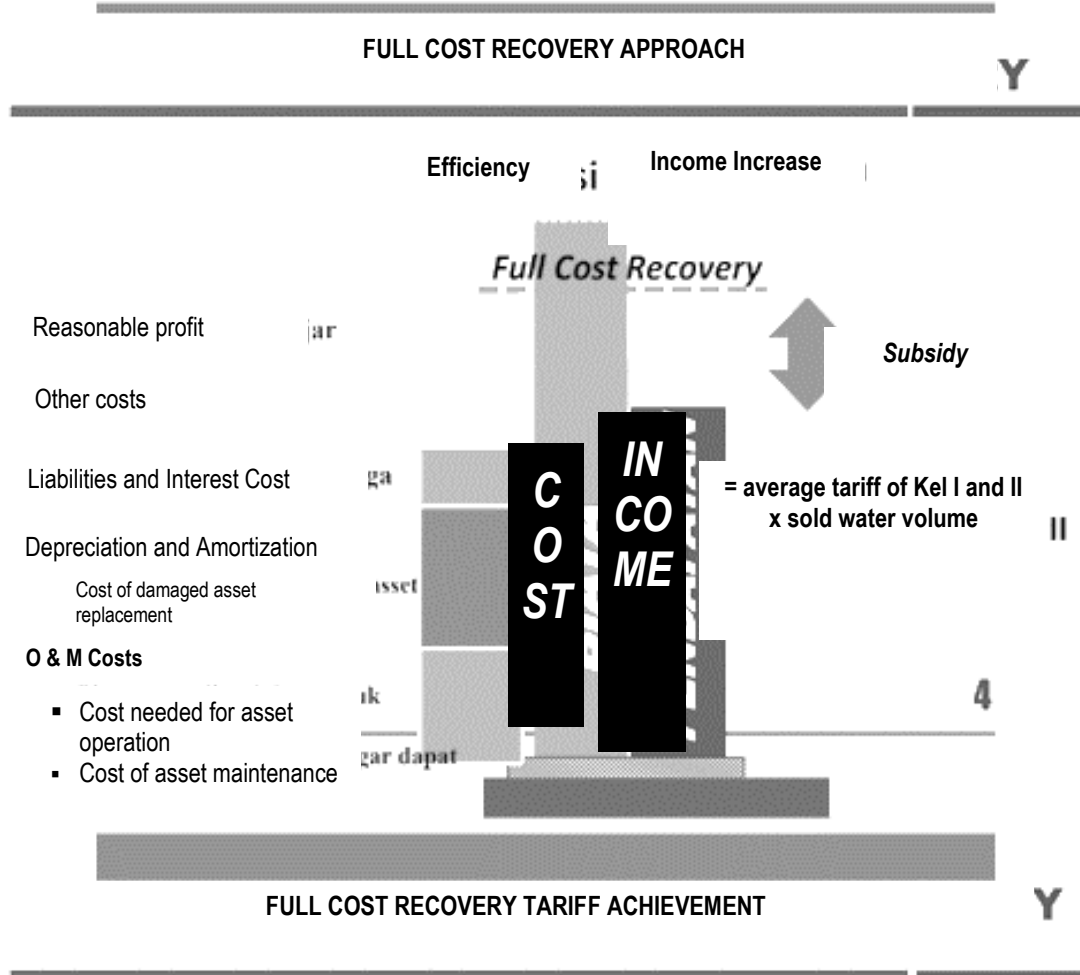
The achievement of drinking water services in Indonesia in 2017 only reached 72% or the fulfillment was still lacking at 28%. It takes hard work to achieve this target both through the construction of pipelines and non-pipeline networks. For this reason, a leap is needed so that the target of 100% safe drinking water can be achieved. The assessment was carried out on 18 PDAM performance indicators which were divided into 4 aspects namely finance, service, operations and human resources. Then from the results of the assessment it was divided into 3 categories namely healthy PDAMs with a score of > 2.8, unhealthy PDAMs with a score of 2.2-2.8 and sick PDAMs with a score of <2.2.

Review of tariffs, based on Minister of Home Affairs Regulation No. 71 of 2016 concerning Calculation and Determination of Drinking Water Tariffs, that one of the drinking water tariffs is based on the recovery of operational costs and the development of drinking water services. In accordance with these regulations, the lowest tariff is a maximum of 4% of the UMR, so that low-income people can still reach subscription fees.

Regulation of the Minister of Home Affairs Number 23 of 2006 concerning Technical Guidelines and Procedures for Setting Drinking Water Tariffs at Regional Drinking Water Companies. Several technical guidelines and tariff policies that must be considered at a minimum: 1. The standard for Basic Needs of Drinking Water is the need for water of 10 cubic meters/head of family/month or 60 liters/person/day, or another volume unit determined further by the Minister who carry out government affairs in the field of water resources, 2. Tariffs for basic needs of drinking water must be affordable to the purchasing power of the customer community whose income is the same as the Provincial Minimum Wage, 3. Tariffs fulfill the principle of affordability, if household expenses are to meet basic needs of water drinking does not exceed 4% (four percent) of the income of the customer community, 4. Fairness in the imposition of tariffs is achieved through

the application of differential tariffs with cross subsidies between customer groups, 5. PDAM revenue must comply with the principle of cost recovery, 6. Full cost recovery cost recovery) achieved from the results of calculating the same minimum average rate with basic costs, 7. For the development of drinking water services the planned Average Tariff must cover the basic costs plus a reasonable profit rate, 8. A reasonable profit rate is achieved based on the ratio of profit to earning assets of 10% (ten percent).

Figure 1.FCR Tariff Minister of Home Affairs Regulation No. 71 of 2016

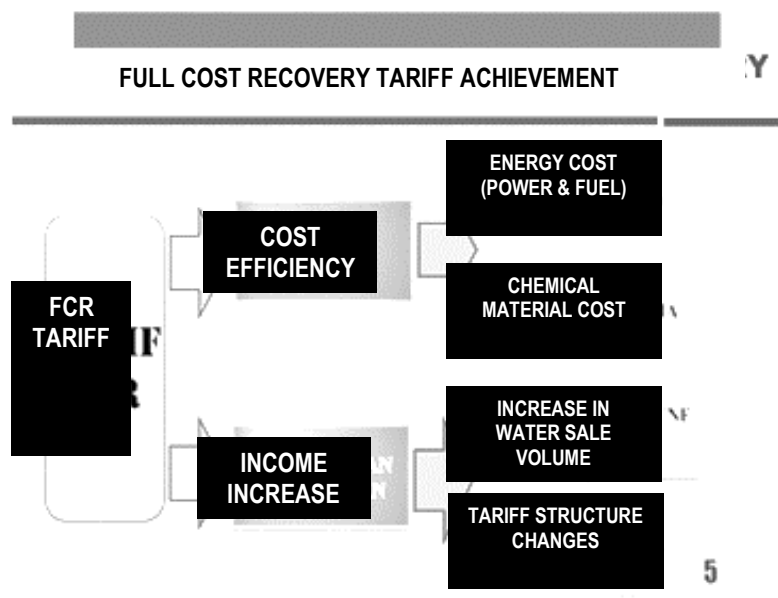


Source: Minister of Home Affairs Regulation No. 71 of 2016

Regulation of the Minister of Home Affairs Number 71 of 2016 Concerning the Calculation and Determination of Drinking Water Tariffs So far, Permendagri No. 71 of 2016 concerning Calculation and Determination of Drinking Water Tariffs has only been used as a reference and has not been implemented properly, even though Permendagri No. 71 of 2016 emphasizes FCR water rates.

Figure 2. FCR Tariff Calculation Basis

PDAM WATER TARIFF CALCULATED FROM WATER INCOME DIVIDED BY OPERATING EXPENSE, NOT FULLY USED PERMENDAGRI NO. 71 OF 2016



Source: Minister of Home Affairs Regulation No. 71 of 2016

The problems faced in the provision of drinking water today include the low coverage of drinking water services. The low coverage of these services operationally is a reflection of the lack of funding for the development of existing systems, inefficient management, or the absence of SPAM organizing institutions in new expansion areas or UPTD/BLUD institutions that have been formed still need improvement/enhancement from a managerial perspective, human resources, facilities and infrastructure.

SPAM problem analysis is carried out using the Minister of Home Affairs Regulation No. 71 of 2016 concerning Calculation and Determination of Drinking Water Tariffs, namely: a. Cost Efficiency Approach, there are two, namely energy costs and chemical costs, b. Revenue Increase Approach, there are two, namely increasing the volume of water sales and changing the tariff structure. Rates are part of financial performance. Financial performance is a description of the company's financial condition in a certain period. Financial performance is a major concern of managers, boards of directors and shareholders. (Wong et al, 2015).

There are 3 components in the conceptual framework, namely the internal institution (PDAM organizational structure) and the Tariff Preparation and Determination Process.

1.2 Research Objective

This study aims to improve or increase the provision of drinking water in new expansion areas or UPTD/BLUD institutions that have been formed both in terms of managerial, human resources, facilities and infrastructure.

1.3 Research Methodology and Data Analysis

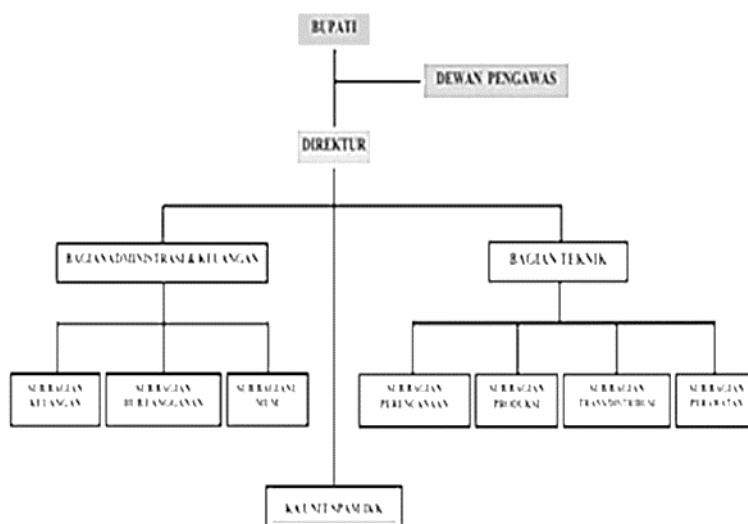
The type of research used is research with qualitative methods with a case study approach. Researchers used qualitative methods in this study by considering several factors. First, institutions and financing alternatives for Drinking Water Supply Systems (SPAM) can be analyzed in depth and comprehensively if researchers go directly to the field to conduct research. Second, social phenomena that exist in the field of institutions and alternative financing for the Drinking Water Supply System (SPAM), can be well understood from the researcher's point of view. Third, qualitative researchers believe that existing truths are dynamic and can be discovered only through studying people through their interactions with their social situations. According to Sugiyono (2016) the definition of qualitative research is research that is used to examine the conditions of natural objects where the researcher is the key instrument. So qualitative researchers believe that truth is dynamic and can be discovered only through studying people in relation to their social situation. Or it could also be interpreted that qualitative research is an act of finding meaning from what is learned which assumes that reality is of many sizes, mutually active and a transitional social experience that is shaped by each individual.

Examination of the participant aspect with aspects that are flexible and interactive is the understanding of qualitative research. Understanding social phenomena from the participant's perspective is the goal of qualitative research.

The type of case study is Single Case Embedded. To conduct single case study research, you can use logical replication research, namely by using the same procedure that applies to each issue. A common problem with embedded research designs is that all case studies include more than one unit analysis (Yin, 2003).

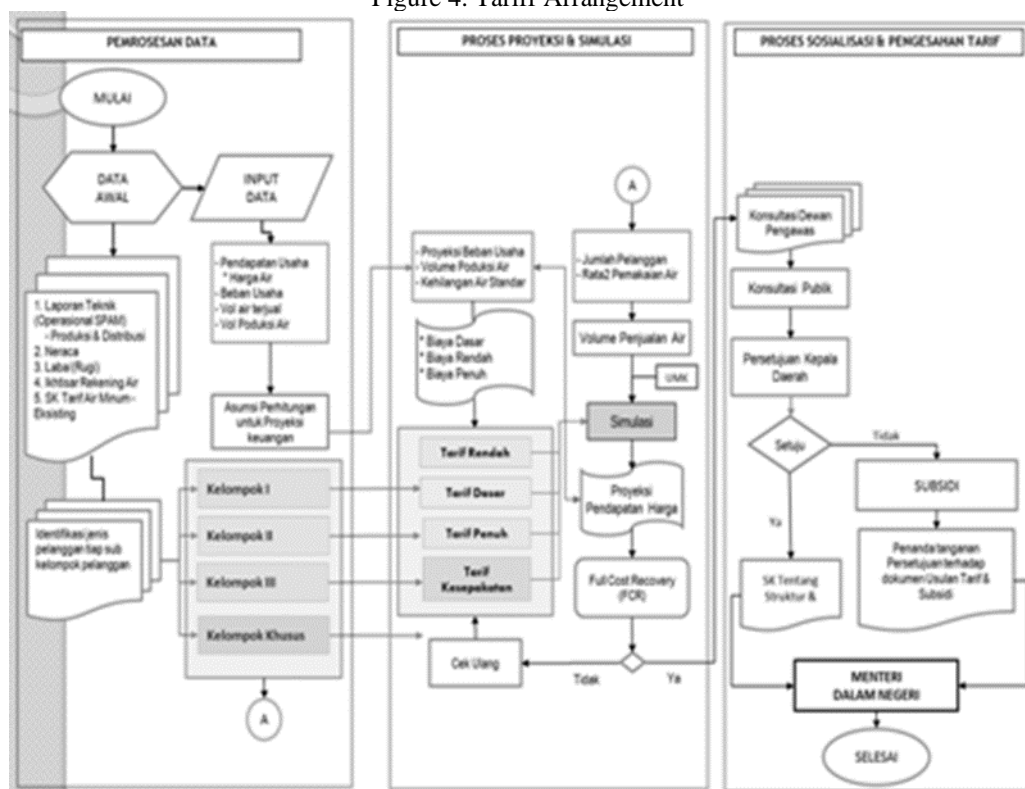
The data used in this study are: first, primary data. Primary data is data obtained directly from the original source (not through intermediary media). Data can be obtained by conducting interviews with parties related to the research object, such as the Engineering section. Interviews were conducted by asking questions in a semi-structured manner related to the problems to be studied, so that the necessary data was obtained in conducting the research. By using semi-structured interviews, researchers can find problems more openly, where the parties being interviewed can express their opinions freely. In addition to conducting interviews, data was also obtained by observing documents related to institutional and alternative financing for the Drinking Water Supply System (SPAM). Second, secondary data. Secondary data is the collection of data obtained by studying several documents (archives) of the relevant institutions in the form of organizational structures, Tariff Arrangement Flow Charts, and others related to this research. So digging data with two methods as follows: a. Interviews and observations, b. Implementation of Group Discussion Forums (FGD).

Figure 3. Organization Structure



Source: Regional Drinking Water Company (PDAM)

Figure 4. Tariff Arrangement



Source: Regulation of the Minister of Home Affairs No. 71 of 2016

PDAM East Kotawaringin District should understand internal institutions (PDAM organizational structure, see figure 3). The PDAM organizational structure can assist in the placement of appropriate human resources in their fields and can improve PDAM performance, so that the Standard Guidelines and Criteria Norms (NSPK) are used to realize quality drinking water management and services with the aim of providing drinking water services in order to fulfill people's rights to safe drinking water. quality. The benefit of implementing NSPK in drinking water services is that PDAM can provide maximum service. NSPK must be properly mastered by all managers and employees in PDAM with the main function of service, to improve the performance of internal human resources institutions, training is needed.

The water tariff for PDAM East Kotawaringin District (see Table 1) is calculated from the revenue of water divided by operating expenses, not fully using Permendagri No. 71 of 2016 concerning Calculation and Determination of Drinking Water Tariff (see figure 4). The calculation of PDAM Water Tariff that has been carried out in PDAM East Kotawaringin District is only up to Basic Cost = Basic Tariff, not yet up to Low Tariff and Full Tariff.

Table 1. Calculation of PDAM Water Tariff in Kotawaringin District

No.	Description	Unit	Permendagri 71/2016	Kotawaringin Timur Regency
1	BASIC COSTS			
a.	Operation & Maintenance Cost	Rp/Yr	37,101,228,923.00	37,101,228,923.00
b.	Amortization Depreciation Cost	Rp/Yr		
c.	Loan Interest Expense	Rp/Yr		
d.		Rp/Yr	274,339,650.00	
e.	Total Business Cost	Rp/Yr	37,375,568,573.00	37,101,228,923.00
f.	Multiplied by inflation factor	%/Yr		
g.	Estimated TBU for the tariff period	Rp/Yr	37,375,568,573.00	37,101,228,923.00
h.	Produced Water Volume	m ³ /Yr	10,279,548.00	10,279,548.00
i.	Standardized Water Loss Rate	%/Yr	28.57%	28.57%
j.	Standard Water Loss Volume	m ³ /Yr	2,936,866.86	2,936,866.86
k.	Base Cost	Rp/m ³	5,090.18	5,052.82
	Standard Base Cost 20%	Rp/m ³	4,544.89	4,511.53
2	BASIC TARIFF			
a.	Base Cost	Rp/m ³	5,090.18	5,052.82
b.	Base Tariff = Base Cost	Rp/m ³	5,090.18	5,052.82

Source: Processed Data

Through training and an example of making FCR rates (based on Permendagri No.71 of 2016) below, based on the BPKP Audit of PDAM East Kotawaringin Regency for the Fiscal Year 2019 it can be used to predict water rates calculated by assuming there is an increase in the number of 1,000 SR customers and taking advantage of idle, as well as tariffs standard average of IDR 4,371. In 2024 the amount of water sold is 8,675,468 m3 with a water tariff of IDR 4,371, experiencing a profit or FCR. The water tariff of IDR 4,371 needs to make a tariff adjustment, because the tariff still uses Perbub No. 13 of 2017. Calculation of tariffs in 2024, based on Permendagri 71/2016 there are special tariffs, namely Special Non-Commercial Tariffs of Rp. 5,090.18 and Special Commercial Tariffs of IDR. 7,610.63 (See Table 2).

Table2.Predictionof Water Tariff Calculation to ReachFCR

No	Uraian	2018	Satuan	2019	2020	2021	2022	2023	2024
1	Pendapatan	31,222,306,675	Rp	32,335,607,266	33,452,901,322	34,570,196,378	35,687,489,433	36,804,783,489	37,922,077,545
2	Tarif rata2 standar Perbub No. 13 Th 2017	4,371	Rp/m3	4,371	4,371	4,371	4,371	4,371	4,371
3	Jumlah m3 air yang terjual	7,142,755	m3	7,387,446	7,653,050	7,908,554	8,164,259	8,419,863	8,675,468
4	Jumlah pemakaian untuk pelanggan RT/SR	255,60	m3/bh	255,60	255,60	255,60	255,60	255,60	255,60
	Pemakaian rata-rata untuk pelanggan RT/SR	21,30	m3/bi						
5	Jumlah Pelanggan (Unit SL)	27,941	SR	28,941	29,941	30,941	31,941	32,941	33,941
	Peningkatan Cakupan Pelayanan SR	1,000	SR						
6	Jumlah Penduduk di wilayah Pelayanan	56,007	SR						
7	Jumlah Penduduk di wilayah Administrasi	111,005	SR						
	Kapasitas Produksi menganggur (idle)	3,280,932	m3	3,026,241	2,779,637	2,515,033	2,256,428	2,003,824	1,748,219
8	Total Beban Operasi	37,101,228,923	Rp	37,101,228,923	37,101,228,923	37,101,228,923	37,101,228,923	37,101,228,923	37,101,228,923
9	Jumlah Volume Produksi 2018 (Vol)	10,279,548	m3/bh	10,279,548	10,279,548	10,279,548	10,279,548	10,279,548	10,279,548
	Keuntungan / Rugi	(5,878,922,248)	Rp	(4,765,621,657)	(3,648,327,601)	(2,531,033,545)	(1,413,739,499)	(296,445,434)	820,848,622

Source: Processed Data

1.3 Conclusions and Suggestions

1.3.1. Conclusions

This article is "Institutional and SPAM Funding Alternatives" in East Kotawaringin Regency, Central Kalimantan Province, it is necessary to carry out regular and gradual evaluations of the PDAM organizational structure so that it can properly realize the NSPK. Through training and examples of making FCR tariffs, PDAM can predict water tariffs calculated by assuming there is an increase in the number of customers

1.3.2. Suggestions

It is recommended that PU Cipta Karya of Central Kalimantan Province continue to monitor PDAMs from 14 City Regencies.

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