

Consultancy Services for the Fifth Rate Rebasing
(Contract No. RO-CS2021-002)

FIFTH RATE REBASING REPORT

EXECUTIVE SUMMARY









WOODFIELDS CONSULTANTS, INC.
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EXECUTIVE SUMMARY

1 INTRODUCTION

The main thrust and direction of the consultancy services for the Fifth Rate Rebasing is to extend assistance to the Metropolitan Waterworks and Sewerage System Regulatory Office (MWSS RO) in order to fulfill one of its business core and organizational mandates of rate rebasing. Operationally, the assistance is contained alongside the functions of the RO as stipulated in Executive Order 149 (EO 149): *“arrange for the regular, independent, technical and financial audit of the activities of the Concessionaires, and the public dissemination of such information.”* As such, the consultancy service for the Fifth Rate

Rebasing was awarded to the Joint Venture of Woodfields Consultants, Inc. with AddValue Business Advisors, Inc. with Contract No. RO-CS2021-002 signed on 27 January 2022.

2 APPROACH AND METHODOLOGY

2.1 Consulting Service Implementation Arrangements

The MWSS RO achieved the success of the Fifth Rate Rebasing due to effective project administration and management implemented throughout the entire rate rebasing execution. The functional interdependence of MWSS RO, as the overall oversight entity, and the Consulting Team to ensure the applicability, sufficiency, and appropriateness of conducting technical and financial audits were the eminent characteristics of its success. The lines of correspondence and communication among MWSS RO, the Consultant, and the two concessionaires, Maynilad Water Services Inc. (Maynilad) and Manila Water Company Inc. (Manila Water), were managed by the designated administrative staff of the Consulting Team, along with representatives from MWSS RO, Maynilad, and Manila Water. Correspondingly, the Project Manager led the overall supervision and control of the Consulting Team’s implementation office. With a pool of technical, financial, and legal experts, administrative and operational assistance was provided to MWSS RO to realize key deliverables or milestones outlined in the Terms of Reference (TOR) for the Fifth Rate Rebasing.

2.2 Audit Procedures

The Consulting Team procedures for this rate rebasing followed the standard sequence typical in all audit exercises. The structure of the audit process, as presented in **Figure 2-1**, features these three main activities: (a) Opening Conference, (b) Audit Proper, and (c) Exit Conference.

In general, the Consulting Team adhered to the established guidelines of MWSS RO in the conduct of rate rebasing with the following vital methodologies:

- Site inspection and field validation
- Document review
- Interview or conference with the two Concessionaires together with MWSS RO
- Peer discussion

The audit observations for each auditable capital expenditure (CAPEX) and operating expenditure (OPEX) requiring clarification, substantiation, and submission of outstanding

information were transmitted in advance to the concerned Concessionaire with the formal copy coursed through the MWSS RO.

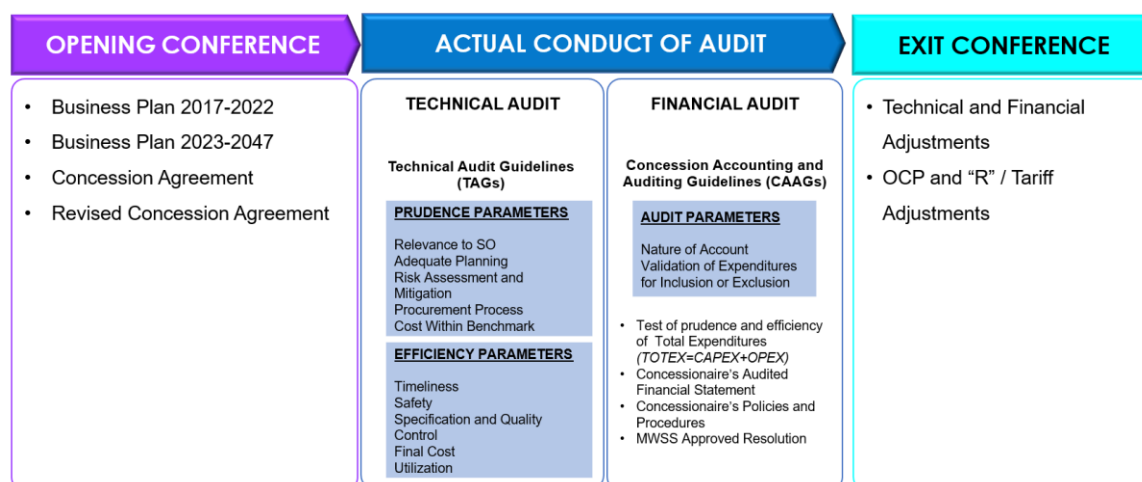


Figure 2-1 Fifth Rate Rebasing Audit Framework

2.3 Key Milestones and Deliverables

Following the scope of works under the TOR of the Fifth Rate Rebasing, the key activities and deliverables of the Consulting Team were grouped into four major milestones: Historical Cash Flows and Opening Cash Position Calculations, Future Cash Flows, Determination of 'R,' and Public Consultation as presented in **Figure 2-2**.

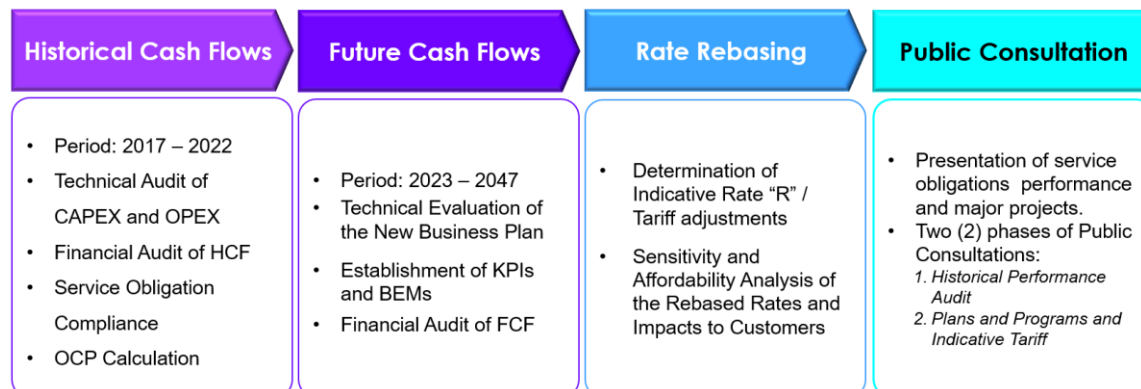


Figure 2-2 Key Deliverables of the Fifth Rate Rebasing

3 RATE REBASING ADJUSTMENT FOR MANILA WATER

3.1 Historical Cashflows and OCP Calculation

CAPEX projects of Manila Water have a total of PhP 72.86 Billion reported in their Approved Business Plan, of which PhP 61.94 Billion has been disbursed within the rate rebasing period of 2018 to 2022.

Following the procedures set in the Technical Audit Guidelines, the Consulting Team audited 100% or 118 Big CAPEX Projects, each costing PhP 100 Million or higher.

Meanwhile, mixed sampling methodology¹ was employed to audit small CAPEX Projects with 173 projects, as presented in **Table 3-1**.

Table 3-1 Manila Water's Number of Projects Audited under the Historical Cash Flow

Headlines	Total Project Count	Audited Big CAPEX Projects	Audited Small CAPEX Projects
Water Supply and Non-Revenue Water (NRW)	677	52	57
Wastewater	191	61	21
Support	1,439	5	95
Total	2,307	118	173

Most of the Big and Small CAPEX projects audited by the Consulting Team were found to be prudent and efficient. Further, all projects are directly related to the service obligations set forth in the Concession Agreement. However, there are CAPEX projects recommended by the Consulting Team for parked/deferred and for full disallowance for the following reasons:

- *Rehabilitation of the Design and Build of 20 MLD Marikina River Water Treatment Plant Project*. The disbursed amount of PhP 60.64 Million was deferred due to the pending insurance claim of the rehabilitation works caused by Typhoon Ulysses;
- *Sumag River Diversion Project (SRDP)*. Standby cost of PhP113.47 Million, which exceeded 15% of the awarded cost, was fully disallowed and Php 27.90 Million was deferred until rebidding and completion of the project; and
- *Construction of Submarine Bypass for East La Mesa Treatment Plant (ELMTP)*. The disbursed amount of PhP 2.3 Million was fully disallowed since the project was terminated and was not utilized.

In addition to the adjustments proposed by the Technical Consulting Team, the Financial Consulting Team provides the following key recommendations:

- Exclusion of excess expenses due to benchmarking amounting to PhP 126.30 Million and items that did not qualify as recoverable Expenditures under the CAAGs of the MWSS RO amounting to PhP 1.68 Million; and
- Exclusion of the proposed rewards of PhP2.46 Billion (originally submitted at PhP1.55 Billion).

The technical and financial audit resulted in adjustments to the OCP, adjusting the submitted financial model of Manila Water from PhP 29.28 Billion to PhP 27.56 Billion, as shown in **Table 3-2**.

Table 3-2 Adjusted OCP of Manila Water (PhP in Millions)

Particulars (Amounts in PhP in Millions)	Financial Model	Adjustments		Adjusted
		Financial	Technical	
2017 OCP (at current prices)	(13,358.3)	-	-	(13,358.3)
Revenues and receipts (at current prices)	83,196.2	-	-	83,196.2

¹ The Consulting Team should consider projects costing PhP40 million and above because of their significant effect on the audit undertaking. Projects costing PhP40 million and above should be prioritized over projects which cost is less than PhP40 million, and (b) The possibility of applying the Pareto Principle – that 20% of the number of small CAPEX projects to be audited represents 80% of the total project cost.

Particulars (Amounts in PhP in Millions)	Financial Model	Adjustments		Adjusted
		Financial	Technical	
Expenditures (at current prices)				
CAPEX	(62,057.3)	-	115.8	(61,941.5)
Concession fees	(3,622.3)	(155.4)	-	(3,777.7)
OPEX	(30,068.2)	128.0	-	(29,940.2)
Proceeds from sale of PPE	21.1	-	-	21.1
+/- Working capital	4,870.1	-	-	4,870.1
Unrecovered FCDA	(395.3)	-	-	(395.3)
Effects of ADR and CPI	(6,322.5)	19.8	67.4	(6,235.3)
Discounted (reward)/penalty	(1,546.6)	1,546.6	-	-
2023 OCP (at NPV)	(29,283.1)	1,539.0	183.2	(27,560.9)

3.2 Future Cashflows, Review of the Business Plan, and 'R' Determination

Compared with the Manila Water RR18 Business Plan as presented in **Figure 3-2** Manila Water has shifted considerable CAPEX from Environmental Sustainability Projects to nearly equal CAPEX distribution for the next five years among Environmental Sustainability, Water Security, and Service Accessibility Projects. However, Environmental Sustainability CAPEX remains a top priority from 2023 to 2047.

The reasonableness and relevance of Manila Water's original proposal for water supply were assessed through the analysis of water supply versus demand. Two distinct scenarios were formulated for this purpose: Scenario 1, encompassing Manila Water's proposed source development, and Scenario 2, detailing the recommended alterations to water sources as presented by the Consulting Team. The latter scenario includes the following recommendations:

- The exclusion of Hagonoy Portable Treatment Plant (PTP) with CAPEX amounting to PhP 945 Million,
- the deferment of Kaliwa Water Supply Project from 2026 to 2028, and
- a revision in the completion timeline for Long-term East USP Sources by 2029 and 2039.

The Consulting Team assessed that Scenario 2, including adverse climate change effects, is sufficient to cater to the demand of the East Zone, as presented in **Figure 3-1**. The alteration in water supply, therefore, corresponds to adjustments on the proposed CAPEX from PhP 101.38 Billion to PhP 94.76 Billion for the period 2023 to 2027 and from PhP 388.45 Billion to PhP 386.72 Billion for the period 2023 to 2047 as presented in **Figure 3-2**.

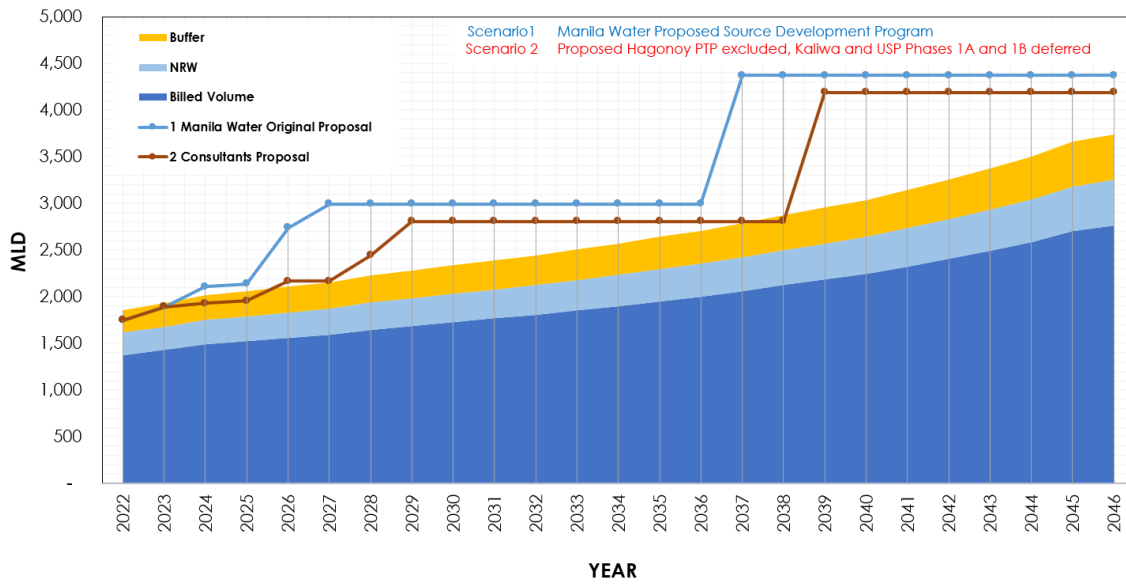
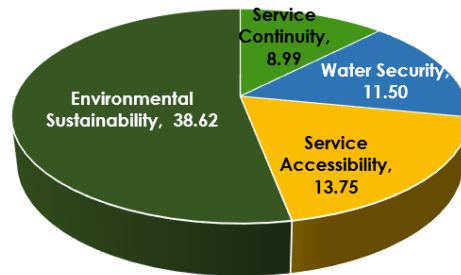


Figure 3-1 Water Supply and Demand Analysis of Manila Water

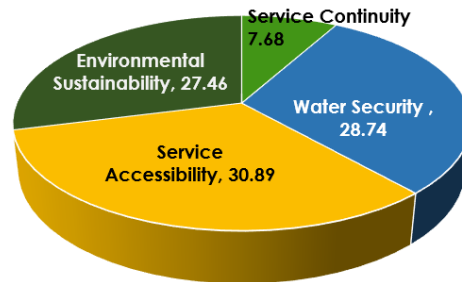
**RR 18 Business Plan
2018-2022 CAPEX**

PhP 72.86 Billion*



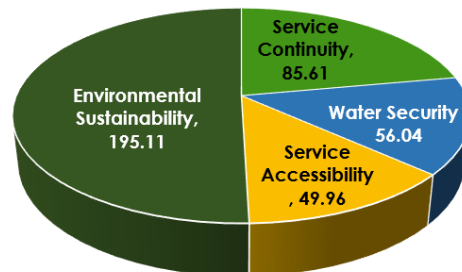
**RR 23 Business Plan
2023 -2027 CAPEX**

PhP 94.76 Billion*



**RR 23 Business Plan
2023 – 2047 CAPEX**

PhP 386.72 Billion*



*excluding Concession Fees; VAT Inc

Figure 3-2 Approved Adjustments on Manila Water's CAPEX

Similarly, the actual performance and target service obligations for water supply, sewerage, and sanitation were evaluated, considering the CAPEX adjustments. The results of this assessment are briefly presented in **Table 3-3**. The target service obligations remain unchanged despite the downward technical adjustments in CAPEX.

Table 3-3 Manila Water Key Service Obligation²

Indicators	RR18 Target (2017-2021)	Actual (2017-2021)	RR23 Target (2026)		Remarks
			Population Approach ³	Connection Approach	
Water Service Coverage	95.90%	94.03%	94%	N/A	Decrease in service coverage is due to RIZWADA's refusal to connect with Manila Water
Non-revenue Water	12%	14.74%	15%		For the next 5 years, the 15% NRW is more cost efficient by around PhP 23 Million annually versus the 12% NRW target as validated with Manila Water.
Sewer Coverage Total East Zone	32.00%	31.46%	44%	36%	The sewer coverage includes the Concessionaire's serviced area either through the separate sewer system or the combined or interceptor system.
Sanitation Coverage	No target submitted	80.27%*	- ⁴	64%**	Sanitation target is programmed to customers not only to unsewered areas but also to those under the combined drainage and sewerage system. With this principle, complete wastewater treatment in these areas will be achieved.

* computed considering constrained water-served population

** New Guideline on sewerage & sanitation coverage (connection-to-connection) is implemented starting year 2022.

To mitigate the impact on customers and address affordability concerns, the rate adjustment is spread out and staggered over the next five years. **Table 3-4** and **Table 3-5** shows the all-in tariff at staggered adjustments considering the on-time and deferment of additional new water source development.

Table 3-4 Manila Water All-in Tariff at Staggered Adjustment considering Timely Development of Additional New Water Source

Particulars	2023	2024	2025	2026	2027
Basic Charge (PhP)	26.81	35.85	41.97	46.23	50.37
Rebasing Adjustment (PhP)	8.04 (30.00%)	5.00 (14.35%)	3.25 (8.15%)	3.00 (6.96%)	1.08 (2.34%)

² It is imperative for MWSS RO to conduct thorough cross-checking and validation of the data and information provided by Manila Water.

³ Target based on the population approach and DITCI person-per-connection factors.

⁴ It is noteworthy that Manila Water had yet to provide value in Sanitation Coverage target – population approach in year 2026 of their KPIs + BEMs. Hence, MWSS RO should diligently follow up, monitor, and validate these latest values in the Concessionaire's submission of their Annual Report of their KPIs + BEMs.

Particulars	2023	2024	2025	2026	2027
CPI adjustment (PhP)	1.00 (3.73%)	1.12 (2.73%)	1.01 (2.00%)	1.14 (2.00%)	1.11 (2.00%)
Basic Charge for the Year	35.85	41.97	46.23	50.37	52.56
Environmental Charge (percent of basic)	8.96 (25%)	10.49 (25%)	11.56 (25%)	15.11 (30%)	15.77 (30%)
Government Tax – 2.625%	1.18	1.38	1.52	1.72	1.79
All in Tariff (PhP/cum)	45.99	53.84	59.31	67.20	70.12

Table 3-5 Manila Water All-in Tariff at Staggered Adjustment considering Deferred Development of Additional New Water Source

Particulars	2023	2024	2025	2026	2027
Basic Charge (PhP)	26.81	35.85	41.97	46.23	49.20
Rebasing Adjustment (PhP)	8.04 (30.00%)	5.00 (14.35%)	3.25 (8.15%)	1.91 (4.43%)	1.05 (2.34%)
CPI adjustment (PhP)	1.00 (3.73%)	1.12 (2.73%)	1.01 (2.00%)	1.06 (2.00%)	1.08 (2.00%)
Basic Charge per Year	35.85	41.97	46.23	49.20	51.33
Environmental Charge (percent of basic)	8.96 (25%)	10.49 (25%)	11.56 (25%)	14.76 (30%)	15.40 (30%)
Government Tax (PhP) ⁵	1.18	1.38	1.52	1.68	1.75
All in Tariff (PhP/cum)	45.99	53.84	59.31	65.64	68.48

The adjustments of Manila Water also include upward alterations in the Environmental Charge from 25% for years 2023 to 2025 to 30% for years 2026 and 2027. The adjustment of the Environmental Charge from 25% in 2025 to 30% in 2026 is contingent upon Manila Water achieving 30% sewer coverage by the end of 2025.

The approved rebased rates of Manila Water, considering the on-time and deferred development of additional new water sources, as shown in **Table 3-6** and **Table 3-7**, would not burden the existing and future Low-Income Customers (LIC).

Table 3-6 Affordability Analysis considering Timely Development of the Additional New Water Source for Manila Water

Year	2023	2024	2025	2026	2027
Rebased Rates (increase per cum per year in PhP)	8.04	5.00	3.25	3.00	1.08
Lifeline Charge equal to 10 cum (PhP)	65.52	76.71	84.5	92.07	96.07
Total Lifeline Current Charges (PhP)	85.59	99.95	109.94	123.71**	129.02**
LIC Household Income per Month *** (PhP)	13,069.00	13,461.00	13,865.00	14,281.00	14,709.00
% of Current Charges (10cum) to LIC Household	0.65%	0.74%	0.79%	0.87%	0.88%

**Environmental Charge was increased to 30% from 25%

***The inflation rates applied to calculate income for future years are: 4.1% for 2023 and 3.0% for the years 2024 to 2027.

⁵ Government tax is 2.625% for 2023 onwards.

Table 3-7 Affordability Analysis considering Deferred Development of Additional New Water Source for Manila Water

Year	2023	2024	2025	2026	2027
Rebased Rates (increase per cum per year in PhP)	8.04	5.00	3.25	1.91*	1.05*
Lifeline Charge equal to 10 cum (PhP)	65.52	76.71	84.5	89.93	93.83
Total Lifeline Current Charges (PhP)	85.59	99.95	109.94	121.52**	126.72**
LIC Household Income per Month *** (PhP)	13,069.00	13,461.00	13,865.00	14,281.00	14,709.00
% of Current Charges (10cum) to LIC Household	0.65 %	0.74%	0.79%	0.85%	0.86%

*No additional source

**Environmental Charge was increased to 30% from 25%

***The inflation rates applied to calculate income for future years are: 4.1% for 2023 and 3.0% for years 2024 to 2027.

The percentage on 10 cum of current charges to LIC range from 0.65% to 0.88% for on-time and deferred development of additional new water sources from period 2023 to 2027, as shown in **Table 3-6** and **Table 3-7**. These percentages are below the 5% threshold of the LIC monthly household income⁶.

The lifeline charges are determined based on CPI and do not directly influence the adjustments made to the rebased rates. Overall, the findings of the affordability analysis indicate that whether the rate increase is governed by on time or deferred additional water source, households within the low-income group will not face significant financial strain. They will still be able to manage their expenses comfortably, as the percentage of the current charges remains well below the acceptable threshold of 5%.

3.3 Public Consultation

Before the Fifth Rate Rebasing, the MWSS RO, through the Office of the Chief Regulator – Public Information Department (OCR-PID), conducted Pre-Rate Rebasing Public Consultation Drives (PCDRs) with the following objectives: (a) to inform the Local Government Units (LGUs) on the completed and ongoing projects, programs, and plans of the Concessionaires; (b) solicit valuable inputs (land use and development plan) from LGUs that may be incorporated in the Business Plans of the Concessionaires; (c) discuss and formulate a water and wastewater master plan that is responsive to specific needs and priorities of LGUs; and (d) provide a venue for discussing and addressing prevailing (gender-related) issues and concerns of stakeholders on water, sewerage, and sanitation services, and for exploring good practices in providing (gender-responsive) services.

For Manila Water, sessions were conducted per cluster covering the following municipalities/cities:

⁶ The generally accepted guideline by international funding agencies for household expenditure on water supply, sewerage and sanitation services is at most 5% of average household income. The 1997 Concession Agreement did not set the affordability level percentage but defined the Low-Income Customers (LIC) as “customers with an annual household income of PhP 50,000 or less, which amount shall be automatically adjusted on January 1st of each year by the percentage change in the consumer price index for the preceding year.” Based on MWSS RO estimates, the inflated annual income of LIC in 2022 reckoned from 1997 as base year is PhP 150,651.00.

Cluster 1 <i>01 December 2021</i> Marikina City Pasig City Quezon City San Juan City	Cluster 2 <i>07 December 2021</i> Makati Mandaluyong Manila Taguig Pateros	Cluster 3 <i>01 December 2021</i> Rizal (Province) Angono, Rizal Antipolo City Baras, Rizal Binangonan, Rizal Cainta, Rizal Cardona, Rizal Jalajala, Rizal Morong, Rizal Pilillia, Rizal Rodriguez, Rizal San Mateo, Rizal Tanay, Rizal Taytay, Rizal Teresa, Rizal
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Four (4) Public Consultations or Public Consultation Drives in collaboration with the OCR-PID and the Rate Rebasing Management Committee (RRMC) were held for Manila Water during the Fifth Rate Rebasing. The summary of public consultations per area coverage are as follows:

Session 1A Presentation of the Proposed Business Plans <i>Antipolo City</i> <i>25 July 2022</i> Manila Water North-East Zone	Session 1B Presentation of the Proposed Business Plans <i>Marikina City</i> <i>27 July 2022</i> Manila Water South-East Zone
Session 2A Presentation of MWSS RO determined Indicative Tariff <i>Pasig City</i> <i>17 October 2022</i> Manila Water North-East Zone	Session 2B Presentation of MWSS RO determined Indicative Tariff <i>Cainta, Rizal</i> <i>17 October 2022</i> Manila Water South-East Zone

Overall, the public consultation was informative and productive. Manila Water substantively addressed the concerns raised by participants and demonstrated its commitment to delivering high-quality water, and sewerage and sanitation services to its customers.

Overall Concern on Continuity of Services

Participants expressed concern about the continuity of water, sewerage, and sanitation services. Manila Water's performance has substantively addressed these concerns despite the challenges of the pandemic period, demonstrating its ability to deliver such services. The basic services and challenges met during the last period will be progressively and sustainably addressed through the soundness of the programs and projects presented for the next period.

Queries on Infrastructure, Sustainability, and Preparedness

Queries were raised on the quality of infrastructures, the sustainability of services, and Manila Water's Business Plan preparedness for major disasters (earthquakes, typhoons, and floods), climate change, and the growing population.

Manila Water representatives responded that the adaptability of service delivery under a different form of government may not be an immediate concern, but they will find ways to adapt and assure the public that they currently have satisfactory coordination with the local and national government.

Concerns on Safeguarding Customer Interests

Concerns were also expressed about how and who can safeguard the general interest of customers in the event of failure in the delivery of the concessionaire's services. The MWSS RO addressed this primarily by expounding on its functions and responsibilities under its mandate as the regulatory agency.

Queries on Existing and Proposed Water Supply Programs

Queries were raised on the existing and proposed water supply programs, including the Kaliwa Dam project. Manila Water President and CEO, Atty. De Dios, as well as its representatives who attended the sessions addressed these issues. They thoroughly explained the organization's Business Plan, which constitutes the development of alternative sources to address the increasing requirements of its customers and its projected growth during the succeeding periods up to the end of its concession.

Concerns on Sewerage and Sanitation

There was relatively more significant concern about the magnitude of current sewerage and sanitation programs and those incorporated in the business plan relative to the growing population. Since customers in the concession area rely on septic tanks, implementing a sewerage system is likely to result in a combined sewerage system or commonly known as combined sewer overflow.

Customers are anticipating an increase in desludging activity, an alternative sanitation service. While such service does not fall solely on the concessionaire, efforts are being exerted to coordinate this concern with other responsible entities, such as the Office of the Building Officials of the different LGUs, the Department of Public Works and Highways (DPWH), and other related and responsible entities, both public and private. Manila Water President and CEO, Atty. De Dios, addressed the concern by assuring that additional desludging trucks are strategically planned to guarantee that Manila Water customers can access sanitation services, particularly in areas without sewer connections. Moreover, when desludging is required before the scheduled fifth year, customers can promptly contact Manila Water's hotline to request immediate desludging services.

Inquiry on the Effectiveness of ESG Programs

There was also an inquiry on the effectiveness of Environmental, Social, and Governance (ESG) programs and projects, especially in low-income and underserved areas. Generally, customers find Manila Water's ESG programs viable and sustainable, given their current paramount consideration in its presented Business Plan.

Notable Sentiment on Tariff Rate Adjustment

The public sentiment regarding the tariff rate adjustment is predominantly positive, as it is seen as an inevitable step in line with the rising costs of various commodities. While there is a general acceptance of the need for adjustment, there is a thoughtful concern about the magnitude of the increase. The public consensus is that the rate should be reasonable

and commensurate to the actual investments incurred, particularly considering the ongoing economic recovery from the impacts of the COVID-19 pandemic. Notably, a significant portion of the customer base falls within the medium to low economic status, making affordability an important consideration in the rate rebasing exercise. The MWSS RO and Manila Water assured the stakeholders of a balanced and reasonable rate considering their circumstances.

Inquiry on the Appropriateness of Tariff Rate Adjustments

There was a considerable inquiry into the appropriateness of the components of the tariff rate adjustments that have been considered in deriving the rate proportionate to the current efforts and projects under the proposed Business Plan. These refer to disapproved projects in previous Business Plans included in the past rate rebasing exercises. It was explained though that, as a matter of policy, such disapproved project costs shall be excluded in the Cash Flow for any future tariff rate determination.

Moreover, it was emphasized that the process includes built-in safeguards to ensure the transparency and fairness of the tariff rate adjustment. There is also a commitment to engage in continuous and sustained Information-Education-Communication (IEC) efforts and public consultations throughout the implementation period. These initiatives ensure that public interests are carefully considered and addressed in the rate rebasing process.

4 RATE REBASING ADJUSTMENT FOR MAYNILAD

4.1 Historical Cashflows and OCP Calculation

Maynilad has a total CAPEX project cost estimate of PhP 93.87 Billion under the RR18 Business Plan, with the majority of the CAPEX allocated to Water Supply and NRW Projects. Of this amount, PhP 49.05 Billion has already been disbursed within the rate rebasing period from 2018 to 2022.

Correspondingly, the Technical Consulting Team audited 100% or 124 Big CAPEX Projects, and 147 Small CAPEX Projects were audited as presented in **Table 4-1** using a mixed sampling methodology⁸.

Table 4-1 Maynilad's Number of Projects Audited under the Historical Cash Flow

Headlines	Total Project Count	Audited Big CAPEX Projects	Audited Small CAPEX Projects
Water Supply and NRW	636	76	107
Wastewater	100	47	19
Support	140	1	21
Total	876	124	147

Most of the Big and Small projects audited by the Consulting Team were implemented prudently and efficiently. They were directly related to the service obligations set forth in the Concession Agreement. However, for the Sumag Diversion Project, PhP74.53 Million was disallowed, as the shared cost of Maynilad on the standby cost exceeded 15% of the awarded cost. Additionally, 15 affected utilities (AU) projects under NRW reduction, with a disbursed amount of PhP244.24 Million, were fully disallowed. Despite passing prudence

⁸ (a) The Consulting Team should consider projects costing PhP40 million and above because of their significant effect on the audit undertaking. Projects costing PhP40 million and above should be prioritized over projects.

and efficiency tests, these projects were rejected because their CAPEX is reimbursable from third-party proponents (i.e., DOTr, NLEX, Skyway, and MMDA).

The technical and financial audit results resulted in OCP adjustments from negative PhP 103.81 Billion to negative PhP 100.35 Billion for Maynilad as presented in **Table 4-2**.

Table 4-2 Adjusted OCP of Maynilad (PhP in Millions)

Particulars	Financial Model	Adjustments		Adjusted
		Financial	Technical	
2017 OCP (at current prices)	(77,116.7)	286.9	-	(76,829.8)
Revenues and receipts (at current prices)	112,893.7	1,180.4	-	114,074.1
Expenditures (at current prices)	-	-	-	
CAPEX	(56,484.8)	7,117.3	318.6	(49,048.9)
Concession fees	(6,050.5)	902.0	-	(5,148.5)
OPEX	(37,123.6)	1,473.2	-	(35,650.4)
+/- Working capital	2,397.3	(5,272.8)	-	(2,875.5)
Corporate Income Tax (CIT)	43.6	(43.6)	-	-
Unrecovered FCDA	-	(862.8)	-	(862.8)
Effects of ADR and CPI	(42,369.9)	(1,784.1)	141.3	(44,012.7)
2023 OCP (at NPV)	(103,810.9)	2,996.5	459.9	(100,354.5)

4.2 Future Cashflows, Review of the Business Plan, and “R” Determination

Maynilad intended to raise its CAPEX project cost estimate from PhP 93.87 Billion under the RR18 Business Plan (2018-2022) to PhP 137.59 Billion in the RR2023 Business Plan (2023-2027), reflecting a substantial increase of 47%. Most of this CAPEX is allocated to water supply and NRW projects from 2023 to 2027. Furthermore, Maynilad envisioned an additional increase in CAPEX for wastewater projects from 2023 to 2046.

The Consulting Team analyzed Maynilad's water supply and demand, focusing on synchronizing new sources with the billed volume, NRW reduction, and buffer. **Figure 4-1** illustrates the assumed completion and operational timelines for new water sources, with Poblacion WTP expected in 2023, the Kaliwa Water Supply Project in 2028 (aligned with the assumption made by Manila Water), and USP sources in 2035 and 2039.

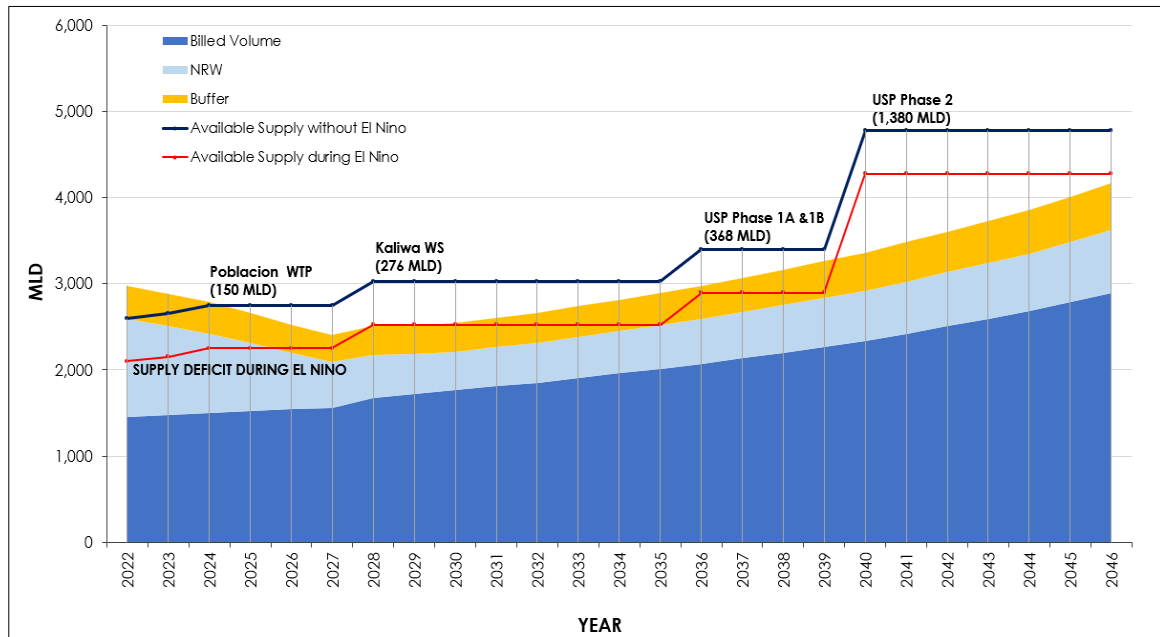


Figure 4-1 Maynilad's Water Supply and Demand

The suggested timeline for introducing new water sources, combined with the proactive Non-Revenue Water (NRW) reduction program, is determined to adequately meet the demand of the West Concession until the end of the franchise period in 2046. Technical adjustments on the CAPEX were due to the exclusion of some projects that were found to be non-compliant in terms of prudence. These are:

- *Engineering, Procurement, Construction (EPC) for the Design and Construction of 150 MLD Water Treatment Plant utilizing Laguna Lake as the raw water source. Reduction of CAPEX from PhP 143.34 Million to PhP 42.20 Million;*
- *Realignment of CAPEX from Design and Construction of 30MLD Mobile Treatment Plant utilizing Laguna Lake at Putatan, Muntinlupa to MTPs for converting the effluent from the following facilities to New Water Source – 20 MLD Parañaque Water Reclamation Facility and 10 MLD Cupang Water Reclamation Facility amounting to PhP 1,321.96 Million; and*
- *Affected Utilities with CAPEX of PhP 660 Million since cost are for reimbursement by third party proponent.*

Hence, adjustments have been made to the proposed CAPEX, reducing it from PhP389.77 Billion to PhP 312.63 Billion from 2023 to 2046, as depicted in **Figure 4-2**.

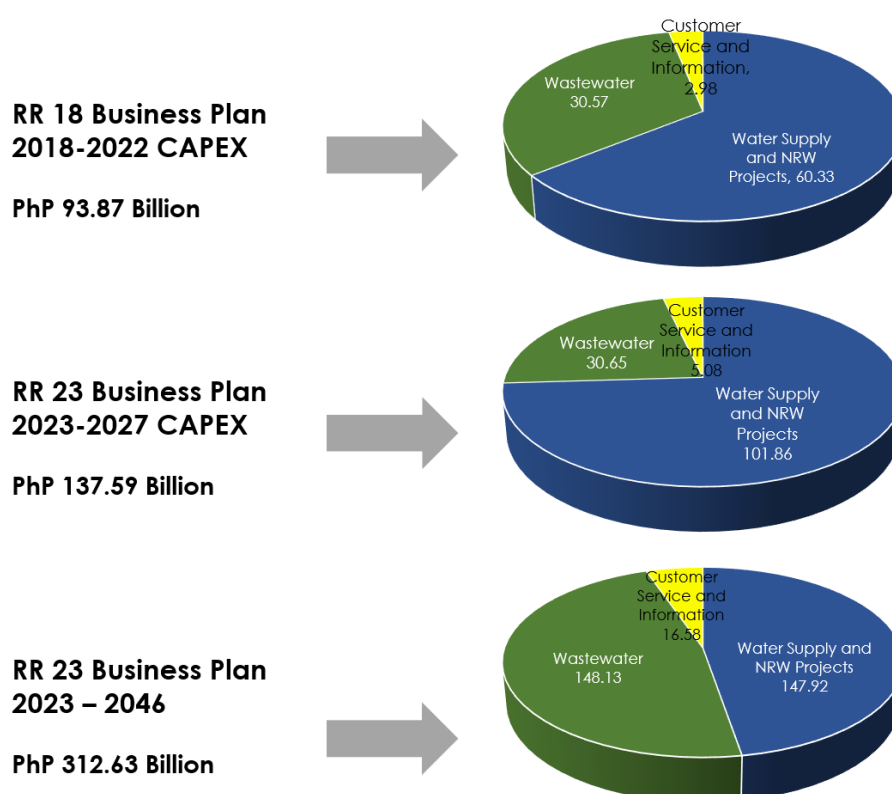


Figure 4-2 Approved Adjustments on Maynilad's CAPEX

The actual and target service obligations, along with the technical findings and recommendations on Maynilad CAPEX projects, were evaluated and found to be acceptable. The key service obligations of RR 18 and RR 23 are summarized in **Table 4-3**.

Table 4-3 Maynilad Key Service Obligations⁹

Indicators	RR18 Target (2017-2021)	Actual (2017-2021)	RR23 Target (2026)		Remarks
			Population Approach ¹⁰	Connection Approach	
Water Service Coverage	99.5%	94.5%	95.1%	N/A	Maynilad should focus on improvements in the Cavite area; however, it would need additional supply to accelerate WSCs in the Province of Cavite. It should fast-track its NRW program, an immediate source of additional supply to meet service level requirements in the Concession area, including the south area.
Non-revenue Water	30.0%	44.94%	29%		Implementation of the supply system approach may ensure efficient NRW reduction through recovery, reallocation and resell. Success depends on sustained DMA diagnostics and more comprehensive primary NRW reduction (aggressive diagnostic activities, pipe replacement).

⁹ It is imperative for MWSS RO to conduct thorough cross-checking and validation of the data and information provided by Maynilad.

¹⁰ Target based on the population approach and DITCI person-per-connection factors.

Indicators	RR18 Target (2017-2021)	Actual (2017-2021)	RR23 Target (2026)		Remarks
			Population Approach ¹⁰	Connection Approach	
Sewer Coverage	47.0%	21.57%	42%	33%	It covers an area with either a separate sewer system, combined sewer system, or hybrid system. It is computed based on equivalent domestic sewer connections.
Sanitation Coverage	81.0%	83.9%	82%	67%	Per franchise law, combined sewer and sanitation services coverage always results in 100% wastewater coverage.

Analogous to the approach of Maynilad in mitigating the impact on customers and addressing affordability concerns, the rate adjustment considering the recommended on-time and deferred development of additional new water sources is spread out and staggered over the next five years, as presented in **Table 4-4** and **Table 4-5**. It bears to emphasize, though, that tariff adjustments of Maynilad are contingent upon specific conditions, which encompass:

- The “R” adjustment in 2024 is contingent upon Maynilad achieving its 2023 water supply targets, including coverage, continuity (availability and pressure), and quality; and
- The adjustment of EC in 2025, increasing from 20% to 25%, is contingent upon Maynilad reaching a sewer coverage of 25% in 2024.

Table 4-4 Maynilad All-in Tariff at Staggered Adjustment considering Timely Development of Additional New Water Source

Particulars	2023	2024	2025	2026	2027
Basic Charge (PhP)	35.10	39.70	47.25	50.44	52.54
Rebasing Adjustment (PhP)	3.29 (9.37%)	6.26 (16.30%)	2.12 (4.75%)	1.01 (2.17%)	1.01 (2.12%)
CPI Adjustment (PhP)	1.31 (3.73%)	1.29 (2.73%)	1.07 (2.00%)	1.09 (2.00%)	1.15 (2.00%)
Basic Charge – Rebased ¹³	39.70	47.25	50.44	52.54	54.70
Environmental Charge (Percentage of basic)	7.94 (20%)	9.45 (20%)	12.61 (25%)	13.14 (25%)	13.68 (25%)
Government Tax (PhP) ¹⁴	1.25	1.49	1.66	1.72	1.79
All in Tariff (PhP)	48.89	58.19	64.71	67.40	70.17

Table 4-5 Maynilad All-in Tariff at Staggered Adjustment considering Deferred Development of Additional New Water Source

Particulars	2023	2024	2025	2026	2027
Basic Charge (PhP)	35.10	39.70	47.25	50.44	52.36
Rebasing Adjustment (PhP)	3.29 (9.37%)	6.26 (16.30%)	2.12 (4.75%)	0.84 (1.80%)	0.80 (1.68%)
CPI Adjustment (PhP)	1.31 (3.73%)	1.29 (2.73%)	1.07 (2.00%)	1.08 (2.00%)	1.13 (2.00%)
Basic Charge – Rebased ¹⁷	39.70	47.25	50.44	52.36	54.29
Environmental Charge (Percentage of basic)	7.94 (20%)	9.45 (20%)	12.61 (25%)	13.09 (25%)	13.57 (25%)

¹³ Implemented starting 01 January 2023

¹⁴ Government tax is 2.625% for 2023 onwards.

¹⁷ Implemented starting 01 January 2023

Particulars	2023	2024	2025	2026	2027
Government Tax (PhP) ¹⁸	1.25	1.49	1.66	1.72	1.78
All in Tariff (PhP)	48.89	58.19	64.71	67.17	69.64

The approved rebased rates of Maynilad, considering the on-time and deferred development of additional new water source as shown in the **Table 4-6** and **Table 4-7**, would not burden both the existing and future LIC.

Table 4-6 Affordability Analysis considering Timely Development of Additional New Water Source for Maynilad

Year	2023	2024	2025	2026	2027
Rebased Rates (increase per cum per year in PhP)	3.29	6.26	2.12	1.01	1.01
Lifeline Charge equal to 10 cum (PhP)	108.94	129.67	138.42	144.19	150.13
Total Lifeline Current Charges (PhP)	135.70	161.22	179.11**	186.51**	194.13**
LIC Household Income per Month *** (PhP)	13,069.00	13,461.00	13,865.00	14,281.00	14,709.00
% of Current Charges (10cum) to LIC Household	1.04%	1.20%	1.29%	1.31%	1.32%

**Environmental Charge was increased to 25% from 20%

***The inflation rates applied to calculate income for future years are: 4.1% for 2023 and 3.0% for years 2024 to 2027.

Table 4-7 Affordability Analysis considering Deferred Development of Additional New Water Source for Maynilad

Year	2023	2024	2025	2026	2027
Rebased Rates (increase per cum per year in PhP)	3.29	6.26	2.12	0.84*	0.80*
Lifeline Charge equal to 10 cum (PhP)	108.94	129.67	138.42	143.68	148.97
Total Lifeline Current Charges (PhP)	135.70	161.22	179.11**	185.85**	192.64**
LIC Household Income per Month *** (PhP)	13,069.00	13,461.00	13,865.00	14,281.00	14,709.00
% of Current Charges (10cum) to LIC Household	1.04%	1.20%	1.29%	1.30%	1.31%

*No additional source

**Environmental Charge was increased to 25% from 20%

***The inflation rates applied to calculate income for future years are: 4.1% for 2023 and 3.0% for years 2024 to 2027.

The percentage on 10 cum of current charges to LIC range from 1.04% to 1.32% for on-time and deferred development of additional new water sources from period 2023 to 2027, as shown in **Table 4-6** and **Table 4-7**. These percentages are below the 5% threshold of the LIC monthly household income¹⁹.

The lifeline charges are determined based on CPI and do not directly influence the adjustments made to the rebased rates. Overall, the findings of the affordability analysis

¹⁸ Government tax is 2.625% for 2023 onwards.

¹⁹ The generally accepted guideline by international funding agencies for household expenditure on water supply, sewerage and sanitation services is at most 5% of average household income. The 1997 Concession Agreement did not set the affordability level percentage but defined the Low-Income Customers (LIC) as "customers with an annual household income of PhP 50,000 or less, which amount shall be automatically adjusted on January 1st of each year by the percentage change in the consumer price index for the preceding year." Based on MWSS RO estimates, the inflated annual income of LIC in 2022 reckoned from 1997 as base year is PhP 150,651.00.

indicate that whether the rate increase is governed by on time or deferred additional water source, households within the low-income group will not face significant financial strain. They will still be able to manage their expenses comfortably, as the percentage of the current charges remains well below the acceptable threshold of 5%.

4.3 Public Consultation

Before the Fifth Rate Rebasing, the MWSS RO through the OCR-PID held Pre-Rate Rebasing PCDs with the following objectives: (a) to inform the LGUs on the completed and ongoing projects, programs, and plans of the Concessionaires; (b) solicit valuable inputs (land use and development plan) from LGUs that may be incorporated in the Business Plans of the Concessionaires; (c) discuss and formulate a water and wastewater master plan that is responsive to specific needs and priorities of LGUs; and (d) provide a venue for discussing and addressing prevailing (gender-related) issues and concerns of stakeholders on water, sewerage, and sanitation services, and for exploring good practices in providing (gender-responsive) services.

For Maynilad, online sessions via Zoom Webinar were conducted per cluster covering the following municipalities/cities:

Cluster 1 <i>29 November 2021</i>	Cluster 2 <i>03 December 2021</i>	Cluster 3 <i>06 December 2021</i>	Cluster 4 <i>10 December 2021</i>
Caloocan City Manila City Malabon City Navotas City	Quezon City Makati City Pasay City Valenzuela City	Las Piñas City Muntinlupa City Parañaque City	Cavite (Province) Bacoor City, Cavite Cavite City, Cavite Imus City, Cavite Kawit, Cavite Noveleta, Cavite Rosario, Cavite

During the Fifth Rate Rebasing, four (4) Public Consultations or Public Consultation Drives in collaboration with the OCR-PID and the RRMCC were held for Maynilad. The summary of public consultations per area coverage are as follows:

Session 1A Presentation of the Proposed Business Plans <i>Arroceros, Manila</i> <i>20 July 2022</i>	Session 1B Presentation of the Proposed Business Plans <i>Parañaque City</i> <i>22 July 2022</i>
Maynilad North-West Zone	Maynilad South-West Zone
Session 2A Presentation of MWSS RO determined Indicative Tariff <i>Caloocan City</i> <i>24 October 2022</i>	Session 2B Presentation of MWSS RO determined Indicative Tariff <i>Las Pinas</i> <i>26 October 2022</i>
Maynilad North-West Zone	Maynilad South-West Zone

Overall, the public consultation was productive and informative. Maynilad addressed the concerns raised by participants and demonstrated its commitment to delivering high-quality water and sewerage and sanitation services to its customers.

Overall Concern on Continuity of Services

The participants expressed overall concern about the continuity of both water and sewerage and sanitation services. Maynilad representatives, headed by their COO, Mr.

Randy Estrellado, addressed these concerns despite the challenges met during the pandemic period during the last rebasing period, demonstrating the organization's ability to deliver such services. Such concerns and challenges shall be supported by the relative soundness of the programs and projects presented.

Queries on Infrastructure, Sustainability, and Preparedness

Queries were raised on the quality of infrastructures, the sustainability of services, and Maynilad's Business Plan preparedness for major disasters (earthquakes, typhoons, and floods), climate change, and the growing population. Maynilad representatives emphasized the critical importance of developing water sources to meet the growing demand for water. Hence, Maynilad actively support key projects such as MWSS's Kaliwa Dam and the forthcoming Teresa Treatment Plant in Rizal. In addition, Maynilad is increasing water supply from 300 MLD to 450 MLD using Laguna Lake as source and implementing modular treatment plants CAPEX projects in Cavite to enhance overall water infrastructure.

Specific concerns were also expressed about Maynilad's capability to fulfill its service obligations in terms of water quality, the availability of alternative water supply for service interruptions, and its ability to process wastewater generated relative to the expansion of the service area. MWSS RO Chief Regulator Patrick Ty addressed this matter, emphasizing the agency's commitment to fulfilling its mandates, particularly in monitoring Maynilad's service to safeguard the public's interests. Deputy Administrator Evelyn Agustin further supported this statement, elucidating that monthly random water samples are taken within the concession area to ensure the potability of the water delivered to customers.

Concern on Safeguarding Customer Interests

Concerns were also expressed about how and who can safeguard the general interest of customers in terms of failure in the delivery of services of the concessionaire. This was addressed primarily by the MWSS RO as the regulatory agency, expounding on its functions and responsibilities under its mandate.

Heightened Concern for Sustainability of Water Supply Services

Concerns about the sustainability of Maynilad's water supply services were amplified by its performance during the pandemic, marked by frequent service interruptions. Nevertheless, Maynilad representatives clarified that their team has been working diligently to address this issue. They have been putting in extra effort to stabilize water delivery, focusing on optimizing operations and progressively developing water sources to meet the anticipated growth in the service area population.

Water Quality

The discussion emphasized the importance of water quality, especially in the immediate aftermath of service restoration. Concerns were raised regarding the fitness of water for human consumption and other uses, particularly when considering alternative technologies like water recycling. Maynilad representatives highlighted ongoing upgrades at the La Mesa Treatment Plants to improve treatment capabilities, specifically targeting turbidity levels ranging from 300 NTU to 2,000 NTU. These enhancements aim to maintain or even increase production volume while accommodating a wider range of raw water quality.

Alternative Water Sourcing

Maynilad representatives have proactively tackled the issue of alternative water sourcing by introducing the Paranaque New Water Treatment Plant, which utilizes advanced treatment processes to transform effluent water into potable drinking water. Emphasizing its commitment to quality, Maynilad secured a potability certificate from the local government unit and pledged to meet all parameters set in the Philippine National Standards for Drinking Water. Supported by the MWSS Corporate Office and Regulatory Office, this facility is expected to significantly enhance the resilience and efficiency of Maynilad's water system by providing a reliable alternative source of clean drinking water.

Non-Revenue Water

Special concern has also been raised on the magnitude of Non-Revenue Water (NRW). Maynilad representative explained that initiatives aimed at reducing NRW i.e., total pipeline replacement, with a specific emphasis on District Metering Areas (DMAs), have been incorporated into their Business Plan. The objective is to bring down the NRW level from its current total/global NRW level of 43% to an average of 20%. The Plan has been reviewed and audited by the MWSS Regulator Office together with the Fifth Rate Rebasing Consultant. Participants were also advised to cooperate in addressing this aspect of the service. These include reporting observed leakages in service lines in their vicinity, wasteful practices such as using fire hydrants for personal purposes, and the proliferation of illegal connections.

Sewerage and Sanitation

On the topic of sewerage and sanitation, there is relatively great concern about the magnitude of the programs and projects, both current and incorporated in the business plan, relative to a growing population. Specifically, there is a concern about comparatively inadequate information dissemination on the availment process and the scheduling of desludging services in lieu of sewerage service connection.

Maynilad representative addressed the concern regarding the ways to avail desludging services, which include: (a) contacting the hotline number 1626, (b) submitting a request on the Maynilad website, (c) visiting the Facebook page and sending a message, and (d) personally visiting any Maynilad Business Area. It is advised to bring the water bill and ensure that the manhole is ready for prompt desludging. The participants expressed overall concern about the continuity of both water and sewerage and sanitation services. Maynilad representatives, headed by their COO, Mr. Randy Estrellado, addressed these concerns despite the challenges met during the pandemic period during the last rebasing period, demonstrating the organization's ability to deliver such services. Such concerns and challenges shall be supported by the relative soundness of the programs and projects presented.

It was also expressed that a five (5) year interval in desludging services²¹ may be too long, as a significant number of septic tank facilities are relatively small or sub-standard. It is hoped that this aspect will be further expounded in the concessionaire's business plans.

²¹ The focus of this concern should not be on the length of desludging interval but improving the design and construction of the septic tank. The DOH issued Administrative Order (AO) 2019-0047 on October 29, 2019 the "National Standard on the Design, Construction, Operation and Maintenance of Septic Tank Systems". The said AO should be followed to ensure that the septic tank to be constructed should be adequate to partially treat the wastewater generated by the households. The AO also stated that "desludging frequency shall be three to five years".

Tariff Rate Adjustment

The public sentiment regarding the tariff rate adjustment is predominantly positive, as it is seen as an inevitable step in line with the rising costs of various commodities. While there is a general acceptance of the need for adjustment, there is a thoughtful concern about the magnitude of the increase. The public consensus is that the rate should be reasonable and commensurate to the actual investments incurred, particularly considering the ongoing economic recovery from the impacts of the COVID-19 pandemic. It is important to note that a significant portion of the customer base falls within the medium to low economic status, making affordability an important consideration in the rate rebasing exercise. The MWSS RO and the Maynilad assured the stakeholders of a balanced and reasonable rate that considers their circumstances.

There was a considerable inquiry on the appropriateness of the components of the tariff rate adjustments that have been considered in deriving the rate proportionate to the current efforts and projects under the proposed Business Plan. These refer to the disapproved projects in previous Business Plans that were included in the past rate rebasing exercises. It was explained though that, as a matter of policy, such disapproved project costs shall be excluded in the Cash Flow for any future tariff rate determination.

Moreover, it was emphasized that the process includes built-in safeguards to ensure the transparency and fairness of the tariff rate adjustment. There is also a commitment to engage in continuous and sustained Information-Education-Communication (IEC) efforts and public consultations throughout the implementation period. These initiatives serve as an assurance that public interests are carefully considered and addressed in the rate rebasing process.