



# **CONSULTATIVE DOCUMENT**

**Document Reference: 2024/001/CD-02**

## **DEPRECIATION STUDY**

**For**

**DOMINICA ELECTRICITY SERVICES LTD**

***COMMENTS ON RESPONSES RECEIVED***

***TO FIRST CONSULTATIVE DOCUMENT (Ref #: 2024/001/CD-01)***

*March 2024*

## CONSULTATION PROCESS

Persons who wish to participate in this consultation and to express opinions on this Document are invited to submit comments in writing to the IRC. Responses/ Comments should be sent to:

**Executive Director  
Independent Regulatory Commission  
P.O. Box 1687  
42 Cork Street  
Roseau  
Commonwealth of Dominica**

Responses, clearly showing the Document Reference identification, may be sent by mail or fax to the address or fax number above or by e mail to: [admin@ircdominica.org](mailto:admin@ircdominica.org).

Confidential information provided with responses should be submitted as a separate document and clearly identified as such.

In order to stimulate debate, the IRC will place any responses received on its website at [www.ircdominica.org](http://www.ircdominica.org) immediately following the last date for receipt of responses. Comments on the responses will also be entertained by the IRC which should, likewise, be submitted by the date indicated.

The references and proposed timetable for this consultation are:

**Document Ref No: 2024/001/CD-02**  
**Document Title: Depreciation Study for DOMLEC**

Event	Dates
<b>Publication of Document for Consultation</b>	January 22 <sup>nd</sup> , 2024
<b>In-Person Public Consultation</b>	February 22 <sup>nd</sup> , 2024
<b>First Responses close</b>	February 29 <sup>th</sup> , 2024 (Revised)
<b>Comments on first responses and Second Issue</b>	Friday April 12 <sup>th</sup> , 2024 (Revised)
<b>Second Responses Close</b>	Friday April 26 <sup>th</sup> , 2024 (Revised)
<b>Statement of Results and Commission's Decision</b>	May 31 <sup>st</sup> , 2024 (Revised)

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## DEPRECIATION POLICY FOR DOMINICA ELECTRICITY SERVICES LTD

### Introduction and Background

### Introduction and Background

DOMLEC informed the Commission of its need to initiate a tariff review in 2021 and the process of the tariff review was initiated later that year.

The Commission is of the view that in order to ensure timely completion of its review of any application for a tariff review submitted by DOMLEC it would be minded to consider certain critical issues in separate proceedings leading up to the tariff review itself. These issues, which are critical inputs to the tariff determination, are:

- Depreciation Study
- Determination of Weighted Average Cost of Capital (WACC)
- Determination of Asset Base
- Approval of Investment Programme
- Approval of the Cost of the Service Study

The Commission will, conduct its review of and make determinations on these issues prior to the formal submission of DOMLEC's Intent-to-File on the presumption and condition that the Commission's Decisions on these issues will be final and used by DOMLEC as the input in the tariff calculations.

In this regard, DOMLEC has submitted its Depreciation Study for the Commission's consideration. This consultation document sets out the Commission's thinking in response to DOMLEC's submissions.

The Commission's objective in this proceeding is to consider and decide on:

**The DOMLEC Depreciation study applicable to DOMLEC's assets, and inventory stock.**

## Policy and Legal Framework

The Commission's duties and functions with regards to tariff making are provided for pursuant to provisions in three principal instruments – the Electricity Supply Act (ESA) 2006, No. 10 of 2006 (the Act), the Transmission, Distribution and Supply Licence Document Reference No: 2012/003/D (the Licence) and Commission's Determination as per the "Tariff Regime for Dominica Electricity Services Ltd Document Ref: 2009/004/D " (the Determination).

The Act provides at Section 18

*The Commission shall be independent in the performance of its functions and duties under this Act and shall not be subject to the direction and control of the Government or of any person, corporation or authority, except that the Commission shall have due regard to the public interest and overall Government policy, as embodied in legislation.*

At Section 19

*The Commission shall have sole and exclusive authority to regulate all electricity entities that are subject to this Act and shall have full powers to regulate all licensee with regard to all economic and technical aspects of regulation in accordance with this Act especially with regard to the determination of tariff or electricity charges.*

At Section 20

*(1) The Commission shall, without limiting the generality of this section, have a duty to perform and exercise its functions and powers under this Act in the manner which it considers best calculated to:*

- (a) encourage the expansion of electricity supply in Dominica where this is economic and cost effective and in the public interest;*
- (b) encourage the operation and development of a safe, efficient, and economic electricity sector in Dominica;*
- (d) facilitate the promotion of sustainable and fair competition in the electricity sector where it is efficient to do so;*
- (e)+ protect the interests of all classes of consumers of electricity as to the terms and conditions and price of supply;*
- (g) ensure that the financial viability of efficiently regulated electricity undertakings is not undermined.*

Firstly, the Act gives the Commission full authority to act independently in the performance of its duties under the Act – specifically having regard to public interest considerations and government policy, as embodied in legislation. In providing for its functions the ESA (S20) mandates the Commission to act in a manner which it considers best calculated to achieve several policy objectives and in this regard clauses (a), (b), (d), (e) and (g) of S 20, reproduced above, are instructive.

## Depreciation Study for Dominica Electricity Services Ltd.

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The Licence at *Condition 32* addresses the Price Control Mechanism:

*Tariff Principles:*

*The Commission shall determine the Licensee's rates for electric power pursuant to its powers under the ESA and on the principles set out in the Commission's Decision Document: Tariff Regime for Dominica Electricity Services Ltd.; Document Ref. 2009/004/D as amended from time to time.*

While the Determination sets out in detail the methodology and process for determining the tariff for DOMLEC.

**The following sections of the Determination are particularly instructive:**

*Regulatory Policy objectives*

*The Commission's regulatory policy is to establish a tariff which balances the interests of the consumers and investors alike where the investors have the opportunity to realize a fair return on investment while customers can expect an efficient, responsive and economical service in an environment where the rights of all stake holders are preserved. The Commission will not guarantee a rate of return to the investors but will seek to create a regulatory environment where the incentives are such that the company through efficient operational practices and continual efficiency improvements will have the opportunity to achieve the desired rate of return during any tariff period.*

*Tariff Principles*

*There are basically two models for a tariff structure which could apply in the Dominica situation.*

- 1. A tariff which includes all the costs including the costs of fuel, based on a projected cost of fuel over the tariff period; or*
- 2. A two-part tariff comprising (i) a non-fuel base rate and (ii) a fuel charge, which fully recovers the cost of fuel (subject to efficiency factors) and no more.*

*Both methods use the same techniques and parameters for estimating revenue requirements, the exception being that in the first case fuel is included in the revenue requirements while it is not in the second case. The options for dealing with fuel costs are discussed separately. The Commission has accepted option No. 2 and will allow a 100% pass-through of fuel costs.*

*The average tariff that will be in effect from time to time shall be consistent with the following:*

## Depreciation Study for Dominica Electricity Services Ltd.

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$$RR = OC + FC + GO$$

Where:

RR = Revenue Requirement

OC = Operating Cost

FC = Financing Cost

GO = A provision to recover or return the cost of Obligations imposed by government which were not known or anticipated at the tariff review.

The "Average Rate" then becomes the Revenue Requirement (\$) divided by the forecast sales (kWh).

$$\text{Average Rate} = \text{Revenue Requirement (\$)} / \text{Sales (kWh)}$$

### Revenue Requirements

The Utility's revenue requirement is calculated as the sum of its estimated costs of providing service, where a fair return is included as one of those costs. These forecasted funding levels have to be sufficient to get the required work done without adversely impacting quality of service, or compromising reliability, customer service or safety; any disallowance resulting in deferral of projects or work activities must be carefully considered and weighed against these criteria.

The Revenue Requirement consists of the sum of Operating Costs and Financing Costs required for providing electricity service.

$$RR = \text{Operating Costs} + \text{Financing Costs}$$

Where RR = Revenue requirement

Operating Costs = Costs of labour, non-generation fuel, **depreciation**, income taxes, deferred costs

Financing Costs = Cost of capital which includes cost of debt and equity.

The critical exercise is to determine the forecast of the revenue requirements based on a sustainable and defensible estimate of the expenses for the base year. One approach is where the base year is the year for which the most recent published annual reports and audited financial statements are available and from which the Test Year (the forecasted year), representing a forecasted statement of expenses and costs that are known and measurable is derived.

In any event, in all cases, the expenses that are ultimately approved for inclusion will be those that are determined by the Commission to be prudent.

## Depreciation Study for Dominica Electricity Services Ltd.

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*The non-fuel revenue requirement is developed based on a combination of demonstrated historic costs and forecast costs. The fuel revenue requirement is by definition a 100% pass-through of actual cost and will change monthly according to an agreed-to formula.*

*The revenue requirement for the Base Rate is then:*

$$\text{Base Rate RR} = \text{NFOC} + \text{FC} + \text{GO} + \text{RF}$$

*Where:*

*RR = Revenue Requirement*

*NFOC = Non-Fuel operating Costs (this includes non-generation fuel)*

*FC = Financing Costs*

*GO = Government Obligations, and*

*RF = Regulatory Fees*

Depreciation therefore is prescribed as an element of the non-fuel operating costs (NFOC).

The Determination continues the question of Depreciation to note:

*Depreciation rates can change over time. However, it is incumbent on the utility to provide Depreciation Studies to justify any changes to the estimated removal or decommission cost, the estimated salvage value, and the estimated remaining useful life in years. These are all the estimates necessary to determine annual depreciation: any changes to these parameters must be approved by the regulator to ensure reasonable capital recovery.*

DOMLEC has carried out a Depreciation Study as part of the second attempt for Tariff Review.



## **Consultation Questions:**

The Commission thanks stakeholders who attended the public consultation on the Depreciation Study. The Commission also commended those participants who engaged in the discussions by raising issues, concerns, comments, questions, and provided responses to the five questions raised during the public hearing held on February 22<sup>nd</sup>, 2024. The Commission noted that no written responses were submitted to the IRC following the stakeholder's engagement.

### **Consultation Question No 1:**

*Do respondents agree that it is not only an order but also prudent for the Commission to accept for its consideration the Depreciation Study submitted by DOMLEC?*

### **Consultation Question No 2:**

*Do respondents agree to the Depreciation Rate Study submitted by DOMLEC and the use of the stated methodology in the determination of the depreciation quantities for DOMLEC's depreciable plant assets that results in the total decrease in depreciation expense by? If not, what other established approach should be considered?*

### **Consultation Question No 3:**

*Do respondents agree to the approach adopted by Alliance Consulting Group to evaluate the mortality characteristics and life spans of DOMLEC's assets in service. If not, what other approach could be adopted?*

### **Consultation Question No 4:**

*Do respondents agree to the determination of the Composite Depreciation rate and expense for DOMLEC's assets shown in appendix A of DOMLEC's Depreciation Rate Study which is appended as Appendix 1 with this Consultative Document?*

### **Consultation Question No 5:**

*Do respondents have any other (related) comments or recommendations?*

## Comments on Responses

### Consultation Question No 1:

*Do respondents agree that it is not only an order but also prudent for the Commission to accept for its consideration the Depreciation Study submitted by DOMLEC?*

The background to this question reflects upon aspects of the regulatory framework that establishes the mandate for the Commission to execute its duties and functions. It raises the concerns whether the stakeholders are of the view that the Commission act contrary to its own Decision Document and adhere to the due process for the implementation of a depreciation study for DOMLEC ahead of the second tariff review.

The Regulatory policy establishes the tariff framework as mandated in the Tariff Regime for DOMLEC Decision Document Ref 2009/004/D connotes that *“DOMLEC should carry out a Depreciation Study prior to the second tariff filing”*. It is incumbent on the utility to justify any changes to the estimated removal or decommission costs, the estimated salvage value and the estimated remaining useful life in years. These are all the estimates necessary to determine annual depreciation, any changes to these parameters have to be approved by the regulator to ensure reasonable capital recovery.” This statement sets the guidelines that the Commission is not in breach of its rules to consider a depreciation study prior to the second tariff filing.

The Commission’s informed participant of its Regulatory objective to set a tariff which balances the interests of the consumers and investors alike where the investors can realize a fair return on investment. The Commission has created a regulatory framework where DOMLEC, through efficient operational practices and continual efficiency improvements, will have the opportunity to achieve the desired results during any tariff period.

In response to DOMLEC’s engagement with stakeholders DOMLEC stated: *“The purpose of this study is to develop updated depreciation rates using the straight-line method, unit or individual items procedure, whole life technique for electric plant recorded on the books of DOMLEC as of December 31, 2021.”* This study reviews the existing useful life or average service life for each category and subcategory considering the physical and functional characteristics, prior practices and future expectations”.

DOMLEC explained that the expected lives for some of these assets changed from what was used in the previous depreciation study. That technology is the driving force for changes in the assets service life and this something results in shorter lives in some cases. Additionally, differences in the type of materials, operating machine, maintenance scheduling can contribute to the changes to the average service life of assets over time. Hence, these are some of the factors that initiate the need for the updates to the depreciation study.

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## Depreciation Study for Dominica Electricity Services Ltd.

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At the end of the presentations from IRC and DOMLEC, and following responses from the participants, it was found that there were no objections or adverse comments in response to Question No 1.

The Commission is of the view that it can and should pursue the objectives of this proceeding to consider and decide on: **Application of Depreciation study for DOMLEC's Assets.**

### Consultation Question No 2:

*Do respondents agree to the Depreciation Rate Study submitted by DOMLEC and the use of the stated methodology in the determination of the depreciation quantities for DOMLEC's depreciable plant assets that results in the total decrease in depreciation expense by \$2,482,248.00? If not, what other established approach should be considered?*

### Consultation Question No 3:

*Do respondents agree to the approach adopted by Alliance Consulting Group to evaluate the mortality characteristics and life spans of DOMLEC's assets in service. If not, what other approach could be adopted?*

The Commission is of the view that Questions 2, and 3 are closely linked or interrelated since these questions address the methodology and approach that led to reduction in the depreciation calculation.

The Commission's concern that impelled these questions arises from the applicable accounting conventions and Generally Accepted Accounting Principles (GAAP) that establish the various methodologies for depreciation calculation. Additionally, in formulating these questions, the Commission seeks to affirm to participants, the comprehensive work undertaken to arrive at a proposed depreciation amount that can be considered justifiable.

In the Commission's deliberations, it was noted that the Tariff Regime for DOMLEC (2009/004/D outlined the methodology for the determination of the depreciation rate "*The depreciation calculation can be made using a straight-line remaining life basis method which uses depreciation rate based on net salvage, average service lives, remaining lives and mortality dispersion patterned developed from a depreciation study*"

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## Depreciation Study for Dominica Electricity Services Ltd.

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The Commission noted that depreciation is a significant expense for most utilities, and it is the means by which the utility recovers from ratepayers' funds (over time) provided by investors (up front) for the construction or acquisition of tangible assets and utility plant. Since the depreciation expense is an estimate, any over or under recovery is reconciled in future depreciation charge.

The onus is on the regulator to engage with an agency to assist the Commission in this tariff review. Mrs. Lamis Aljounaidi, Regulatory Consultant from Paris Infrastructure Advisory (PIA), is a recognized expert in energy economics, tariff setting and financing. She has sixteen years of experience in energy infrastructure development and economics focused on renewables and networks. The Regulatory Consultant supported over 50 projects through different development and financing stages including regulation, WACC calculations, pricing, market design for investment incentives. She has experience working in Dominica, to support the regulator through the development of a geothermal IPP (2018-2020) during which she evaluated the DOMLEC-DGDC PPA, did Electricity Demand Forecasts, and review of the Project's Financial Model. The Commission advised participants that the Regulatory Consultant has the professional competence and expertise to assist the IRC in conducting a comprehensive review and analysis of DOMLEC's Depreciation Study.

The Commission conceded to the fact that Mr. Dane Watson is the Managing Director of Alliance Consulting Group and has the competencies and expertise to conduct the Depreciation Rate Study for DOMLEC. In his statement to participants, Mr. Watson stated:

*"I am a certified Depreciation professional, an electrical engineer, a professional engineer. I led engineering groups and accounting groups within one of the largest electric and gas utilities in North America for about twenty years before I started Alliance Consulting Group. We have done approximately 400 studies all over North America and well beyond since that time."*

DOMLEC submitted its Depreciation rate study as of December 2021 to the Commission in November 2022. The existing depreciation rates computed annual depreciation of \$19,871,005.00, while the proposed rate derived annual depreciation of \$17,388,572.00. This resulted in a decrease in depreciation of \$2,482,248.00 as shown in the tables below.

**Depreciation Study for Dominica Electricity Services Ltd.**

Table 1 below summarizes DOMLEC's depreciation calculation:

**TABLE 1: DOMLEC's depreciation calculation on Building & Construction, Plant & Machinery and Network, Vehicles, Office Equipment, Software & Intangible Assets**

Asset Category	Existing Annual Depreciation Rate	Annual Accrual Amount	Proposed Annual Depreciation Rate	Proposed Annual Depreciation Amount	Change in Depreciation Expense
	%	EC\$	%	EC\$	EC\$
<b>Building &amp; Construction</b>	<b>2.10%</b>	<b>1,369,010.62</b>	<b>2.10%</b>	<b>1,369,545.85</b>	<b>535.23</b>
Headworks & Pipeline - Trafalgar	2.00%	20,884.27	2.04%	21,301.96	417.69
Headworks & Pipeline - Padu	2.00%	37,133.69	2.00%	37,133.69	-
Other-General Purpose	2.00%	146,073.39	2.22%	162,141.47	16,068.07
New Hydro Building	2.00%	915,708.94	2.00%	915,708.94	-
Power House - Hydro NT and Padu	2.00%	10,771.68	2.00%	10,771.68	-
Power House - Diesel	2.90%	60,144.69	3.80%	78,810.29	18,665.59
BC4 Diesel & Hydro	2.90%	2,925.00	2.07%	2,087.84	(837.15)
BC4 Melville Hall Fuel Platform	2.90%	108.49	2.86%	106.99	(1.50)
Office & Stores	2.75%	24,345.21	2.22%	19,653.22	(4,691.99)
Fencing - Trafalgar & Padu	2.75%	1,308.37	2.22%	1,056.21	(252.16)
General Purpose	2.75%	149,606.89	2.22%	120,773.56	(28,833.33)
<b>Plant and Machinery</b>	<b>6.88%</b>	<b>6,296,216.42</b>	<b>6.02%</b>	<b>5,504,659.22</b>	<b>(791,557.20)</b>
Hydro Plant (Laudat and Padu)	2.25%	387,411.59	2.00%	344,365.86	(43,045.73)
Hydro Plant (Trafalgar)	2.25%	15,864.89	2.04%	14,384.16	(1,480.72)
Hydro Accessories	2.25%	81,582.17	2.00%	72,517.48	(9,064.69)
Diesel Plant - Medium Speed	4.25%	1,590,413.58	3.35%	1,253,620.12	(336,793.46)

## Depreciation Study for Dominica Electricity Services Ltd.

Asset Category	Existing Annual Depreciation Rate	Annual Accrual Amount	Proposed Annual Depreciation Rate	Proposed Annual Depreciation Amount	Change in Depreciation Expense
	%	EC\$	%	EC\$	EC\$
Diesel Plant - High Speed	6.67%	457,178.27	4.85%	332,430.98	(124,747.30)
Diesel Plant - FC5 Addition (Spares)	4.25%	165,065.34	3.35%	130,110.33	(34,955.01)
Major Spares - MAN (FC10-12)	5.56%	55,437.18	3.35%	33,401.90	(22,035.28)
Major Spares - SWD (Watzillia, FC1 & FC4)	16.67%	34,367.21	3.35%	6,906.43	(27,460.78)
Major Spares - CAT 3516 (FC7-8 and SL except SL8)	6.67%	80,011.41	4.85%	58,179.21	(21,832.20)
Major Spares - CAT 3612 (FC 5-6)	4.25%	41,154.37	3.35%	32,439.32	(8,715.04)
Overhauls - CAT 3516	27.25%	49,373.96	50.00%	90,594.42	41,220.46
Overhauls - CAT 3612	44.44%	127,657.98	33.33%	95,743.48	(31,914.49)
Overhauls - All others Medium Speed	40.00%	1,907,599.95	33.33%	1,589,507.66	(318,092.29)
Overhauls - All others High Speed	40.00%	568,090.40	50.00%	710,113.00	142,022.60
Diesel Accessories	4.25%	299,147.69	4.32%	304,074.83	4,927.14
General Accessories	4.25%	24,868.88	4.32%	25,278.49	409.61
Tool & Testing Equipment	10.00%	410,991.55	10.00%	410,991.55	-
Solar Project Tarou			4.00%		
<b>Network, Vehicles, Office Equipment, Software &amp; Intangible assets</b>	<b>%</b>	<b>EC\$</b>	<b>%</b>	<b>EC\$</b>	<b>EC\$</b>
<b>Transmission &amp; Distribution</b>	<b>4.57%</b>	<b>8,720,882.24</b>	<b>3.52%</b>	<b>6,723,776.51</b>	<b>(1,997,105.73)</b>
Networks	4.50%	7,382,045.37	3.01%	4,937,768.12	(2,444,277.24)
Networks - Meters	5.00%	1,338,836.87	6.67%	1,786,008.38	447,171.51
<b>Vehicles</b>	<b>14.14%</b>	<b>1,066,787.27</b>	<b>12.63%</b>	<b>952,524.03</b>	<b>(114,263.25)</b>

**Depreciation Study for Dominica Electricity Services Ltd.**

Asset Category	Existing Annual Depreciation Rate	Annual Accrual Amount	Proposed Annual Depreciation Rate	Proposed Annual Depreciation Amount	Change in Depreciation Expense
	%	EC\$	%	EC\$	EC\$
Light	16.67%	495,471.04	16.67%	495,471.04	-
Heavy	12.50%	571,316.23	10.00%	457,052.98	(114,263.25)
<b>General Property</b>	<b>14.47%</b>	<b>2,418,107.97</b>	<b>16.89%</b>	<b>2,838,251.10</b>	<b>420,143.13</b>
Computers	25.00%	291,227.40	25.00%	291,227.40	-
Software - CIS, Enterprise	14.00%	1,091,900.60	20.00%	1,559,858.00	467,957.40
Software - SCADA	14.00%	5,842.34	14.29%	5,963.36	121.02
Office Equipment (printers & handheld devices)	20.00%	142,167.70	20.00%	142,167.70	-
Office Equipment (shredders, copiers, etc.)	14.00%	656,742.57	14.29%	670,346.52	13,603.95
Office Furniture	10.00%	179,647.70	6.67%	119,825.02	(59,822.68)
Building Contents - AC & Refrigerators	10.00%	48,863.10	10.00%	48,863.10	-
Residential Furniture	10.00%	1,716.56	N/A		(1,716.56)
<b>TOTAL</b>		<b>19,871,005</b>		<b>17,388,757</b>	<b>(2,482,248)</b>

It was noted that both PIA/IRC reviewed and analyzed DOMLEC's initial submission of the depreciation study and the shared data files containing depreciation calculation. The decrease in the proposed depreciation amount resulted from the prolonged life span of some assets under the category of Building and Construction and Transmission and Distribution assets. DOMLEC calculated depreciation expense for its depreciable assets using the whole life method as follows:

$$\text{Annual Accrual Rate} = \frac{100\% - \text{Net Salvage \%}}{\text{Average Service Life}}$$



## Depreciation Study for Dominica Electricity Services Ltd.

The whole life method recovers the original cost of depreciable assets over the average service life adjusting for salvage/scrape values. However, DOMLEC did not factor for salvage value in the depreciation calculation. DOMLEC computed depreciation based on the average age of all assets in use including fully depreciated assets, weighted using the original value of sub- category of Building and Construction. This led to an overestimate of depreciation for this subcategory of assets.

PIA/IRC agreed that the depreciation method that could lead to the most accurate results is to exclude fully depreciated assets and have the assets weighted using the net value rather than the original value. IRC and DOMLEC convened a special meeting to determine the depreciation method that would yield the best result. Technical discussions were also held separately among both Consultants. The Regulatory Consultant /PIA carried out comprehensive review of the shared data containing 2,650 list of assets and proposed that the depreciation method be adjusted to include the remaining useful life method as follows:

$$\text{Adjusted Depreciation formula} = \frac{\text{Plant cost} - \text{Actual Depreciation Reserve}}{\text{Net Life Span} - \text{Age of the assets}}$$

The Consultancy Groups agreed to use the remaining useful life method to compute depreciation for DOMLEC's depreciable assets. DOMLEC's re-submitted a revised accounting data with depreciation calculation for the 2,650 items prepared by its consultant. The depreciation amount connotes the life span/ and average age of each item under each subcategory of assets.

The IRC's Regulatory Consultant conducted further analysis of the shared data file and re-calculated depreciation amount for the 2650 items using the remaining useful life depreciation method. Difference options were utilized that considered:

1. The inclusion of fully depreciated assets among the list of items and weighted the assets' gross value.
2. The exclusion of fully depreciated assets among the list of items and weighted the assets by gross value.
3. The exclusion of fully depreciated assets among the list of items and weighted the assets by net value.
4. The exclusion of fully depreciated assets among the list of items and weighted the assets by annual depreciation.

The result shows that the average age of these sub-category of assets based on Option 1 and 2, resulted in higher average age. This could further lead to a higher depreciation expense. Accordingly, the review demonstrates that option 4 is the most accurate approach.

DOMLEC's Consultant further adjusted the depreciation amount based on the remaining useful life. DOMLEC and IRC agreed to the revised proposed depreciation amount of \$12,710,427.64.



## Depreciation Study for Dominica Electricity Services Ltd.

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In summary, following IRC and DOMLEC presentations that formed the basis for discussion for Question 2 and 3, the stakeholders raised questions and comments on a depreciation methodology that could lead to the best result. The IRC and DOMLEC provided further clarity on the depreciation method and approaches used.

In the final analysis, it was found that participants had no further objections and conceded with the Commission and DOMLEC view that it can and should pursue the objective of the proceeding to consider and decide on: **The remaining useful life method to calculate depreciation and applied depreciation rate for DOMLEC depreciation assets.**

### Consultation Question No 4:

*Do respondents agree to the determination of the Composite Depreciation rate and expense for DOMLEC's assets shown in appendix A of DOMLEC's Depreciation Rate Study which is appended as Appendix 1 with this Consultative Document?*

The background to this question arises from the proposed depreciation amount as shown in appendix A of DOMLEC's Depreciation Study and to point any concern that stakeholders may have regarding the assignment of depreciation rates to the list of assets.

The Commission noted that given the utility's investment in plant assets it is likely that the Depreciation Rate can change over time. The impact of technological change, wear and tear, obsolescence and any other contingent factors on a particular asset or group of assets can contribute to the average service life of the assets. The depreciation study aims to recover only assets that should be allowed in the rate base. **The Commission also advised stakeholders that the higher the depreciation expense, the higher the rates. On the contrary, a lower depreciation expense could contribute to a lower electricity rate to customers.**

DOMLEC's Consultant noted that in the initial depreciation study, annual depreciation of approximately \$20 million was calculated using the whole life; but annual depreciation was reduced to \$13 million utilizing the remaining useful life and excluding of fully depreciable assets.

DOMLEC's Consultant explained further – *“that depreciation expense should be reduced annually by around \$7 million. That is because we have seen in a number of cases that the lives were increasing to some degree. The first one is building and construction; there was very little change in that, a slight increase in life which created a slight increase in depreciation expense. The largest change was in the plant and machinery which basically is the hydro facilities and the diesel facilities. The hydro facilities' life was extended by some amount which caused \$4 million of the \$7 million decrease in depreciation expense annually.”*

## Depreciation Study for Dominica Electricity Services Ltd.

In summarizing and following presentation from the IRC and DOMLEC, the Commission noted that stakeholders did not express further comments nor disagreement to the proposed depreciation amount and depreciation rate assigned to DOMLEC's depreciable assets that form the basis for Question 4.

The Commission is of the view that it can and should pursue the objectives of this proceeding to consider and decide on: **The proposed depreciation rate based on the depreciation calculation of \$12,710,427.64 as shown in Table 2 below, the same should be applied to the DOMLEC's depreciable assets.**

**TABLE 2: Total Depreciation Amounts for Building & Construction, Plant & Machinery, Transmission & Distribution and Office Equipment**

Assets	Plant Cost	Proposed Depreciation Rate	DOMLEC Accepted Depreciation Submission
	EC\$		
<b>BUILDING AND CONSTRUCTION</b>	<b>65,080,265</b>	<b>1.96%</b>	<b>1,277,299.00</b>
Headworks & Pipeline - Trafalgar	1,044,214	2.30%	24,054.00
Headworks & Pipeline - Padu	1,856,685	1.90%	35,283.00
Other-General Purpose	7,303,670	3.70%	270,210.00
New Hydro Building	45,785,447	1.04%	475,055.00
Power House - Hydro NT and Padu	538,584	0.40%	2,169.00
Power House - Diesel	2,073,955	11.20%	232,284.00
Melville Hall & Sugar Loaf BC Total	104,603	1.56%	1,630.00
BC4 Diesel & Hydro	100,862	0.00%	
BC4 Melville Hall Fuel Platform	3,741	0.00%	
Office & Stores	885,280	3.13%	27,703.00
Fencing - Trafalgar & Padu	47,577	1.62%	769.00
General Purpose	5,440,250	3.83%	208,134.00
<b>PLANT AND MACHINERY</b>	<b>159,623,268.23</b>	<b>0.02</b>	<b>1,891,807</b>
Hydro Plant (Laudat and Padu)	17,218,293	0.23%	39,802
Plant - Hydro Plant Padu Total	2,303,774	0.00%	-
Plant - Hydro Plant Laudat Total	14,914,519	0.00%	
Plant- Hydro Plant Trafalgar Total	705,106	1.53%	10,820
Plant - Hydro Accessories Total	3,625,874	1.29%	46,631
Plant- Diesel Plant Total	44,275,743	1.36%	601,230
Diesel Plant - Medium Speed	37,421,496	0.00%	
Diesel Plant - High Speed	6,854,247	0.00%	
Diesel Plant - FC5 Addition (Spares)	3,883,890	0.65%	25,093
Major Spares - MAN (FC10-12)	997,072	2.21%	22,011

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Assets	Plant Cost	Proposed Depreciation Rate	DOMLEC Accepted Depreciation Submission
	EC\$		
Major Spares - SWD (Watzillia, FC1 & FC4)	206,162	0.00%	-
Major Spares - CAT 3516 (FC7-8 and SL except SL8)	1,199,571	3.30%	39,554
Major Spares - CAT 3612 (FC 5-6)	968,338	2.82%	27,355
Overhauls - Total	6,657,674	9.28%	617,701
Overhauls -CAT 3516	181,189	0.00%	
Overhauls - CAT 3612	287,259	0.00%	
Overhauls - All others Medium Speed	4,769,000	0.00%	
Overhauls - All others High Speed	1,420,226	0.00%	
Diesel Accessories	7,038,769	3.44%	241,821
General Accessories	585,150	1.33%	7,770
Tool & Testing Equipment	4,109,915	5.16%	212,020
<b>TRANSMISSION &amp; DISTRIBUTION</b>	<b>190,822,190</b>	<b>4.08%</b>	<b>7,777,063</b>
Networks	164,045,453	2.49%	4,079,422
Networks - Meters	26,776,737	13.81%	3,697,641
<b>Vehicles</b>	<b>7,542,762</b>	<b>5.63%</b>	<b>424,777</b>
Light	2,972,232	6.78%	201,625
Heavy	4,570,530	4.88%	223,152
<b>OFFICE EQUIPMENT</b>	<b>28,711,939</b>	<b>8.02%</b>	<b>1,339,482</b>
Computers	1,164,910	6.34%	73,837
Computers - Laptop total	703,629	8.31%	58,488
Computer Total	461,281	3.33%	15,350
Intangible Software All	7,841,021	8.87%	695,317
Software - CIS, Enterprise	7,799,290	0.00%	
Software - SCADA	41,731	0.00%	
Office Equipment (printers & handheld devices)	710,839	5.10%	36,223
Printers and Handheld Devices -Printer Total	362,577	9.99%	36,212
Printers and Handheld Devices -All in One Total	348,262	0.00%	11
Office Equipment (shredders, copiers, etc.)	4,691,018	9.39%	440,544
Furniture -Office Total	2,285,108	4.09%	93,560
Office Furniture	1,796,477	0.00%	
Building Contents - AC & Refrigerators	488,631	0.00%	
Residential Furniture	17,166	0.00%	
<b>Total Depreciation Amount</b>	<b>\$ 371,626,835</b>		<b>\$12,710,427.64</b>

## Depreciation Study for Dominica Electricity Services Ltd.

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### Consultation Question No 5:

*Do respondents have any other (related) comments or recommendations?*

The background to these questions arises from any matter that the Commission believes that may be of concern to shareholders.

### **Other concerns raised at the Public Hearing:**

1. *Concern was raised whether the new 10MW geothermal power plant to be built at Laudat would contribute to a higher depreciation amount.*  
Participants were informed that the geothermal plant is not part of DOMLEC's asset base. The Geothermal Power Plant Project is a separate entity managed by the Geothermal Power Company of Dominica (GPCD) 2023 formed as an Independent Power Producer. DOMLEC will only be required to purchase energy from the company in compliance with the established Power Purchase Agreement (PPA) established between the two parties.
2. *The reason for accepting the whole life versus the remaining life method in the initial submission was raised.*

DOMLEC's Consultant informed participants:

*"As a Depreciation Analyst, we support and use remaining useful life to calculate depreciation for various companies. However, the whole life was used to calculate depreciation in the initial submission of depreciation study because this was the preferred method utilized by DOMLEC and approve by the IRC in the 2014 depreciation study. "*

The Consultant further expounded that the approach and method utilized to determine depreciation agreed upon by DOMLEC, IRC and both Consultancy Group is good, sound, solid and in line with international best practice.

**The Commission has taken note of these concerns.**

## Concluding Comments

The consultation thus far has reinforced the Commission's views as expressed in the Consultative Document. The Commission is of the view that establishing depreciation rates and using remaining useful lives of the utility's assets is a critical factor in tariff making as these can have a direct impact on the resultant rates charged to consumers.

The alignment of depreciation rates used for financial reporting with rates used for tariff making, though desirable is not necessarily mandatory and that, in the Commission's view, the objective is to ensure that the rates used for computation of depreciation expense in the test year are likely to result in a depreciation expense that is fair and reasonable in that year and during the initial 3-year tariff period.

The Commission has not heard any arguments that would affect the valuation of the assets from the public and other stakeholders. The IRC rely on the audit of fixed asset carried out by the Commission and the external auditor reviews that confirm the historical costs used to determine the depreciation expense for the depreciable asset categories to include:

- Buildings and Construction
- Plant and machinery - Hydro.
- Network
- Tools and Equipment
- Vehicles
- Office Furniture
- Office Equipment (Appliances)
- Software (Intangible Assets)