CONSULTATIVE DOCUMENT

Document Reference: 2014/001/CD-01

DEPRECIATION POLICY

For

DOMINICA ELECTRICITY SERVICES LTD

JANUARY 2014

Independent Regulatory Commission
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CONSULTATION PROCESS

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In order to stimulate debate, the IRC will place any responses received on its website at 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 time table for this consultation are:

Document Ref No: 2014/001/CD-01
Document Title: Depreciation Policy for DOMLEC

Event	**Proposed Date**
Publication of Document	February 7, 2014
First Responses close	March 7, 2014
Comments on first responses and Second Issue	March 24, 2014
Second Responses Close	April 18, 2014
Statement of Results and Commission's Decision	May 26, 2014

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DEPRECIATION POLICY FOR DOMINICA ELECTRICITY SERVICES LTD

Introduction and Background

The Commission issued two new Licences, a Generation Licence and a Transmission Distribution and Supply Licence, to Dominica Electricity Services Ltd (DOMLEC) both which became effective on January 1 2104. These two Licences complete the process for aligning the regulatory framework for DOMLEC with the principles and intent of Electricity Supply Act 10 of 2006 (ESA) established a regime of separate licensing for each of the business sectors of public electricity supply undertakings – generation, transmission distribution and supply.

The Transmission, Distribution and Supply Licence (the Licence) sets out the provisions for conducting tariff reviews and, at Condition 33, specifically addresses the procedure for the initial tariff review as follows:

> *DOMLEC shall, within 7 days of the Commencement Date, submit a timetable for the filing of an application to the Commission for a tariff review, and that the date for such a filing shall not be later than 9 months after the Commencement Date without the approval of the Commission. The application for a tariff review shall be in the format set out in the Commission's Decision Tariff Regime for Dominica Electricity Services Limited - Document Ref 2009/004/D and the tariff review shall be conducted in accordance with the process set out in that Decision.*

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 Policy
- Determination of Weighted Average Cost of Capital (WACC)
- Determination of Asset Base
- Approval of Investment Programme

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

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

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

1) Depreciation policy and rates applicable to DOMLEC's Assets; and
2) The application of the rates to the existing assets

Policy and Legal framework

The Commission's duties and functions with regard to tariff making are provided for pursuant to provisions in three principal instruments – the Act, the Licence and Commission's Determination "Tariff Regime For Dominica Electricity Services Ltd Document Ref: 2009/004/D 9" (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 licencee 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 efficient 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 a number of policy objectives and in this regard clauses (a), (b), (d), (e) and (g) of S 20, reproduced above, are instructive.

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 treating 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:

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).

Average Rate = Revenue Requirement ($) / 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 = Operating Costs + 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.

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:

Base Rate RR = NFOC + FC + GO + 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 on 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 have to be approved by the regulator to ensure reasonable capital recovery.

DOMLEC will carry out a Depreciation Study prior to the second Tariff Review.

The Commission notes that the Determination provides for a Depreciation Study to be done prior to the second Tariff Review. While the Determination states that the depreciation study be done prior to the second tariff review it does not stipulate that such a study could not be done prior to the first and the Commission is therefore of the view that it is not in breach of its rules to consider a depreciation policy based on a Depreciation Study submitted by DOMLEC prior to the first tariff review. In order to clarify the situation, it is important to note that the Commission had anticipated that DOMLEC would have submitted a tariff review application immediately after the Determination came into effect in 2009 and it was prepared at the time, being aware that new Licences would not be in place until some years later, to conduct the tariff review on the basis of the depreciation policy existing at the time. As the tariff review did not take place at that time, the Commission believes that it would be prudent to conduct the first tariff review after the issuance of the Licence having the benefit of recent

Depreciation Study.

Consultation Question No 1:
Do respondents agree that it is not only in order but also prudent for the Commission to accept for its consideration the Depreciation Study submitted by DOMLEC prior to the first tariff review?

Setting Depreciation Rates

The purpose of depreciation is to allow a utility to recover the original cost (less net salvage) of fixed capital investment over the useful life of the plant by means of an equitable plan of charges through operating expenses. Depreciation is often times the most 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. This systematic recovery of an asset's cost over its useful life is recorded in the company's income statement as an expense. In determining the depreciation rates to recover the cost of capital assets over their remaining useful life, the only assets to be considered are those that have been allowed into rate base. Since the depreciation expense is an estimate, any over or under recovery is reconciled in future depreciation charges. The utility should therefore conduct depreciation studies periodically.

That the determination of depreciation rates is a critical process for regulatory commissions is emphasized by the National Association of Regulatory Utility Commissioners (NARUC) of the United States where it comments in its 1996 publication "Public Utility Depreciation Practices"[1]:

> "Prescribing depreciation rates is one of the most important regulatory Commission activities impacting customer rates. The estimation of depreciation parameters is not, of course, a scientifically exact process, since it involves a large element of informed judgment. At the same time it cannot be an arbitrary figure selected for convenience because it must allocate the full cost over the life of the property in a rational manner. The depreciation rate is a calculated figure and there is a zone of reasonableness within which the underlying parameter may be expected to lie. It is essential to remember that depreciation is intended only for the purpose of recording the periodic allocation of cost in a manner properly related to the useful life of the plant. It is not intended for example to achieve a desired financial objective or to find the modernization programs."

While the Commission is guided by the principles outlined, it is of the view that in considering depreciation it should also be mindful of the impact of technological

[1] Reference taken from FTC Barbados Decision No 1 of 2009"Depreciation Policy – Barbados Light and Power, 2009-02-25"

change, wear and tear, obsolescence and any other contingent factors on a particular asset or group of assets.

The Determination provides for the depreciation calculation to be made using a straight-line remaining life basis method, which uses depreciation rates based on net salvage, average service lives, remaining lives and mortality dispersion patterns developed from a depreciation study; calculated as follows:

Annual Depreciation= (B-A+R-S) ÷ RL

Where:

B= Original Cost (or Net Book Value)
A= Accumulated Depreciation
S= Estimated Salvage Value
RL= Estimated Remaining Useful Life in years

It is in the context of the foregoing that the Commission's objective in this proceeding is, as stated earlier, to consider and decide on:

1) Depreciation policy and rates applicable to DOMLEC's Assets; and
2) The application of the rates to the existing assets

Consultation Question No 2:
Do respondents agree with the Commissions objectives stated in (1) and (2) above? If not, what are the other considerations that the Commission should address?

Depreciation policy and rates applicable to DOMLEC's Assets

DOMLEC's Proposal

In support of its request for a review of the Depreciation Policy, DOMLEC provided a Depreciation Study, dated September 2013, conducted on its behalf by American Appraisal. The study seeks to assist DOMLEC to establish its "depreciation rates for its depreciable electric utility assets for regulatory and financial reporting purposes" as at December 2012. The Commission has noted that American Appraisal is an internationally recognized firm of valuation consultants that operates globally with offices in the Americas, Europe, the Middle East and Asia-Pacific regions. It has an extensive portfolio of electric utilities as clients and has conducted depreciation rate and remaining useful life studies for utilities such as Barbados Light and Power (Barbados), Lucelec (St Lucia) in the region and Alabama Power Company, Sothern Power Company, Georgia Power Company and Mississippi Power Company in the United States of America to name a few. American Appraisal had also been contracted by DOMLEC, during the licences negotiations, to carry out a Remaining Useful Life Assessment of its generating plant.

The Commission is of the view therefore that American Appraisal has the competencies to conduct the Depreciation Rate Study.

The Expert assigned by American Appraisal to carry out the Study was Peter Huck P.E., a senior manager of the Industrial Valuation Group of American Appraisal and heads their electric and gas utilities practice. He has presented testimony before the Federal Energy Commission and several state regulators in the United States of America as well as before the Fair Trading Commission of Barbados. It is noteworthy that the Fair Trading Commission of Barbados accepted him as the Expert Witness for Barbados Power and Light in a similar proceeding in 2009[2].

The Commission believes that Peter Huck P.E. has the necessary expertise and experience to advise on depreciation rates and therefore accepts the report authored by him to be that of an expert in the field.

Depreciation rates to be used in the determination of tariffs for DOMLEC
Based on the study, DOMLEC has proposed at Exhibit A appended to the Study, the following deprecation rates as policy:

Asset Category – Buildings and construction

Asset Category		Present Depreciation		Proposed Depreciation	
		Rate (%)	Implied Life (yrs)	Rate (%)	Average life (yrs)
Buildings and Construction					
	Head works & Pipeline - Trafalgar	3.33	30		
	Head works & Pipeline - Padu	3.33	30		
	Power House	2.50	40		
	Melville Hall & Sugar Loaf	2.50	40		
	Office & Stores	2.50	40		
	Fencing – Trafalgar & Padu	2.50	40		
	Fond Cole	2.50	40		
	New Hydro Building	2.90	35		
	Generation - Hydro electric			2.00	50
	Generation - Diesel			2.90	34.5
	General Purpose			2.75	36.4

In proposing the rates recommended DOMLEC comments in the Study that:

[2] FTC Barbados Decision No 1 of 2009"Depreciation Policy – Barbados Light and Power, 2009-02-25, page 11.

Because the average service life of the investment in Building and Construction varies by the function of the underlying assets, three rates are being recommended. General purpose buildings and two types of generation buildings - hydroelectric and diesel - make up the asset categories to which the three rates are assigned. In our experience, administrative (or general purpose) buildings typically have average service lives of 30 years to 45 years. Buildings housing generation units typically have lives related to the ultimate retirement dates of the generation units and the total life or life span of the generating facility location as a whole. In our service life analysis, we considered that not all of the investment will remain in service until the final retirement date of the primary building and that investment additions are made during the primary building's life. Both of these factors can lead to the average service life being less than the total life or life span of the primary buildings.

Asset Category – Plant and Machinery

The salient comment offered in the Study to support the recommended rates for this asset category

The primary present depreciation rate for Plant and Machinery - Hydroelectric ("Hydroelectric") is 4.00%, implying an average service life of 25 years. The primary present depreciation rate for Plant and Machinery - Diesel ("Diesel") is 6.67%, implying an average service life of 15 years.

The implied lives of the primary Plant and Machinery depreciation rates are less than the lives indicated by historical use, expected prospective use, condition, and industry experience. Based on our analysis, the average service life for the primary investment of Hydroelectric should be more than 35 years, though not more than 50 years. The recommended depreciation rate for Hydroelectric is 2.25%, which implies an average service life of approximately 44 years. Further, based on our analysis, the average service life for the primary investment of Diesel should be more than 20 years, though not more than 25 years. The recommended depreciation rate for Diesel is 4.25%, which implies an average service life of approximately 23.5 years.

Asset Category		**Present Depreciation**		**Proposed Depreciation**	
		Rate (%)	**Implied Life (yrs)**	**Rate (%)**	**Average life (yrs)**
Plant and Machinery					
	Plant: Hydro	4.00	25		
	Plant: Hydro Accessories	10.00	10		
	Plant: Diesel Accessories	10.00	10		
	Plant: Diesel Accessories	10.00	10		
	Plant: general Accessories	6.67/10.00	10/15		
	Plant: Diesel	6.67	15		
	Plant: Diesel – FCS Addition (Spares)	16.67	6	16.67	6
	Tools & Testing Equipment	10.00	10	10.00	10
	Hydroelectric plant equipment			2.25	44
	Diesel Plant Equipment			4.25	23.5

It is not clear to the Commission what the provision "Plant: Diesel – FCS Addition (spares)" is and therefore whether it belongs in the depreciation schedule. DOMLEC will be asked to clarify this provision in the course of this consultation.

Asset Category – Network, Vehicles, Office Furniture, Office Equipment, Software and Intangible assets

Asset Category		Present Depreciation		Proposed Depreciation	
		Rate (%)	Implied Life (yrs)	Rate	Average life
Network					
	Various, all with same present rate	5.00	20		
	Network, except meters			4.50	22.2
	Networks, meters			5.00	20
Vehicles					
	Light	20.00	5	16.67	6
	Heavy	14.00	7.1	12.50	8
Office Furniture					
	Office Furniture	12.50	8	10.0	10
	Residential Furniture	12.50	8	10.0	10
Office Equipment (Appliances)					
	Office Equipment (printers, hand held devices)	33.30	3.0	20.00	5.0
	Office Equipment (copiers, switches, etc)	12.50	8.0	14.00	7.1
	CIS System	33.33	3.0	14.00	7.1
	Computers	33.30	3.0	25.00	4.0
Software (Intangible Assets)					
	Software – CIS, Enterprise, AMI, etc	33.3	3	14.00	7.1

In support of its recommendations relating to networks DOMLEC comments that

Considering the mix of assets, the expected average service life of the DOMLEC Network investment is reasonably estimated in the range of 20 years to 25 years. Based on the analysis, the recommended depreciation rate for Network is 4.50%, which implies an average service life of approximately 22 years.

An AMI program began in 2010 that has so far replaced approximately 85% of existing electromechanical meters with "smart meters." Eventually all existing electromechanical meters will be replaced with the newer smart meters. In addition, DOMLEC has a prepaid or pay-as-you-go program that currently makes up a large majority of new customers. The life experience of smart meters is limited because AMI is relatively recent. Manufacturers estimate, and utility experience indicates, an average service life of 20 years or more for Meters, though there are some indications for a shorter life. We recommended a somewhat shorter average service life of 20 years for Meters than for the rest of Network. Assuming the investment of Meters can be identified and separated cost effectively, the recommended depreciation rate for Meters is 5.00%.

The company notes the implied service life based on the depreciation rates currently applied to light and heavy vehicles is consistent with industry norms but at the lower end of the range. The consultant has commented that from a review of the fixed asset record and in discussion with company personnel the practice is that the company keeps its vehicles in service for a longer period than the life implied by the present depreciation rates; in fact vehicles tend to be kept until they are no longer economical to operate rather than being replaced on a fixed time interval. The recommendation therefore is that the deprecation rates be adjusted to reflect a one year increase in the service life for each category of vehicle.

The Commission's Considerations

The Commission notes DOMLEC's recommendation regarding the depreciation rates and the implied average lives.

Table 1 provides some comparative data on general depreciation rates in the region.

Table 1
Comparative Depreciation Rates

Asset Category		DOMLEC proposed Rate (%)	Other Depreciation rates %		
			BLP Barbados	JPS Jamaica	
Hydro Plant					
	Civil Works	2.00		2.0	
	Mechanical and Electrical	2.25		2.86	
	Roads Bridges	2.00		2.5	
Diesel Plant					
	Civil Works				
	Mechanical and electrical	4.25	3.36[3]		
Transmission Plant				4.0	
Distribution Plant					
	Overhead and underground Lines	4.50	4.0	3.3	
	Structures			3.3	
	Other equipment	5.0	4.0	4.0	
	Meters	5.0	4.0	4.94	
General Plant					
	Structures			2.0	
	Transport equipment	12.5/16.7	5.2/7.5	14.3	
	Tools and laboratory equipment			4.0	
	Office and stores furniture and equipment	10.0	7.2	5.0	
	Communications and other equipment	14.0	16.67	5.65	

The indicative data provided at Table 1 suggest that DOMLEC's proposals are generally in line with electric utility practices.

The Commission is of the view that the rates proposed by DOMLEC are generally acceptable but it believes that the application of the rates to the diesel generation plant must be far more granular and that each plant must be assigned a specific rate determined by the technology. In this regard, the Commission believes that High Speed Diesels, by virtue of their technology, have a shorter life than medium speed diesels and

[3] These are low speed diesel technology

are subject to higher capital maintenance and life extension interventions than their medium speed counterparts.

As a policy therefore the Commission proposes the following rates and implied average lives for the diesel generating plant.

Table 2
Proposed Depreciation rates for Diesel generators

Technology	Depreciation rate (%)	Average life (yrs)
Medium Speed	4.25	23.5
High Speed	6.67	15

Consultation Question No 3:
Do respondents agree with the Commission's proposals to establish different deprecation rates for medium and high speed diesel generators respectively? If not, please explain why not?

Consultation Question No 4:
If the response to Consultation Question No 2 is yes, do respondents agree with the proposed rates of 4.25% and 6.67% respectively for medium and high speed diesel generator technology? If not, please explain and propose alternatives.

The application of the rates to the existing assets

Depreciation, by its very nature, is an estimate based primarily on the estimated useful life of the asset. Estimated useful lives are based on current facts and historical information and take into consideration the anticipated physical life of the assets.

The Commission is mindful that, at its request, DOMLEC commissioned a study to assess the remaining useful lives of its generation assets. The study was intended to assist the Commission to determine the Term of the Generation Licence which was eventually issued to DOMLEC, against the background where the Act requires the Commission to fix the Term, having regard to the remaining useful life of the generating assets. This having been established, the Commission believes that the very nature of depreciation requires that the useful lives adopted in the upcoming review do not necessarily have to be aligned to the Licence term but should reflect the reality of the conditions of the assets. This is premised on the principle that assets must be used and useful and that the rate of amortization balances the interest of the company in terms of return of the investment with that of the consumers in the impact on tariffs.

The task therefore is, after having established the depreciation rates as policy, to agree on the remaining useful life (RUL) of each plant over which the book value will be amortised.

Appendix A sets out DOMLEC's proposed Retirement Schedule based on the 2013 Remaining Life Study while Appendix B provides details of DOMLEC's proposed Depreciation rates and Average service Lives.

The Commission's Considerations

The Commission is in general agreement with and will accept DOMLEC's recommendations in respect of the asset categories and, in doing so, relies on the external audit reviews to confirm the Cost and Depreciation Reserve elements.

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

The Commission, however, believes that further consideration has to be given to "Plant and Machinery", specifically the diesel generating plant. The Commission believes that there are two critical considerations:

1) As has been mentioned earlier the question of whether it is appropriate to assign the same life to medium and high speed diesel engine technology?
2) DOMLEC appears to have slavishly applied the result of the RUL Study without any apparent consideration of the actual condition and circumstances of the individual plant.

The Commission is therefore of the view that this consultation must provide explanations to and resolve these issues as a precondition to the final Determination by the Commission and in this regard DOMLEC is required support more fulsomely its recommendations in these regards.

Consultation Question No 4

Do respondents agree with or have any comments on the Commission's position in respect of:

1) The appropriateness of DOMLEC assigning the same life to medium and high speed diesel engine technology?

2) DOMLEC's approach to assigning the remaining useful life (arising from the RUL Study) without any apparent consideration of the actual condition and circumstances of the individual plant.

Concluding Comments

The Commission is of the view that establishing depreciation rates and the attendant 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.

Despite the results of the RUL study which was used to satisfy the Act in setting the term of DOMLEC's Generation Licence the Commission believes that the useful life of the plant must be determined after taking into consideration the historical experience as well as the functional considerations such as obsolescence, technological advances and the reality of the physical condition of the plant.

Consultation Questions:

- ***Consultation Question No 1:***
  Do respondents agree that it is not only in order but also prudent for the Commission to accept for its consideration the Depreciation Study submitted by DOMLEC prior to the first tariff review?

- ***Consultation Question No 2:***
  Do respondents agree to the Commission's objective stated in (1) & (2) of the section titled 'Setting Deprecation Rates'? If not, what are the other considerations?

- ***Consultation Question No 3:***
  Do respondents agree with the Commission's proposals to establish different deprecation rates for medium and high speed diesel generators respectively? If not, please explain why not?

- ***Consultation Question No 4:***
  If the response to Consultation Question No 2 is yes, do respondents agree with the proposed rates of 4.25% and 6.67% respectively for medium and high speed diesel generator technology? If not, please explain and propose alternatives.

- ***Consultation Question No 5:***
  Do respondents agree with or have any comments on the Commission's position in respect of:
  The appropriateness of DOMLEC assigning the same life to medium and high speed diesel engine technology?
  DOMLEC's approach to assigning the remaining useful life (arising from the RUL Study) without any apparent consideration of the actual condition and circumstances of the individual plant.

Appendix A

DOMLEC's Proposed Retirement Schedule based on the 2013 Remaining Life Study

DOMLEC'S RETIREMENT SCHEDULE BASED ON THE 2013 REMAINING LIFE STUDY

	Technology	Nameplate Capacity (kW)	In Service year	Remaining Useful Life Beyond 2013	Date of Latest Major Refurbishment	Expected Year of Retirement
FC1	MS Diesel	750	1986	5		2018
FC4	MS Diesel	750	1986	5	25-Mar-11	2018
FC5	MS Diesel	2,840	1996	24	Note 1 1-Aug-13	2037
FC6	MS Diesel	1,750	1989	8	4-Apr-10	2021
FC7	HS Diesel	1,400	2003	14	Mar-09	2027
FC8	HS Diesel	1,400	2003	14	20-Nov-13	2027
FC10	MS Diesel	2,009	2009	26	30-Dec-11	2039
FC11	MS Diesel	1,460	2009	26	3-Oct-11	2039
FC12	MS Diesel	1,460	2009	26	15-Jun-12	2039
SL3	HS Diesel	1,350	1998	9	Jan-09	2022
SL4	HS Diesel	1,400	2003	14	14-Sep-12	2027
SL5	HS Diesel	1,400	2005	16	30-Jun-10	2029
SL6	HS Diesel	1,280	2007	18	13-Feb-11	2031
SL7	HS Diesel	1,400	2005	16	5-Feb-10	2029
LD1	Hydro	1,240	1990	32	Mar-07	2045
NT1	Hydro	1,760	1991	33	Mar-10	2046
NT2	Hydro	1,760	1991	33	Note 2 May-13	2049
PD1	Hydro	940	1967	15	Note 3 Oct-10	2028
PD2	Hydro	940	1967	15	Note 3 Oct-10	2028

Note 1: The entire engine lock, crank shaft, pistons, connecting rods and liners were replaced in 2013. The utility intends to apply for a life extension based on this.

Note 2: The generator rotor was replaced with a new one and the stator was refurbished in 2013. The utility was granted an additional 3 year life extension by the IRC based on this.

Note 3: A complete refurbishment of the turbines was done and the generators were replaced.

Appendix B

DOMLEC's Proposed Depreciation Rates and Average Service Lives.

CONFIDENTIAL

Dominica Electricity Services Ltd., Depreciable Electric Utility Assets
As of December 31, 2012
Depreciation Rates and Average Service Lives

Exhibit A

Asset Category / Sub Category Title	December 31, 2012 Cost EC$	Depreciation Reserve EC$	Depre Reserve %	Present Depreciation Rate	Present Depreciation Implied Life Yrs	Proposed Depreciation Rate	Proposed Depreciation Average Service Life Yrs
BUILDINGS & CONSTRUCTION	57,537,023	32,860,889	57.1%				
Headworks & Pipeline - Trafalgar	4,547,652	1,285,017	28.3%	3.33%	30.0		
Headworks & Pipeline - Padu	621,585	588,744	94.7%	3.33%	30.0		
Power House	1,523,083	967,685	63.5%	2.50%	40.0		
Melville Hall & Sugar Loaf	782,196	267,061	34.1%	2.50%	40.0		
Office & Stores	885,280	384,920	43.5%	2.50%	40.0		
Fencing - Trafalgar & Padu	157,661	47,491	30.1%	2.50%	40.0		
Fond Cole	2,689,925	505,455	18.8%	2.50%	40.0		
New Hydro Building	46,329,642	28,814,515	62.2%	2.90%	35.0		
Generation - Hydroelectric						2.00%	50.0
Generation - Diesel						2.90%	34.5
General Purpose						2.75%	36.4
PLANT AND MACHINERY	71,554,657	40,786,962	57.0%				
Plant: Hydro	19,235,533	12,949,688	67.3%	4.00%	25.0		
Plant: Hydro Accessories	2,601,148	1,075,041	41.3%	10.00%	10.0		
Plant: Diesel Accessories	1,894,386	1,015,252	53.6%	10.00%	10.0		
Plant: Diesel Accessories	231,478	231,470	100.0%	10.00%	10.0		
Plant: General Accessories	332,881	332,872	100.0%	6.67%/10%	15/10		
Plant: Diesel	42,242,855	22,215,600	52.6%	6.67%	15.0		
Plant: Diesel - FC5 Addition (SPARES)	2,661,690	2,033,337	76.4%	16.67%	6.0	*16.67%*	*6.0*
Tools & Testing Equipment	2,354,686	933,706	39.7%	10.0%	10	10.0%	10.0
Hydroelectric Plant Equipment						2.25%	44.4
Diesel Plant Equipment						4.25%	23.5
NETWORK	105,166,823	46,484,955	44.2%				
Various, all with same present rate				5.00%	20.0		
Network, Except Meters						4.50%	22.2
Networks - Meters						5.00%	20.0
TOOLS AND TEST EQUIPMENT	See Plant and Machinery					See Plant and Machinery	
VEHICLES	4,676,749	3,233,491	69.1%				
Light	2,544,270	1,865,457	73.3%	20.00%	5.0	16.67%	6.0
Heavy	2,132,479	1,368,034	64.2%	14.00%	7.1	12.50%	8.0
OFFICE FURNITURE	1,300,992	833,270	64.0%				
Office Furniture	1,209,605	747,761	61.8%	12.50%	8.0	10.00%	10.0
Residential Furniture	91,387	85,509	93.6%	12.50%	8.0	10.00%	10.0
OFFICE EQUIPMENT (APPLIANCES)	3,559,796	2,981,684	83.8%				
Office Eqmt (printers, hand held devices)	1,922,420	1,448,204	75.3%	33.3%	3.0	20.00%	5.0
Office Equipment (copiers, switches, etc.)		Copiers, Shredders, Switches, etc.		12.5%	8.0	14.00%	7.1
CIS System	1,080,713	1,080,712	100.0%	33.3%	3.0	14.00%	7.1
Computers	556,663	452,768	81.3%	33.3%	3.0	25.00%	4.0
SOFTWARE (INTANGIBLE ASSETS)	2,572,466	2,147,714	83.5%				
Software - CIS, Enterprise, AMI, etc.	2,572,466	2,147,714	83.5%	33.3%	3.0	14.00%	7.1
Total Depreciable Investment	246,368,506	129,328,965	52.5%				

American Appraisal

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