Office of Utilities Regulation

Jamaica Public Service Company Limited

Extraordinary Rate Review 2017

Determination Notice

OFFICE OF UTILITIES REGULATION

2017 February 1

DOCUMENT TITLE AND APPROVAL PAGE

1. DOCUMENT NUMBER: 2017/ELE/001/DET.001

2. DOCUMENT TITLE: Jamaica Public Service Company Limited Extraordinary Rate Review 2017 Determination Notice

3. PURPOSE OF DOCUMENT

To set out the findings and determinations of the Office of Utilities Regulation in respect of a request for an Extraordinary Rate Review submitted by the Jamaica Public Service Company Limited on 2016 October 25.

4. ANTECEDENT DOCUMENTS

Document Number	Description	Date
2014/ELE/008/DET.004	Jamaica Public Service Company Limited Tariff Review for Period 2014 – 2019 Determination Notice	2015 January 7
2015/ELE/003/ADM.001	Jamaica Public Service Company Limited Tariff Review for Period 2014 – 2019 Determination Notice – Addendum 1	2015 February 27
Ele 2016/ELE/004DET.001	Jamaica Public Service Company Limited Annual Tariff Adjustment Determination Notice	2016 January 4

5. APPROVAL

This document is approved by the Office of Utilities Regulation and the decisions herein become effective on **2017 February 1.**

On behalf of the Office:

……………………………………

Joseph Matalon
Chairman
Date: 2017 February 1

Abstract

In 2016 October, the Jamaica Public Service Company Limited (JPS) submitted a request to the Office of Utilities Regulation (OUR/Office) for an Extraordinary Rate Review. The company claimed that changes to the depreciation rate of its new licence, the Electricity Licence, 2016 (Licence 2016) which took effect in 2016 January had resulted in asset impairment amounting to US$13.4M in 2016 and an average increase in annual deprecation of approximately US$3.9M in 2017 and 2018.

The OUR reviewed JPS request for a rate revision but extended the scope of the review to the appropriateness of the depreciation rates in Schedule 4 of the Licence 2016. The Office concluded that JPS should recover the US$13.4M through the Z-factor mechanism in the revenue cap formula, commencing 2017 July 1. Additionally, it took the decision that to capture the effects of the increased depreciation expenses, the rate revision should be guided by detailed information on the company's planned investments for 2017 and 2018. This is to ensure that the investments are in accordance with the regulatory principles of prudence and efficiency. Consequently, the rate revision determination is now subject to the information provided by JPS and is programmed to take effect 2017 July 1.

In respect of the appropriateness of the depreciation rates in the Licence 2016, based on the findings of the financial experts engaged by the OUR to undertake a review of such rates, as well as JPS' own recognition that in at least two instances the depreciable rates in Schedule 4 of Licence 2016 do not necessarily accord with the historical useful lives of the assets, the Office took the view that the basis on which the depreciation rates were derived should be the subject of further review. Consequently, JPS will be required to conduct a depreciation study before the next Five Year Rate Review due in 2019.

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1.0 Executive Summary

1.1 In a submission to the Office of Utilities Regulation (OUR/Office) dated 2016 October 25, the Jamaica Public Service Company Limited (JPS) requested an Extraordinary Rate Review (Submission). JPS, in its Submission, argued that the changes to the depreciation rates in Schedule 4 of its Electricity Licence, 2016 (Licence 2016), from that of its previous licence – the Amended and Restated All-Island Electric Licence, 2011, would have a material effect on its financial performance. Consequently, the company asked that adjustments be made to the tariff in order to achieve an adjusted revenue requirement that accounts for:

1. an impairment adjustment cost of approximately US$13.4M for assets whose useful life expired during 2016; and
2. an incremental increase in depreciation expense averaging approximately US$3.9M in 2017 and 2018.

1.2 On reviewing JPS' Submission, the OUR concluded that given the forward looking nature of the revenue cap mechanism prescribed in the Licence 2016, the tariff adjustments requested could not be treated precisely in the manner requested. The Submission appears to assume that a rate revision (i.e. an adjustment to the base revenue requirement) was applicable both to the asset impairments which occurred in 2016 and the projected increase in depreciation arising from the application of the rates in Schedule 4 of the Licence 2016 to its financial accounts. However, in the OUR's assessment, the retrospective nature of the 2016 depreciation asset impairments (resulting from the adjustment of the useful lives of the assets) warrants a Z-factor compensation treatment, while the prospective increases in depreciation costs should be correctly treated as a rate review issue.

1.3 Given the complexity of the issues and the specific requirement for knowledge of financial accounting and reporting practices involved in the Submission, the OUR engaged the services of a financial consultant to assist in the analysis required. Additionally, it became apparent that the sixty (60) day period stipulated in the Licence 2016 for the completion of the Extraordinary Rate Review was not achievable. Against that background, the OUR secured JPS' non-objection to the extension of the completion time to 2017 January.

Review of Depreciation Rates in Schedule 4 of the Licence 2016

1.4 A part of the OUR's assessment of the Submission involved a review of a KPMG Depreciation Study, commissioned by JPS in 2013, that informed the revised depreciable lives of the assets established in the Licence 2016. Taking into account the advice provided and its own analysis, as well as JPS' recognition that in the case of at least two asset categories the Schedule 4 rates do not necessarily accord with historical useful lives of the assets, the OUR has concluded that the depreciable rates in Schedule 4 of the Licence 2016 ought to be the subject of further detailed review. Additionally, the analysis done by the OUR's consultants, PricewaterhouseCoopers (PwC), shows that while for some categories of assets (such as test equipment and computer equipment) the useful lives in Schedule 4 of the Licence 2016 reflected comparable regulatory useful lives registered in other countries, the other assets such as **diesel generators, meters, poles, street lights and communication equipment**, exhibit a lower useful asset life relative to those in most other countries considered in the analysis. As a result, the OUR takes the position that there should be a review of the depreciation rates in Schedule 4 at the next Five Year Rate Review, informed by a more robust and reliable study.

Rate Revision

1.5 In order to adjust the revenue requirement in keeping with the forward looking orientation delineated in the Licence 2016, it was necessary to make appropriate changes to the rate base which impacts the rate of return on investment, which in turn affects the revenue requirement. Under the forward looking revenue cap applicable to JPS, such an adjustment ought to incorporate expected planned investment during the tariff review period. While JPS provided some information on its planned investments for 2017 and 2018, the data was not adequate for the OUR to properly assess whether these proposed capital expenditures were prudent and efficient.

1.6 In addition, based on the nature of JPS' Submission, it is also important to capture the effect of future changes in depreciation expenses in the revenue requirement. In its Submission, JPS indicated that the average increase in depreciation expense arising from the application of the rates in Schedule 4 of the Licence 2016 in 2017 and 2018 was approximately US$3.9M. The OUR is of the view that it would be prudent to assess whether the expected increases in depreciation expenses are in fact warranted and satisfy the criterion of efficiency, before making an adjustment to the revenue requirement.

1.7 Against this background, JPS has been given thirty (30) days from the date that this Determination Notice takes effect to submit relevant details on the projects in its investment plan. The OUR, in turn, will conduct a review of the investment plan in a timely manner so as to allow for the determination and implementation of the rate revision in time for it to take effect on 2017 July 1.

Z-factor Adjustment

1.8 The Z-factor adjustment is directly linked to the approximately US$13.4M asset impairment incurred by JPS during 2016. Consistent with the treatment of unrecovered revenue in the revenue cap methodology, JPS is allowed an opportunity cost equivalent to the weighted average cost of capital (WACC) over the recovery period. If the recovery period is one (1) year, the total payout by customers would be approximately US$15.1M. On the other hand, a two (2) year payout strategy would result in a total of approximately US$16.0M being paid out by customers. However, the relative increase in electricity rates for a one (1) year payout would be higher than the two (2) year alternative.

Determinations

1.9 After reviewing JPS' Submission for a rate adjustment arising from the application of the new depreciation rates in Schedule 4 of the Licence 2016, the Office has determined that:

1) JPS' asset impairment and incremental depreciation expenses arising from the application of the rates in Schedule 4 of the Licence 2016 are recoverable in its tariffs and shall be recovered as follows:

    a) The asset impairment costs incurred in 2016 shall be recovered applying the Z-factor mechanism;

    b) The projected increase in depreciation expenses in 2017 and 2018 shall be recovered by a review and adjustment of the revenue requirement in the existing framework of the tariff regime;

c) All projected increases in depreciation expenses in 2019 and beyond shall be addressed in subsequent Five Year Rate Reviews.

2) Based on evidence that the existing depreciable lives in Schedule 4 of the Licence 2016 may not accord with the historical useful lives of certain asset classes, or with benchmark data from a wider population of comparable jurisdictions, JPS shall be required to conduct a new depreciation study for the 2019 – 2024 Rate Review Period using guidelines established by the OUR.

3) In the treatment of the expected depreciation in 2017 and 2018, the Office has decided that:

   a) JPS shall provide details on each project in its investment plan for 2017 and 2018, and provide a forecast of investments and divestments for 2017 to 2021. The information provided shall include the purpose, a break-out of the cost of its components, the implementation schedule and the benefit to be derived from the specific investment.

   b) JPS shall submit a detailed investment plan to the OUR in relation to proposed capital expenditures by the company for 2017 and 2018. This submission shall be made within thirty (30) days of the date on which this Determination Notice becomes effective. Thereafter, the OUR shall review JPS' investment plan and make a determination on the necessary changes to the company's base revenue requirement, which shall be published prior to 2017 July 1, the date on which the revenue revision shall take effect.

4) In respect of the adjustments required for the 2016 asset impairment, the Office has decided as follows:

   a) JPS shall be allowed to recover US$13,378,012 of expenses caused by its 2016 depreciation asset impairment plus the associated opportunity cost. The recovery of these costs amounting to US$15,146,585 shall be recovered by way of the Z-factor mechanism over a one (1) year period.

   b) The Z-factor adjustment approved in Determination 4, along with the rate adjustment to be approved, shall be implemented in 2017 July.

   c) Notwithstanding the above, the OUR reserves the right to adjust the timetable of the payout of the Z-factor adjustment over two (2) years, should the conditions at the time of implementation of the approved adjustments result in a sharp increase in tariffs.

2.0 Introduction

2.1 The Jamaica Public Service Company Limited (JPS) made a submission to the Office of Utilities Regulation (OUR/Office) on 2016 October 25 requesting an Extraordinary Rate Review (the Submission). In its Submission, JPS argued that the changes to the depreciation schedule in its Electricity Licence, 2016 (Licence 2016) from that contained in its previous licence – the Amended and Restated All-Island Electric Licence, 2011 (the Licence 2011), would have a material effect on its financial performance. Consequently, JPS requested that an adjustment be made to the tariff in order to achieve a new revenue requirement to reflect an:

a) impairment adjustment cost of approximately US$13.4M resulting from the application of depreciation rates in Schedule 4 of the Licence 2016 to assets whose useful life expired during 2016; and

b) incremental increase in depreciation expense averaging approximately US$4M in 2017 and 2018.

2.2 In addition, JPS indicated that its analysis of the useful lives of its assets over the period 2019 – 2028 showed that the accumulated incremental depreciation occasioned by the rates in Schedule 4 of Licence 2016 will amount to approximately US$7.3M (see Table 2.1 below).

2.3 At the time of filing the Submission, JPS asserted that it was urgent to obtain a regulatory decision on the issues, and requested that the Office indicate a "clearly defined position by December 20, 2016, as the outcome was very material to the Company's financial performance."

2.4 The Licence 2016 permits the conduct of an Extraordinary Rate Review where there are exceptional circumstances that have a significant impact on the electricity sector or JPS. The review, however, should be limited to the impact of the exceptional circumstances, and should be completed within sixty (60) days, unless there is mutual agreement between the regulator and the Licensee for a longer period.

Table 2.1 – JPS Analysis of Asset Impairment & Incremental Depreciation

Year	Adjustment Proposed (US$)		
	Asset Impairment	Incremental Depreciation	Total
2016	13,378,012.08	-	13,378,012.08
2017	-	4,108,088.42	4,108,088.42
2018	-	3,691,919.50	3,691,919.50
2019 - 2028	-	7,273,049.34	7,273,049.34
Total	**13,378,012.08**	**15,073,057.27**	**28,451,069.35**

2.5 Upon review of JPS' Submission, the OUR formed the view that given the complexity and gravity of the issues involved in the review, it was prudent to engage external financial expertise to provide advice, inter alia, on best practice in the treatment of depreciation. It was not possible, however, to obtain this advice and complete the analysis and determination of the Submission within the sixty (60) day period stipulated in the Licence 2016 for the completion of the review.

2.6 The need for additional time to conduct the review was communicated to JPS. In response, the company stated that it had no objection. However, it requested that in the event that the OUR was unable to arrive at a determination before the end of 2016, then alternatively, the OUR could provide "the summary of its decisions prior to December 31 in appropriate language that would allow the company to satisfactorily meet the requirements of IAS 18 – Revenue Recognition – under the IFRS".

2.7 While not acceding entirely to JPS' proposal, the OUR took the view that it might be helpful to JPS to provide an outline of the principles it would follow in making its determination, and in particular how the issue of asset impairment would be addressed. In a letter dated 2016 December 30, the OUR outlined the principles on which the determination would be based and the procedures to be used in the review. In this respect, the OUR took the position that the asset impairment for 2016 would be aptly addressed by utilizing the Z-factor adjustment mechanism prescribed pursuant to the Annual Review; and the increase in depreciation expenses in 2017 and 2018 would be more appropriately handled by way of a review of the rates under the Extraordinary Rate Review mechanism, which involves an adjustment to the base revenue requirement.

2.8 The OUR engaged the services of financial consultants, PricewaterhouseCoopers (PwC), to provide:

a) comments on the precise treatment applicable to JPS' financial and regulatory accounts, based on the changes to depreciation rates effected in Condition 15 and Schedule 4 of the Licence 2016.

b) expert opinion on the appropriateness of a number of regulatory options under contemplation by the OUR with respect to JPS' recovery of cost associated with the company's legitimate asset impairment.

2.9 This Determination Notice sets out the legal framework for the Extraordinary Rate Review exercise and the OUR's analyses of JPS' Submission. In addition, it assesses the appropriateness and accuracy of JPS' computations, and sets out the determinations made by the Office.

3.0 Legal Framework

3.1 Pursuant to Condition 2, paragraphs (2) and (3) of the Licence 2016, JPS is authorized to "*generate, transmit, distribute and supply electricity for public and private purposes in all parts of the Island of Jamaica*", and is obligated to "*…provide an adequate, safe and efficient service based on modern standards, to all parts of the Island of Jamaica at reasonable rates so as to meet the demands of the Island and to contribute to economic development.*"

3.2 The OUR was established under the Office of Utilities Regulation Act (the "OUR Act") with responsibility, inter alia, to regulate the provision of "prescribed utility services". Prescribed utility services is defined under the OUR Act to include the generation, transmission, distribution and supply of electricity. This regulatory responsibility for the electricity sector is further reflected in section 4(d) of the Electricity Act, 2015 which states that "*the Office shall regulate the electricity sector generally*."

3.3 In the exercise of its powers and functions, section 4(3) of the OUR Act mandates the OUR to,

"*…undertake such measures as it considers necessary or desirable to -*

(a) encourage competition in the provision of prescribed utility services;

(b) protect the interests of consumers in relation to the supply of a prescribed utility service;

(c) encourage the development and use of indigenous resources; and

(d) promote and encourage the development of modern and efficient utility services…"

3.4 Among the various powers and functions of the OUR set out in section 4 of the OUR Act, is a power to determine rates in respect of the generation, transmission, distribution and supply of electricity. A portion of section 4(4A) of the OUR Act directs that:

"*(4A) The rates determined by the Office in respect of prescribed utility services for the generation, transmission, distribution and supply of electricity shall –*

(a) be in accordance with -

…

(iv) the tariff provisions set out in all licences and enabling instruments with respect thereto;"…

(b) take into account –

(i) the interest of consumers in respect of matters, including the cost, safety and quality of the services;…

3.5 In the case of JPS, Condition 15 and Schedule 3 of the Licence 2016 makes provision for the determination of its rates. Paragraph 2 of Condition 15 and paragraph 5 of Schedule 3 specify respectively that:

> *"2. The rates to be charged by the Licensee in respect of the Supply of electricity shall be subject to such limitation as may be imposed from time to time by the Office.*
>
> …
>
> *5. All rates shall be determined by the Office."*

3.6 Schedule 3 of the Licence 2016, outlines the procedures for determination and review of JPS' electricity tariff. This Schedule provides for three (3) instances in which the OUR may be requested to review and determine rates which may result in revisions or adjustments to JPS' non-fuel rates based on a revenue cap methodology viz:

1. **Five Year Rate Reviews (paragraphs 6 – 41):** As the name suggests, these reviews are scheduled at five-year intervals. The five-year rate review involves an exhaustive examination of all aspects of the revenue requirement, including rate base, return on investment, operating and maintenance cost, depreciation, as well as, efficiency targets and incentive mechanisms. The date for the next such review is 2019 April.

   Extraordinary Rate Reviews (paragraphs 59 – 61): These reviews may be done between five-year rate reviews, and are occasioned by the impact of exceptional circumstances on the electricity sector and/or JPS. Such a review is only permissible where the impact is significant, and where the circumstances did not comprise factors that were considered or known when the last rate review was undertaken. Rate reviews of this type are done at the request of either the Minister or JPS. The prescribed time period for such a review is sixty (60) days, unless the OUR and JPS otherwise agree, and the scope of the review is limited to the impact of the exceptional circumstances.

2. **Annual Review or Annual Rate Adjustment (paragraphs 42 – 56):** The Licence 2016 details the formula to be employed for an annual adjustment to the revenue target, the annual adjustment date (beginning 2016 July 1)

and the time period for conducting the adjustment (sixty (60) days). Notably the formula specifically assumes, inter alia, that tariffs based on the revenue-cap regime are already in place. Therefore, changes are only required to the superstructure and not the substructure of the tariff.

3.7 Within the framework of Annual Rate Adjustments, provision is made for alterations to the tariff using the Z-factor mechanism. The application of the Z-factor is triggered by special circumstances that materially affect, inter alia, JPS' non-fuel costs, for which the recovery of such costs is done through an allowed percentage increase in the revenue cap. The provisions governing the Z-Factor mechanism that are most relevant to JPS' Submission are that set out in paragraph 46.d.(i) of Schedule 3 of the Licence 2016 which states in part:

"d….The Z factor is the allowed percentage increase in the Revenue Cap due to any of the following special circumstances:

(i) Any special circumstances that satisfy all of the following:

a) affect the Licensee's costs or the recovery of such costs, including asset impairment adjustments;

b) are not due to the Licensee's managerial decisions;

c) have an aggregate impact on the Licensed Business of more than $50 million in any given year; and

d) are not captured by the other elements of the revenue cap mechanism"

3.8 The Licence 2016 therefore makes provision for the treatment of exceptional and defined special circumstances affecting the tariff in between Five Year Rate Reviews, by way of two channels - (1) the Z-factor adjustment mechanism specified under the Annual Review, and (2) Extraordinary Rate Review utilizing the rate review mechanism applicable to the Five Year Rate Review (i.e. an adjustment to the base revenue requirement).

4.0 Rate Review Issues

4.1 Compensation by way of the Z-factor Mechanism versus a Review of Rates under the Extraordinary Rate Review

4.1.1 The conditions specified in the Licence 2016, which must be satisfied before an extraordinary review of the rates is permitted, require that an exceptional circumstance must occur which has a significant impact on the electricity sector and/or JPS, and which was not a factor known or considered when the rate review was undertaken. The OUR accepts that the major changes to the terms and conditions of the Licence 2011 which resulted in the provisions of the Licence 2016, including the adjustments to the depreciable lives of several of its assets as prescribed in Schedule 4 of the Licence 2016, qualifies as an exceptional circumstance. It is evident based on the information before the OUR that the changes to the depreciation rates will have a significant impact on JPS' costs. As the issue of the Licence 2016 with its new depreciation rates occurred in 2016 January, after the completion of the 2014-2019 Five Year Rate Review, and the 2015 Annual Tariff Adjustment, the new depreciation rates would not have been known or taken into account at those scheduled rate reviews. The impact of the implementation of the new depreciation rates were also not considered at the time of the 2016 Annual Review. The Office is therefore satisfied that it is empowered to embark on this Extraordinary Rate Review pursuant to paragraph 59 of Schedule 3 of the Licence 2016.

4.1.2 In its Submission, JPS took the view that the implementation of the new depreciation schedule in the Licence 2016 translated to an asset impairment in 2016 and would result in increased depreciation expenses that would continue up to 2028. In light of this, JPS posited that the revenue recovery for the asset impairment and increased depreciation could be dealt with either under the Z-factor mechanism or by way of an Extraordinary Rate Review. However, it argued that the Z-factor mechanism could only be invoked after the cost had been incurred, not before. It therefore asserted that:

> *"JPS recognizes that the impairment adjustment may have alternatively been addressed through a Z-factor clause application but would not take account of the*

incremental depreciation expense, at least not until after the cost has been incurred."

4.1.3 In that regard, it considered the Z-factor route to be *"unwieldly and inefficient"*, since it would require the company to *"make a Z-factor filing at the end of each year to recover" c*osts incurred in the past.

4.1.4 Notably, the Licence 2016, which became effective 2016 January 27, represents a fundamental shift in the tariff philosophy that governed JPS under its previous licence issued in 2001 and the Licence 2011. The price-cap regime that had been in place since 2001, was replaced in 2016 by a revenue cap, or more correctly a 'revenue-target mechanism'.

4.1.5 Under the price-cap regime, the average price of electricity was fixed in real terms (net of efficiency and quality of service targets) at the beginning of the five-year tariff period. Consequently, revenue was allowed to vary in direct relationship to sales volumes, all other things being equal.

4.1.6 On the other hand, the revenue-cap mechanism is supposed to establish the revenue target in real terms (net of efficiency and quality of service targets) at the beginning of the five-year tariff period. As such, over the course of the five-year tariff period, all other things being equal, the average price of electricity would be inversely related to sales volumes.

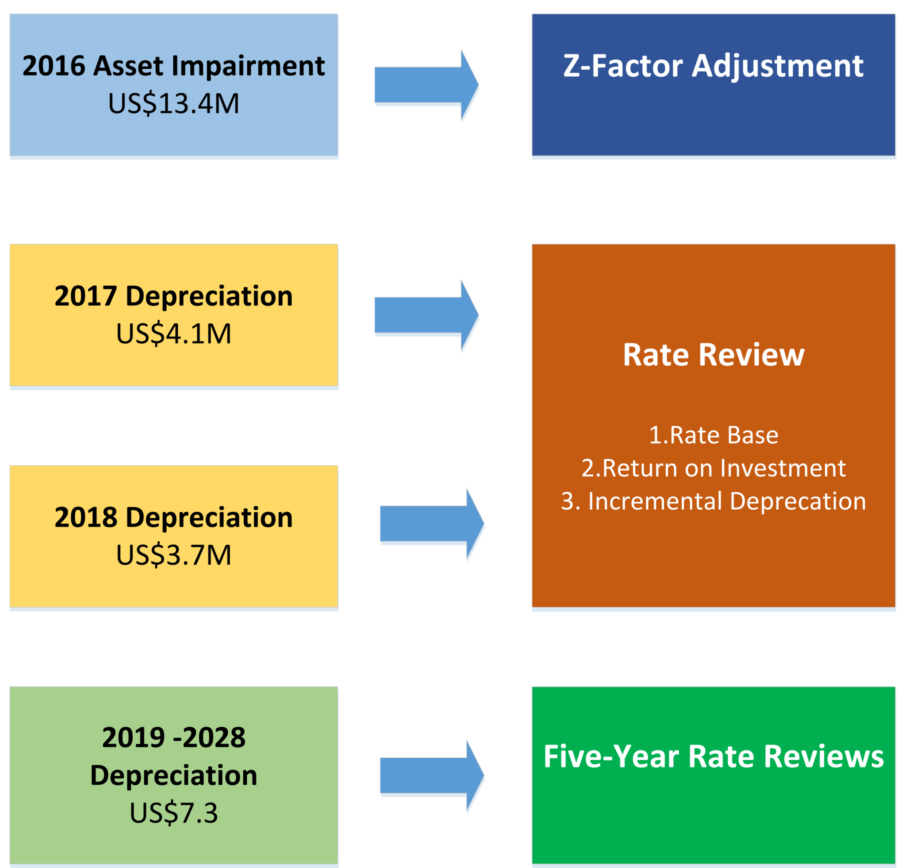
4.1.7 Another important distinction of the new revenue-cap regime is that it is forward looking. Paragraph 6 of Schedule 3 of the Licence 2016 states that *"various rate categories will generate the non-fuel revenue requirement on average of the five-year rate review period"*. This means that the revenue requirement and rate base are determined prospectively.

4.1.8 In this regard, the Licence 2016 assigns an integral role to JPS' Business Plan, the Integrated Resource Plan and the forward-looking rate criteria to be published by the Office in the rate setting exercise.

4.1.9 In this context, the Office agrees with JPS that the application of the Z-factor mechanism to the asset impairment and incremental depreciation costs going forward is inefficient, since the Z-factor mechanism is designed to address the compensation of costs that have already been incurred. The Office is however of the view, contrary to JPS' Submission, that the 2016 asset impairment expenses correctly ought to be compensated under the Z-factor mechanism of the Licence 2016. In fact, not only does the 2016 asset impairment expenses represent a cost incurred in the past, that component of the Submission is expressly addressed as an element of claim at paragraph 46 d. (i) of Schedule 3 of the Licence 2016 (see extract from this provision at paragraph 3.7 above).

4.1.10 The increased depreciation costs claimed by JPS going forward (i.e. from 2017 onward) requires a review of components of the revenue cap mechanism, as it is forward looking and can address costs prospectively. Compensation for this component of JPS' claim will, therefore, be addressed via a more detailed review of the rate base and the revenue requirement of the revenue-cap mechanism, and the resultant adjustment of the tariff going forward.

Figure 4.1 Regulatory Approach to the Treatment of JPS' Asset Impairment & Depreciation



4.1.11 As shown in Figure 4.1 above, the OUR has concluded that in the treatment of JPS' asset impairment and depreciation costs spanning the period 2016 – 2028, the recovery of cost via the tariff shall be based on the following principles:

- Historic asset impairment and costs (i.e. for 2016) shall be recovered through the Z-factor mechanism;
- Future costs for the periods 2017 and 2018 shall be recovered through an adjustment of the revenue requirement under this Extraordinary Rate Review;
- Future costs anticipated after 2018 will be addressed at the Five Year Rate Reviews.

Determination 1

JPS' asset impairment and incremental depreciation expenses arising from the application of the depreciation rates in Schedule 4 of the Licence 2016 is recoverable in its tariffs and shall be recovered as follows:

a) The asset impairment costs incurred in 2016 shall be recovered applying the Z-factor mechanism;
b) The projected increase in depreciation expenses in 2017 and 2018 shall be recovered by the adjustment of the revenue requirement in the existing tariffs;
c) All projected increases in depreciation expenses in 2019 and beyond shall be addressed in future Five Year Rate Reviews.

4.2 Actual Depreciation Rate versus Regulatory Depreciation Rate

4.2.1 Depreciation is essentially the "decline in, or loss of, value" in an asset[1]. Referencing the American Institute of Certified Public Accountants, Accounting Bulletin No. 1, Leonard Goodman[2] states that depreciation accounting is:

"a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage value (if any), over the estimated useful life of the unit (which

[1] Bonbright, Principles, p.268 (1988)
[2] Goodman, L. S. "The Process of Ratemaking' Vol.I, 1998, p.487

may be a group of assets), in a systematic and rational manner. It is a process of allocation, not valuation."

4.2.2 Arising from the conclusions drawn from a depreciation study commissioned by JPS, and conducted by KPMG, the company successfully negotiated with the Government of Jamaica (Government), changes to the depreciation rates that were set out in its Licence 2011, and had new depreciation rates prescribed in Schedule 4 of the Licence 2016 which took effect on 2016 January 27.

4.2.3 Traditionally, JPS has used the depreciation schedule in its licence to adjust its financial accounts. Based on the changes to the depreciation schedule in the Licence 2016, JPS applied the new depreciation rates, for the most part, to its assets which resulted in an approximately US$13.4M asset impairment in 2016, and a projected increase in its depreciation expenses of approximately US$15.1M over the period 2017 to 2028. This ineluctably leads to two (2) questions. First, should JPS be allowed to pass on the increased depreciation cost to its customers? Second, if JPS is allowed to pass on such costs, is the regulator obliged to pass on those costs in the way the company computed them in its Submission?

4.2.4 With respect to the recovery of depreciation costs for approved assets by a regulated business, the literature on ratemaking supports the fair recovery of cost prudently incurred by the regulated business. In this respect depreciation allowances are designed for the preservation of the "integrity of the investment". Therefore if a utility puts assets in a regulated business, provided those assets are approved by the regulator, it is only fair that provisions are made for the investor to recoup the costs of the investment over its useful life.

4.2.5 Furthermore, should it be recognized that where the actual useful life of an asset (or group of assets) approved by the regulator has changed because of advancement in technology, shifts in market conditions or new regulatory developments, this would have no impact on the monetary sums already invested in the utility's infrastructure. Therefore the investor should be allowed to preserve the value of the investment by recouping the cost of the asset over a time period that is deemed to be reasonable.

4.2.6 The change in JPS' licence terms in 2016, including the depreciation rates in Schedule 4 of the Licence 2016, represents a shift to a new regulatory platform fashioned out of negotiations between the Licensee and the Government. As the terms of the Licence 2016 represent the governing regime now applicable to JPS' licensed operations, the OUR has an obligation to allow JPS to recover its asset impairments and incremental depreciation resulting from this new regulatory framework. The mode of such recovery is through the rates charged to JPS' customers.

Table 4.1 – Depreciable Lives of Asset as per the 2011 & 2016 Licences

ASSET		Depreciable Lives (Yrs.)	
		Licence 2011	Licence 2016
Steam Production Plant:		25	25
Hydraulic Production Plant:			
	Civil Works	50	50
	Mechanical and Electrical Equipment	35	35
	Roads and Bridges	40	40
Other Production Plant (incl Wind & Solar):			
	Civil Works	40	40
	Gas Turbine		24
	Other Power Generation Equipment		20
	Mechanical, Electrical and Accessory Equipment	25 or 20	25 or 20
Transmission Plant:			
	Control/Switch Gear & Transformers	25	25
Distribution Plant:			
	Overhead and Underground Lines	30	30
*	Poles and HPS & MV Streetlights	30	20
	LED Streetlights		15
*	Test Equipment &Meters	25	15
	Supervisory Control & Other Equipment	25	25
	Demand Side Management Systems & Battery Storage		5
General Plant:			
	Structures and Leaseholds	50	50
	Transport Equipment	7	7
*	Tools and Laboratory Equipment	25	10
*	Office and Stores Furniture and Equipment	20	10
*	Communications and Other Equipment	15	5
*	Computer equipment	15	6

4.2.7 Concerning the question of whether the OUR should allow JPS to pass on its depreciation costs to customers based on the approach employed in its Submission, it is important to first understand how these costs were derived.

4.2.8 When compared to the Licence 2011, the depreciable lives of JPS' assets in the Licence 2016 have been shortened in six (6) distinct categories (see Table 4.1 above). Consequently, the application of shorter depreciable lives translate to a quicker recovery of the company's investment in these assets, and hence higher depreciation expenses.

4.2.9 While, in most part, JPS applied the depreciable lives prescribed in Schedule 4 of Licence 2016, to calculate the depreciation costs claimed in its Submission, it did not adhere to this approach in two instances – transmission poles and electromechanical meters. In the case of the poles, even though the new Schedule 4 prescribes a life of twenty (20) years for poles, JPS opted to apply a depreciation rate of thirty (30) years, similar to the rate prescribed in its Licence 2011. JPS justified its position by arguing that "*[b]ased on the operational experience in the company, however, poles are expected to last an average of 25 to 30 years*" and the twenty (20) year depreciable life specified in the Licence 2016 *"would not appropriately reflect the true useful life of this category of assets and would therefore result in an inaccurate reflection of their Net Book Value."*

4.2.10 Similarly, JPS did not abide by the prescribed depreciable life of fifteen (15) years for electromechanical meters prescribed in the Licence 2016. Instead the company applied a useful life of twenty (20) years. JPS contended that: "*Electromechanical meters have been utilized by the company for several years and operational experience has indicated that generally, the meters typically have a life of approximately 25 years, based on normal wear and tear and existing maintenance practices*". However, it opted to apply a reduced life of twenty (20) years since it has embarked on an initiative to phase out the electromechanical meters, and since 2009/2010 it had ceased acquiring these types of meters and replacing them with electronic/smart meters.

4.2.11 Conceptually, there is a difference between the regulatory depreciation rates and the depreciation rates applicable to the financial accounts of a regulated utility.

4.2.12 The regulatory depreciation rates do not have to be the same as those employed by the regulated business in its financial accounts. They are generally designed to achieve specific regulatory objectives, while not ignoring the actual useful life of the assets in question. For the purposes of ratemaking, it is the regulatory useful lives of assets that should be used in the recovery of the utility's depreciation expenses.

4.2.13 On the other hand, the depreciation rates applied by the utility to its financial accounts is governed by International Accounting Standards (IAS). According to PwC in its consultancy report:

"Under the relevant standard, IAS 16 Property, Plant and Equipment, assets should be depreciated over the useful lives. Useful life is the period over which an asset is expected to be available for use by an entity. The determination of useful lives, while involving estimation and judgment, is not simply a matter of policy and choice."

BOX 4.1 – IAS Criteria for Establishing the Useful Life of Assets

IAS 16.56 requires that the determination of useful lives should take consideration of:

- expected usage of the asset based on expected capacity or physical output;
- expected physical wear and tear, which depends on operational factors such as the number of shifts for which the asset is to be used and the repair and maintenance programme, and the care and maintenance of the asset while idle;
- technical or commercial obsolescence arising from changes or improvements in production, or from a change in the market demand for the product or service output of the asset; and
- legal or similar limits on the use of the asset, such as the expiry dates of related leases.

4.2.14 In this regard it may be argued that in the treatment of depreciation in its financial accounts, JPS' obligations under the relevant accounting standards are not dictated by the Licence 2016. However, JPS has an obligation to depreciate its assets strictly in terms of their useful lives if it is to be compliant with IAS. The criteria for the depreciation of assets in a company's financial accounts are summarized in Box 4.1 above.

4.2.15 It may therefore be argued that JPS would have acted appropriately, based on the best information it had at the time, if it had applied the depreciation rates to its assets that are consistent with their useful life.

4.2.16 From a regulatory perspective, the OUR is legally bound to follow the primary and secondary legislation that govern the utilities under its watch. Consequently, the depreciation rates delineated in Schedule 4 of the Licence 2016, irrespective of how they accord with the true useful lives of the assets, are the depreciation rates applicable for regulatory purposes (i.e. the regulatory depreciation rates).

4.2.17 Furthermore, paragraph 5 of Condition 15 of the Licence 2016 asserts *"(i)n respect of the items of plant and equipment listed in Schedule 4 to this Licence, the Office shall not establish depreciation rates lower than the respective rates set out in the said Schedule without consulting the Licensee."*

4.2.18 It is therefore evident that even when there are clear instances where the useful lives of JPS' assets are longer than the years stipulated in Schedule 4 of Licence 2016, the OUR is bound by the regulatory framework to consult with JPS before these can be lowered.

4.3 Accuracy of JPS' Depreciation Calculation

4.3.1 With the assistance of the financial experts engaged by the OUR, PwC, an assessment of JPS' asset impairment and depreciation calculation was done.

4.3.2 From this assessment, the OUR has concluded that even though there appears to be scope for the further fine-tuning of the methodology applied by JPS in its calculation, the results of such refinements would not yield a result that is materially different.

4.3.3 Even though the Licence 2016 prescribes a depreciable life of fifteen (15) years for electromechanical meters, and notwithstanding the observation that the real useful life (under normal circumstances) is twenty-five (25) years, the Office accepts the twenty (20) year depreciable life applied by JPS in its Submission.

Notably, a strict application of the depreciation rate prescribed in Schedule 4 of the Licence 2016 would require a higher revenue recovery, resulting in, all other things being equal, higher tariffs for customers. It is further noted that the adjustment of the depreciation rate as proposed by JPS would result in a rate much closer to the actual useful life of the asset than that prescribed in the Licence 2016. The Office posits that Condition 15 of the Licence 2016 provides a basis for this variation as it states that the depreciable rate of an asset may be *"lower than the respective rates set out in the said Schedule"* if there is consultation with the Licensee.

4.3.4 In light of foregoing, and further to discussions with JPS, the Office accepts the increase in the depreciable lives of electromechanical meters beyond that stipulated in Schedule 4 of the Licence 2016 as reasonable in the circumstances. Consequently, the calculations performed by JPS in the derivation of asset impairment and depreciation expense for this asset have been accepted.

4.3.5 As it relates to the projected investments for 2017 and 2018 that are employed in JPS' calculation, the company will be required to provide auditable details on all the identified projects in its capital expenditure plan before the forward looking depreciation expenses in its Submission can be fully approved. Furthermore, the depreciation expenses approved shall be adjusted appropriately to reflect the evidence produced by JPS with respect to: the realism of the cost projected, the practicality of the timing and the perceived benefit of the specific investment to customers.

4.3.6 It also bears underscoring that even though approval may be given to JPS for a particular set of projects, should the company fail to implement the projects as described in its plan, the Office has a responsibility to make adjustments to the tariff to reflect the variation outside of a five percent (5%) tolerance limit. This is consistent with paragraph 48 of Schedule 3 of the Licence 2016 which states *"If the Licensee does not undertake the investment activities stated in the Business Plan on an annual basis, subject to a variation of 5% of the annual expenditure, the Office shall adjust the next year's rates commensurate with the present value amount that was given to the Licensee in the rate but was not utilised for the investment activities…"*

4.4 Review of the Regulatory Depreciation Schedules

4.4.1 As previously observed, the depreciation rates established in Schedule 4 of the Licence 2016 were based on the 2013 depreciation study conducted by KPMG. The methodology employed in the study was predicated on: (1) a multi-country comparison and (2) a historical evaluation of the useful life of JPS' assets.

Multi-country Comparison Review

4.4.2 KPMG's multi-country comparison employed data on the useful regulatory lives of utility assets in five (5) countries (namely: Trinidad and Tobago ("T&T"), New Zealand, Singapore, Barbados and Guatemala). The evaluation for the historical component of the study examined JPS' asset retirements over the period 2005-13.

4.4.3 In its review, the Office observed that the useful lives in the KPMG study were precise even though the same was not true for two (2) of the five (5) countries in the analysis. For New Zealand and Singapore, the useful lives of the assets were stated as a range. Additionally, in most cases the range was quite wide. The Office therefore concluded that:

- 'Limited meaningful' inference can be drawn from New Zealand and Singapore;
- without precise values for the useful lives of assets in the countries in the KPMG study, it is not possible to assess the reasonableness of the assessed useful lives of JPS' assets. Furthermore, given the wide range provided, testing the validity of the asset lives in the new schedule would yield inconclusive results.

4.4.4 In addition, data limitations inherent in the KPMG study:

- led to a restriction of the comparison for some assets (diesel generators, street lights, meters, furniture and vehicles) to two (2) countries (T&T and Barbados);
- led to a restriction of the comparison for other assets (test equipment, supervisory control systems, electronic equipment, communication

equipment and computer equipment) to three (3) countries (T&T, Barbados and Guatemala);

4.4.5 Consequently, the Office has concluded that the derivations arising from the KPMG study were less than robust and could be improved by:

a) Increasing the sample size of the countries employed.

b) Employing a literature review of articles by experts on the useful life of various assets.

c) Assessing the useful lives of assets based on the Original Equipment Manufacturer's' declarations.

Historical Analysis Review

4.4.6 Challenges were encountered in conducting the review of JPS' historical analysis of depreciable rates because the data received from the company was not consistent with the basic asset categories in the KPMG study. Consequently, it is not possible to provide comment on the efficacy of the grouping framework. Notwithstanding, it would appear that the following intervention may be needed for the grouping of assets in the future:

- The creation of categories would need to be in line with the asset nomenclature in the Licence 2011; and
- The fine-tuning of the categories formations for the assets to arrive at useful conclusions.

4.4.7 Additionally, the analysis revealed that for all the assets for which data is available i.e. poles, communication equipment, computers and furniture, historically, the assets have retired at ages that are more than the useful lives prescribed in the Licence 2016.

Analysis of Depreciation Rates in Other Countries

4.4.8 In an effort to deepen the analysis the depreciation rates for electricity assets in seven (7) countries (namely: Brazil, Australia, Pakistan, India, Sri Lanka, United States of America and Dominica) were examined. From this analysis the Office concluded that:

a) Assets like **diesel generators, meters, poles, street lights and communication equipment**, have a lower useful asset life compared to the value in most other countries mentioned in the peer set above; and

b) Assets like **test equipment, computer equipment and furniture** have comparable values of regulatory useful lives witnessed in other countries.

Case for Review of Schedule 4

4.4.9 In light of the findings from the assessment of the KPMG Depreciation Study, the Office is of the view that a full review of the depreciation rates in Schedule 4 should be done before the next Five Year Rate Review due in 2019.

4.4.10 Paragraph 32 of Schedule 3 of the Licence makes it clear that periodic changes to the depreciation rates in Schedule 4 are contemplated. The said Schedule according to Licence 2016 "*may be updated from time to time in accordance with this Licence*". The Licence 2016 also makes provision for the determination by the Office of the adequacy of the depreciation rates during a rate review. The language of paragraph 5 of Condition 15 is instructive in this regard viz.:

> *"Annual depreciation allowance shall be computed by applying reasonable annual straight line depreciation rates to the value of property, plant and equipment stated at book value. As a part of the Rate Review Process, the Office shall determine the adequacy of the depreciation rates based on a depreciation study conducted by a reputable firm of chartered accountants engaged by the Licensee. In respect of the items of plant and equipment listed in Schedule 4 to this Licence, the Office shall not establish depreciation rates lower than the respective rates set out in the said Schedule without consulting the Licensee."*

4.4.10 In the last paragraph of Schedule 4, the right to the OUR to approve depreciation rates for sub-components of the major plant categories set out in that Schedule is reserved. It states that:

> *"The depreciation rates to be applied to the sub-components of the major plant categories delineated above will be determined with reference to the manufacturer's recommended useful life subject to the approval of the OUR."*

4.4.11 In light of the express provisions in the Licence that permit the OUR to (i) determine the adequacy of depreciation rates, (ii) establish depreciation rates lower than those prescribed in Schedule 4 subject to consultation with the Licensee and (iii) approve the depreciation rates of sub-components of the plant categories mentioned in Schedule 4; the Office has determined that it will be necessary to conduct a review of the depreciation rates set out in Schedule 4.

Determination 2

Based on the evidence that the existing depreciable lives in Schedule 4 of the Licence 2016 may be predicated on an analysis that is less than robust, JPS shall be required to conduct a new depreciation study following guidelines established by the OUR. Such a study is to be conducted prior to its application for the 2019 Five Year Rate Review.

5.0 Extraordinary Rate Review

5.1 Overview

5.1.1 As previously indicated, JPS has applied new depreciation rates to its financial accounts. In doing so the company essentially implemented the useful lives ascribed to its assets in Schedule 4 of the Licence 2016. The resulting claim for a rate adjustment by JPS may be classified in two parts. A retrospective recovery for asset impairment expenses amounting to approximately US$13.4M and a prospective recovery of incremental deprecation that is expected to average at about US$4M per year for 2017 and 2018.

5.1.2 An understanding of the anatomy of the alignment of JPS' costs with its revenue recovery mechanism suggests that the changes to the company's depreciation rates would impact the company's revenue requirement:

- Indirectly through its return on investment via its rate base; and
- Directly through changes in its deprecation expenses

5.1.3 Given the construct of the revenue-cap regime set out in Schedule 3 of Licence 2016, the changes to the tariff arising from the rate review which require the revision of the base revenue requirement must follow:

a) **A forward looking approach**: According to Schedule 3 of the Licence 2016, *"(t)he basis of rate setting shall be the revenue cap principle which looks forward at five (5) year intervals and involves the de-coupling of kilowatt hour sales and the approved revenue requirement."* While an Extraordinary Rate Review inevitably takes place between five-year rate reviews, and therefore cannot look forward for five (5) years, it must still observe the forward looking revenue cap principle.

b) **An incremental approach*:*** Paragraph 61 of Schedule 3 affirms *"(w)here possible, the scope of such extraordinary Rate Review will be limited to the impact of the exceptional circumstances."* In this regard, except for the items directly or indirectly impacted by the re-computation of the useful lives of the assets, all other items in the existing rate base should be held constant.

5.1.4 On the other hand, changes to the tariff arising from this Extraordinary Rate Review which involves the addition or subtraction of a lump sum to the revenue requirement, without actually effecting any revision to the base revenue requirement, requires a Z-factor application.

5.2 Rate Revision

Overview

5.2.1 In effecting higher depreciation rates to its plant and equipment, JPS simultaneously lowered the net book value of its assets since both are inextricably connected. Hence, the company rate base would have changed.

5.2.2 Given this change in the rate base, of necessity the company's rate of return on investment included in the revenue requirement must be adjusted. Likewise, the increase in the depreciation rate expected in 2018 and 2019 ought to be added to the revenue requirement in keeping with the new forward looking revenue cap paradigm.

Approach to Rate Revision

5.2.3 To arrive at the adjusted base revenue requirement, the following principles ought to be followed:

1. Adjusting the rate base approved in the Jamaica Public Service Company Limited Tariff Review for Period 2014-2019 Determination Notice Document Number 2014/ELE/008/DET.004 dated 2015 January 7 (the 2014 – 2019 Determination) incrementally to reflect the 2016 to 2019 reality. This requires finding the expected average changes to the net book value of the company's regulatory approved plant, including new investments, over the 2016 -2019 period.
2. Computing the change in the company's return on investment based on the differences between the 2014 – 2019 Determination rate base and the one derived in the 2016 – 2019 assessment. It is important to note that the Office maintains that all the parameters in the weighted average cost of capital (WACC) approved in the 2014 – 2019 Determination formulation should be held constant. The revenue requirement in the 2014 – 2019 Determination would then be adjusted to reflect the change.
3. Calculating the annual incremental change in the depreciation expenses by finding the average increase in such costs for 2017 and 2018.
4. Determining the effective change in the base revenue requirement (i.e. the sum of the changes to the return on investment and the computed average annual increase in the depreciation expenses for 2017 and 2018).

5.2.4 While JPS expects that the cumulative net book value of its new investments will be approximately US$106M and US$210M in 2017 and 2018 respectively, the OUR has a regulatory obligation to examine the specific projects associated with these planned investments to ensure that they are prudent and efficient. In light of the fact that the depreciation expenses for these investments will be embedded in the tariff before the projects are implemented, any material failure to make the planned investments as scheduled will result in a compensating downward adjustment in the annually adjusted revenue requirement.

5.2.5 Accordingly, JPS shall be required to submit details on each project in its 2017 and 2018 investment plan within thirty (30) days of the date that this Determination Notice takes effect.

5.2.6 The details on each project should include the purpose, the cost, the implementation schedule and the benefit of the specific investment.

5.2.7 The OUR shall, on receipt of the details of the plan for JPS' proposed investments in 2017 and 2018, conduct a review of the plan and make a determination on the revision to the base revenue requirement for 2016 – 2019. The determination on the rate revision shall be published prior to, and take effect on 2017 July 1.

Determination 3

a) The Office has determined that JPS shall provide details on each project in its investment plan for 2017 and 2018. The information provided shall include the purpose, a break-out of the cost into its components, the implementation schedule and the benefit to be derived from the specific investment, including any supporting return on investment projections.

b) The detailed investment plan shall be submitted no later than thirty (30) days after this Determination Notice becomes effective. Thereafter, the OUR shall review JPS' investment plan and make a determination on the changes to the company's base revenue requirement, which shall be published prior to 2017 July 1, being the date the revenue revision shall take effect.

5.3 Z-factor Adjustments

5.3.1 Unlike the forward looking increase in the depreciation expenses discussed above, the asset impairment incurred by JPS in 2016 reflects a cost that has already been booked. As previously established, the fact that the approximately US$13.4M asset impairment was incurred in 2016, means it is not eligible for consideration under a forward looking rate review. However, by dint of the fact that these costs satisfy the special circumstances prescribed in paragraph 46.d.(i) of Schedule 3 of the Licence 2016 and the costs were incurred in the past, such costs would be more appropriately recovered by invoking the Z-factor mechanism.

Table 5.1 – Z-factor Payout Strategies

Startegy	Payout (US$)		Total (US$)
	Year 1	*Year 2*	
One Year Payout Regime	15,146,585	-	15,146,585
Two Year Payout Regime	8,457,579	7,573,293	16,030,872

2016 Asset Impairment (US$)	**13,378,012**
Opportunity Cost (WACC)	**13.22%**

5.3.2 If the recovery of the value of the asset impairment had been allowed immediately, it would have been added to the company's profit. It is therefore only reasonable that the company receives compensation for the opportunity cost on the revenue to be recovered that is equivalent to the asset impairment charge, since the recovery will not commence until 2017 July. In keeping with the opportunity cost mechanism in the formulation of the tariff, the Office deems that the approved WACC is a fair compensation for that opportunity cost.

5.3.3 In that regard, the total amount to be recovered by JPS depends on the regulatory payout strategy. If customers are required to pay the full amount of the asset impairment over one (1) year, then the impact on the tariff would be steeper, but the total amount (i.e. approximately US$15.1M) paid to JPS would be less. On the other hand, a two (2) year payout by customers would see a gentler rise in the non-fuel electricity tariff (assuming all other factors are held constant), but the total payout by customers would be US$16.0M (see Table 5.1 above).

5.3.4 Before taking the results of the Extraordinary Rate Review and Z-factor adjustment into account, given the current growth trend in JPS' sales volumes coupled with relatively low inflation levels, indications are that rate payers are likely to see a reduction in rates, or, at worst, a negligible increase in non-fuel rates, during the Annual Rate Review exercise in 2017 July.

5.3.5 Against this background it has been deemed prudent to implement the Extraordinary Rate Review and Z-factor adjustment in 2017 July. Furthermore, the Z-factor adjustment shall be implemented over a one (1) year period, unless the OUR considers that a two (2) year implementation period would be more appropriate given circumstances prevailing at the time of the 2017 Annual Review exercise.

Determination 4

a) JPS shall be allowed to recover US$13,378,012 of expenses caused by its 2016 depreciation asset impairment charge plus the associated opportunity cost. The recovery of these costs amounting to US$15,146,585 shall be recovered by way of the Z-factor mechanism over a one (1) year period.
b) The Z-factor adjustment approved in this Determination 4 along with the Extraordinary Rate Review adjustment to be approved shall be implemented in 2017 July.
c) Notwithstanding the above, the OUR reserves the right to adjust the timetable of the Z-factor implementation should conditions at the time of implementation so warrant.

6.0 Conclusion

6.1 In JPS' Submission for a rate adjustment which was triggered by an approximately US$13.4M asset impairment in 2016 and an expected average increase in depreciation expenses of US$3.9M over the next two (2) years, it sought to recover these costs by way of an Extraordinary Rate Review.

6.2 Based on the provisions entrenched in the Licence 2016, the Office is of the view that while the claim can be addressed under an Extraordinary Rate Review, it should be separated into two distinct components, each of which merits a different treatment under the existing revenue cap framework. In this regard, the

Office has determined that the approximately US$13.4M asset impairment component of the Submission will be addressed using the Z-factor mechanism because it is retrospective, while the component associated with the increase in depreciation expenses will be handled via a rate revision since this captures costs that are prospective.

6.3 In order to effect the rate revision to address the expected increase in depreciation expenses, the following steps are required:

- an adjustment of the rate of return on investment in the revenue requirement approved in the 2014 - 2019 Determination, so as to reflect the changes derived from a forward looking rate base for the period 2016 – 2019, including consideration of the impact of asset impairments already incurred and accelerated depreciation of certain assets as provided in the Licence 2016.
- an adjustment to the approved depreciation expense component of the revenue requirement in the 2014 -2019 Determination by an amount equivalent to the average annual increase in depreciation expenses expected in 2017 and 2018.

6.4 These changes can only be correctly approved by the Office after it has been satisfied that JPS' proposed investments for 2017 and 2018 can meet the regulatory test of prudency and efficiency. Consequently, the Office has taken the decision that JPS shall provide detailed information on its projected capital investment projects in 2017 and 2018, after which a determination shall be made as to the precise adjustment that should be effected in the approved 2014 – 2019 revenue requirement. Any resulting tariff changes are to be implemented in 2017 July.

6.5 With respect to the Z-factor adjustment, given that the approximately US$13.4M attracts an opportunity cost equivalent to the approved WACC of 13.22%, the required payout would be approximately:

- US$15.1M over a one (1) year period; or
- US$16.0M, if it is spread over a two (2) year period.

6.6 While the OUR has granted approval for the implementation of the Z-factor recovery over a one (1) year period, it has reserved its right to change this position in 2017 July and instead require recovery over a two year period, depending on the tariff given prevailing conditions at that time.

7.0 Listing of Determinations

Determination 1

JPS' asset impairment and incremental depreciation expenses arising from the application of the depreciation rates in Schedule 4 of the Licence 2016 is recoverable in its tariffs and shall be recovered as follows:

d) The asset impairment costs incurred in 2016 shall be recovered applying the Z-factor mechanism;
e) The projected increase in depreciation expenses in 2017 and 2018 shall be recovered by the adjustment of the revenue requirement in the existing tariffs;
f) All projected increases in depreciation expenses in 2019 and beyond shall be addressed in future Five Year Rate Reviews.

Determination 2

Based on the evidence that the existing depreciable lives in Schedule 4 of the Licence 2016 may be predicated on an analysis that is less than robust, JPS shall be required to conduct a new depreciation study following guidelines established by the OUR. Such a study is to be conducted prior to its application for the 2019 Five Year Rate Review.

Determination 3

c) The Office has determined that JPS shall provide details on each project in its investment plan for 2017 and 2018. The information provided shall include the purpose, a break-out of the cost into its components, the implementation schedule and the benefit to be derived from the specific investment, including any supporting return on investment projections.

d) The detailed investment plan shall be submitted no later than thirty (30) days after this Determination Notice becomes effective. Thereafter, the OUR shall review JPS' investment plan and make a determination on the changes to the company's base revenue requirement, which shall be published prior to 2017 July 1, being the date the revenue revision shall take effect.

Determination 4

d) JPS shall be allowed to recover US$13,378,012 of expenses caused by its 2016 depreciation asset impairment charge plus the associated opportunity cost. The recovery of these costs amounting to US$15,146,585 shall be recovered by way of the Z-factor mechanism over a one (1) year period.

e) The Z-factor adjustment approved in this Determination 4 along with the Extraordinary Rate Review adjustment to be approved shall be implemented in 2017 July.

f) Notwithstanding the above, the OUR reserves the right to adjust the timetable of the Z-factor implementation should conditions at the time of implementation so warrant.