COMMONWEALTH OF DOMINICA

IN THE MATTER OF the Electricity Supply Act 10 of 2006

AND IN THE MATTER OF the DOMLEC Transmission, Distribution and Supply Licence issued by the Independent Regulatory Commission to Dominica Electricity Services Limited

AND IN THE MATTER OF the petition of Dominica Electricity Services Limited regarding the decision of the Independent Regulatory Commission identified in Decision Document: Weighted Average Cost of Capital for Dominica Electricity Services Ltd (Document Reference 2015/001/D), issued on the 23rd day of April 2015 and which came into effect on the 1st day of May 2015.

PETITION FOR RECONSIDERATION

Background

The Commission issued two new Licences, a Generation Licence and a Transmission Distribution and Supply Licence, to Dominica Electricity Services Ltd (DOMLEC), both of which became effective on January 1 2014. These two Licences complete the process for aligning the regulatory framework for DOMLEC with the principles and intent of the Electricity Supply Act 10 of 2006 (ESA) and 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 in its letter dated June 3, 2014 advised DOMLEC as follows:

1. That, pursuant to Condition 33 of the Licence, the date for DOMLEC to file for a tariff review is changed from October 1, 2014 to May 1, 2015.
2. That in the meantime, as far as practicable, DOMLEC and the Commission continue to work on DOMLEC's:
    - Weighted Average Cost of Capital (WACC);
    - DOMLEC's Asset Base to be used in the Tariff Application; and,
    - DOMLEC's long and medium term investment plans.

    These are all to be completed and submitted to public consultations prior to the filing.

Following on from this the Commission concluded its consideration of and issued a Decision on DOMLEC's Depreciation Policy in June 2014. Subsequently DOMLEC filed proposals in respect of the Integrated Resource Plan, the Five Year Investment Plan and the Weighted Average Cost of Capital (WACC) on which the consultation process commenced in February 2015.

Specifically with regard to the WACC, the Commission issued its First Consultative Document on February 21, 2015 and held a public consultation on March 13, 2015. This was followed by the issue of a second Consultative Document on March 30, 2015 with the public consultation being held on April 14, 2015. The comments from both the consultations and written submissions were considered by the Commission and on April 23, 2015 the Commission issued Decision (Document Ref. 2015/001/D) setting out its Determinations on the WACC, to become effective on May 1, 2015. DOMLEC filed a Petition for reconsideration of these Determinations under cover of a letter dated May 13, 2015.

This Document sets out the Commission's responses to the said Petition.

Review of Administrative Decisions

The procedures for the reconsideration of the Commission's Decisions are set out in the Commission's Decision Document Ref. 2008/004/D at Section 8 where it provides:

> *Petitions for reconsideration of a decision issued by the Commission may be filed pursuant to the Act or "by virtue of these Rules" or other enabling instrument.*
>
> *Applications for reconsideration of a Decision or Order of the Commission may be made by persons adversely affected by the Decision or Order and shall be filed within thirty (30) calendar days of the Date of Notice being given of the Decision or Order. The Petition shall provide full and detailed particulars to support the petition and shall be in such detail to enable the Commission to take a decision on the matter.*
>
> *Unless provided for elsewhere in applicable legislation or other enabling instruments the following may constitute grounds for a reconsideration of its decision:*

1. *Newly discovered facts or evidence which, by due diligence, could not have been discovered while the matter was being considered by the Commission;*

2. *Fraud, misrepresentation, or other misconduct of an affected party;*

3. *A prior order on which the order is based has been reversed or otherwise vacated, or it is no longer equitable that the order should have prospective application; or*

4. *Any other reason justifying relief from the operation of the order.*

The Commission has considered DOMLEC's arguments for reconsideration of its decision against the background of the above-stated grounds and has found that category 4 above is, possibly, the only basis on which the Petition could be considered. The Commission notes at the onset that all the issues raised by DOMLEC in its Petition for Reconsideration were discussed at length at the public consultations held by the Commission to seek guidance from other stakeholders on the matters at hand. The Commission affirms that it took careful note of the issues raised and has been careful to take the views of all stakeholders into account in arriving at its decisions.

The Commission now responds to the specifics of DOMLEC's grounds for reconsideration seriatim.

Decision 1: DOMLEC's capital structure shall be 40% debt and 60% equity for the tariff period 2015 – 2017.

DOMLEC requests that the Decision be reconsidered because:

1. In view of its market context, as an isolated island system and its small size, DOMLEC's actual capital structure of 33.1% debt and 66.9%equity is well within the realm of the normal range for determining the WACC. It is not only consistent with least cost principles but also falls in close proximity to the industry range identified by the Commission. Resorting to a notional capital structure should only occur if DOMLEC's debt to equity ratio were an anomaly.

2. The IRC's position regarding capital structure has been inconsistent:

   i) Page 16 of the IRC Consultative Document: Notice of Proposed Rule Making 2015/001/NPRM-001 dated February 2015 states:

Proposed Decision 1 – DOMLEC's capital structure shall be 38% debt and 62% equity for the tariff period.

ii) Page 19 of the IRC Consultative Document: Notice of Proposed Rule Making 2015/001/NPRM-002 dated March 2015 states:

Proposed Decision 1 – DOMLEC's capital structure shall be 38% and 62% equity for the tariff period.

iii) Page 15/16 2015/001/NPRM-01, the IRC stated as its reason the average amongst the regional utilities is 38%.

iv) Page 25 of the IRC Decision 2015/001/D, Weighted Average Cost of Capital dated April 2015states:

Decision 1 – DOMLEC's capital structure shall be 40% and 60% equity for the tariff period.

3. DOMLEC has not had the opportunity to respond to this latest position.

4. The final capital structure ratio 40/60 is a departure from the IRC's previous positions regarding capital structure.

5. The ultimate figure is higher than the industry average for the Caribbean region but the IRC has not given any reason for arriving at such an anomalous position.

The Commission's Responses

1. As was pointed out in the Commission's Decision Reference: 2015/001/D DOMLEC's Weighted Average Cost of Capital (WACC) is calculated on its Capital Structure, its Cost of Debt and its Cost of Equity. For each of these the Commission is charged by Section 20 (1) (c) and (g) of the Electricity Supply Act 10 of 2006 respectively "to *protect the interest of all classes of consumers of electricity as to the terms and conditions and price of supply*" as well as "to *ensure that the financial viability of efficient regulated electricity undertakings is not undermined*." By these two provisions the Commission is mandated to ensure fairness to DOMLEC as well as to the consumers of DOMLEC's electricity as to the terms and conditions and price of supply of its supply of electricity; i.e. to balance the interest of the consumers and those of the service providers. The Commission is of the view that the condition of balance is realised as the capital structure approaches 50/50. Hence the regulatory capital structure of 40% debt and 60% equity to

be used in DOMLEC's current rate review was devised by the Commission to realise greater equity in the relationship between the customers' interests and that of the company.

The capital structure of a company determines the financing cost of the company's operations and is always an integral part of its rate-setting process In this regard a stakeholder, who is a financial analyst, commented at the last consultation that

> *"I would like to suggest that on the basis of everything you have said so far, the rate that DOMLEC is requesting and the rate that the Commission is proposing are both irrelevant. I think that the rate that should be considered is the rate that everybody thinks is reasonable for the company and for the other stakeholders. And I want to emphasise that it is for the company not for the shareholders or for the majority shareholders. The table that you represented earlier indicates that in the past in most of the recent years, in the last ten years, the actual ratio, the value of debt was close to 50% and by your own admission DOMLEC was profitable. So I think that the Commission needs to make a determination as to what is a reasonable rate irrespective of what the actual gearing is on DOMLEC's books."* Even though there was representation at the consultation from a wide cross-section of the society no one apart from DOMLEC disagreed with the recommendation.

The Commission takes participation and interaction of other stakeholders at its public consultations very seriously, considers all arguments put before it and takes reasoned decisions based on all the inputs and its own expertise and judgment. An example of such seriousness was when stakeholders at the Commission's consultations advised the Commission to grant DOMLEC licences with terms of 25 years as against the 15 years the Commission was suggesting.

The Commission has argued through the consultation that the critical consideration is the relationship between the higher cost of equity to the lower cost of debt and in seeking to determine this matter the issue at is "what is reasonable"? Based on the information presented at the consultation, see Table 1 below, which provides data on DOMLEC's capital structure from 2006 to 2014, stakeholders concluded that to adopt the structure proposed by DOMLEC would be unreasonable and place a disproportionate burden on consumers.

Table 1
DOMLEC's Capital Structure 2006 -2013

Year	Debts	Equity	% of Debt	% of Equity
2006	$41,341,617	$42,904,126	49.07%	50.93%
2007	$40,066,134	$47,420,475	45.80%	54.20%
2008	$51,217,905	$52,462,133	49.40%	50.60%
2009	48,674,756	$58,050,974	45.61%	54.39%
2010	$53,920,640	$56,217,073	48.96%	51.04%
2011	$53,316,961	$62,141,066	46.18%	53.82%
2012	$46,397,839	$68,260,396	40.47%	59.53%
2013	$41,025,375	$75,019,297	35.35%	64.65%

The Commission also believes that the comparisons with other regional companies are instructive. Table 2 below is reproduced from the Consultation Document.

Table 2
Regional Utilities - Capital Structure

Country	Utility	Gearing
The Cayman Islands	CUC	56%
Barbados	Barbados Light and Power[1]	35%
Grenada	GRENLEC[2]	38.43%
St Lucia	LUCELEC[3]	47.77%

While the structure proposed by DOMLEC at 33.1/66.9 would be an outlier, the Commission's proposal of 40/60 is within the norm.

This position was further reinforced by a stakeholder, who at the consultation of March 13, 2015 asserted:

> *"let us all agree IRC, DOMLEC and the stakeholders that debt is cheaper than equity and that basically to the extent that the company, if you see the company as a stakeholder as (a profit shareholder) the company should be seeking to reduce the cost of capital and, therefore, it should seek to, wherever possible, increase its debt. So let us not argue about the risk to shareholders being that much greater than ... debt. We can come to a consensus on what is a reasonable debt to equity ratio is. I think that that is part of the calculation. If DOMLEC chooses to raise all its capital from equity that is a position it can take but I think in the calculations there should be a reasonable ratio assumed and it is 50/50."*

The above comment was in addition to another submitted for the consideration and which was produced in the Commission's Decision Document Reference 2015/001/D.

The Commission sees no merit in the proposition that size is a determinant in the capital structure of DOMLEC. Determining the proper regulatory capital structure of the company certainly has nothing to do with the size of DOMLEC or whether it is an isolated island system or not.

2. DOMLEC's assertion that the Commission was inconsistent with its proposals for the company's regulatory capital structure demonstrated a clear misunderstanding of the

[1] FTC Decision and Order No 0002/09 effective Oct 1, 2009
[2] Derived from data in GRENLEC Annual Report 2013
[3] LUCELEC Annual Report 2013

process of consultation and the purpose thereof. The Rules of Practice and Procedures of the Commission clearly states:

> "*The Commission will explain the basis for its decisions and the factors influencing its position in a given matter through its published documents and will report on the major views received by the Commission in the preceding consultation period. In some cases, new evidence or analysis presented to the Commission may cause it to modify its views. In the interests of transparency and accountability, the reasons for such modifications will be set out and, where the Commission disagrees with major responses or points that were commonly made, it shall explain why.*

While the Commission's position might have seemed inconsistent because of its offer of a capital structure of 38% debt and 62% equity going into its consultation of April 14, 2015, the Commission was well aware that changes could have been made based on the outcome of the interactions with the other stakeholders at that consultation. The very purpose of the consultations is to garner and take into account the views of all stake holders (including those of the company) on positions represented by the Commission in the consultation document.

3. At the beginning of the public consultation of April 14, 2015 the Commission was at pains to advise that it would have been the last consultation on the subject and that the final date for comments on the subject would have been April 16, 2015. In spite of that cut-off date, a trade unionist asked "Am I to understand that between now and the 23rd whatever interventions are made will be taken into consideration and, in fact, form part of your recommendation and for award in relation to the responsibilities that we have here this morning?" The Executive Director's response to that question was "Yes, Sir, that is going to happen."

   While it is true that the actual Commission's decision of a 40% debt and 60% equity capital structure was arrived at as a consequence of the consultation DOMLEC did submit comments to the Commission on the consultation questions on April 16, 2015 in which it sought to justify its proposed structure, despite having had the opportunity to comment at the public consultation.

4. The regulatory capital structure for DOMLEC of 40% debt and 60% equity on which the Commission finally decided departed from its original recommendation to the consultations of 38% debt and 62% equity, but that occurred because the Commission was persuaded by the logic and sanity of the arguments presented at the consultation.

5. The Commission wishes to refer DOMLEC to pages 23 to 25 of its Decision Document Reference 2015/001/D and the answers to 1, 2, 3 and 4 above for the reasons for arriving at its decision on DOMLEC's regulatory capital structure.

Decision 3: The Commission determined that the risk free rate shall be the US 10 Year Treasury Bond rate as at December 2014 – that is 2.17%

Grounds for Reconsideration

DOMLEC requests that the Decision be reconsidered because:

1. The Decision was reached without regard to the following:

1.1. It is standard practice that the term of the debt instrument used to fix the risk free rate of the assets in question be matched with the lives of the said assets. The assets of DOMLEC, like most electric utilities, have useful lives of 20-40 years or more. It is therefore appropriate that a 30 year term bond be used and not a 10 year term bond.

1.2. Given the monthly volatility in short term bond yields it is preferable to use an average of several recent months rather than a point in time estimate. The table below presents the monthly yields for the US 10 & 30 year Treasury Bonds.

Figure 1: US Treasury Bond Average Monthly Yield

Month	10 Year Rate	30 Year Rate
Jan-14	2.86%	3.77%
Feb-14	2.71	3.66%
Mar-14	2.72%	3.62%
Apr-14	2.71%	3.52%
May-14	2.56%	3.39%
Jun-14	2.60%	3.42%
Jul-14	2.54%	3.33%
Aug-14	2.42%	3.20%
Sep-14	2.53%	3.26%
Oct-14	2.30%	3.04%
Nov-14	2.33%	3.04%
Dec-14	2.21%	2.83%
Average	**2.54%**	**3.34%**

Source: U.S Department of Treasury:
http:www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&year=2014

1.3. Yields through 2014 and early 2015 have been at historically low values due to the policies of the US Federal Reserve following the Great Recession. The Federal Reserve has signaled that these policies will be coming to an end in the near future so rates will most likely be increasing over the next 3 years. There is some emerging evidence that yields are beginning to increase as generally anticipated, the closing yield for the 10 Year US Treasury Note for auctions held on May 12, 2015 (the most recent day available at the time of writing) produced a yield of 2.67% which is 50 basis points higher than the December 2014 yield utilized by the IRC in their various documents.

The Commission's Responses

1.1 The Commission has considered DOMLEC's arguments relating to attaching the risk free rate to the useful lives of its assets very carefully and has had some difficulty in accepting what seems to be misplaced logic in the reasoning appertaining thereto. The issues that arise are:

- The Commission has never agreed with DOMLEC on the useful lives of DOMLEC's assets
- The question is which assets and while it is true that assets have "life" ranging from 5 – 50 years the argument that the risk free rates should be associated with asset lives is strange.
- What should be factored into the reasoning is that DOMLEC does not have a licence with a term of 30 years. DOMLEC's current licences have another 23 years to run.
- The life of the tariff review is for 3 years, not 30.

This matter was ventilated fully at the public consultation of April 14, 2015 by the Commission and reasons given for the choice of the US 10 year Treasury Bond to determine the risk free rate. The following is an excerpt from the transcript of the proceedings at the consultation:

"The reason for using the rate on the 10-year bond as against the 30-year bond is that the risk free rate is just a start of the process, that is the first thing you do, after that you have to look at the risk premium and then you have to look at the beta. That is just the start of the process but what Professor Damodaran and some others said was that, and I have a quotation from him, "I actually prefer to use the 10-year bond rate and let me explain why. The risk free rate is just a start of the process, I need to get defaults spread, I need to get equity premiums, in other words, I need to get other

inputs to get the rest of the model going and those inputs are easier to get with a 10-year bond than a 30-year bond rate."

The Commission had earlier indicated that it was relying on the works of Professor Aswath Damodaran[4] and gave its reasons for doing so.

1.2. The Commission does not consider a 10 Year Bond to be a short term security, and gave reasons for using it to arrive at a risk free rate for DOMLEC. In addition, the Commission has argued for the use of latest 10 year US Bond rate available since the process is one of projecting forward and not backwards. This view was reinforced at the consultation as follows:

> *"Again, Professor Damodaran, like so many others, argue that since the rate should be forward looking it was advisable to use the latest 10-year treasury bond rate than to have an average of return over preceding months*

These matters were thoroughly discussed at the public consultation of April 14, 2015."

1.3 The Commission is mindful that the basis on which it has accepted the Petition as having merit is "*Any other reason justifying relief from the operation of the order"*. After having considered the arguments that arose during the consultation, the Commission has not been persuaded that the grounds for reconsideration have been met.

Decision 4: The Commission proposes that there will be no risk premium due to DOMLEC's size.

DOMLEC requests that the Decision be reconsidered because:

1. The Commission should include a risk premium attributable to size in the cost of capital as it reflects the well-established principle that small entities face higher business risks than larger entities.
2. It is well established that the inclusion of a size related risk premium is particularly appropriate in estimating the cost of capital for small companies. This is due to the observation that of cost equity models such as CAPM does not adequately measure the risk premium for stocks of small companies such as DOMLEC. Therefore a size premium is necessary because the CAPM systematically understates size risks and therefore higher returns of stocks for small companies are not fully taken into account.
3. Empirical research supports the notion that small size companies such as DOMLEC have higher risk premia than large-sized companies. The 3 factor Fama-French Model was referenced by DOMLEC in the public consultations and quite clearly demonstrates this effect. This is a standard model used by financial analysts in stock valuation and the

[4] Professor Damodaran holds the Kerschner Family Chair in Finance Education and is Professor of Finance at New York University Stern School of Business

effect is well demonstrated especially for the smallest companies traded on the US exchanges that are most like DOMLEC in their size.

4. The financial impacts of random business events which occur over the course of business enterprise cannot be diversified or absorbed by small/micro entities such as DOMLEC as well as these impacts can be absorbed by large entities.

The Commission's Responses

In answer to DOMLEC's 4 stated reasons for requesting the Commission's reconsideration of its decision on this matter, the Commission wishes to point out that this was comprehensively dealt with at both public consultations held by the Commission and, in neither case, were the other stakeholders, apart from DOMLEC, in disagreement with the Commission's position.

Furthermore, in comments submitted by a participant in the consultation the following argument was made in support of the position that DOMLEC should not be provided with extra premium for size:

> *"DOMLEC is a Dominican company which has always operated in the "small" market of Dominica. It is structured for small. The smallness of the market is therefore a given and should not be considered an additional risk."*

The Commission reiterates that, contrary to DOMLEC's assertions, there is no consensus among analysts that there is a need to adjust for size. While Ibbotson[5] is in support there are others who disagree with his approach to adjustment for size and discredit it as being based on value judgements which cannot be supported by empirical data. As a result, the Commission disagrees with DOMLEC's assertion that adjustment for size is a well established principle. The Commission, therefore, reiterates and reconfirms its justification contained on pages 30, 31 and 32 of its Decision Document Reference 2015/001/D.

[5] Ibbotson is founder, advisor and former Chairman of Ibbotson Associates, now a Morning Star Company.

Decision 5: The Commission will use the group of 35 companies in power sector used by Professor Damodaran as the proxy utilities.

Grounds for Reconsideration:

DOMLEC requests that the Decision be reconsidered because:

1. The Commission has been inconsistent in its approach regarding the proxy companies. The Commission has failed to adopt a sound methodology for properly selecting the group of companies most suited for comparison to DOMLEC. The approach taken in this exercise has been erratic, from the selecting of a sample that was too narrow (2 Caribbean utility companies) in the first instance ref: page 21 of Notice of Proposed Rulemaking 2015/001/NPRM-001 dated February 2015 to one that was too wide (an unfiltered list of 353 companies) ref: page 35 – 51 of Notice of Proposed Rulemaking 2015/001/NPRM-002 date March 2015 before settling on the present 35 companies.
2. Having agreed with DOMLEC that the proxy companies originally selected by the IRC were inappropriate, (See Notice of Proposed Rulemaking 2015/001/NPRM-001 dated February 2015), the IRC rejected DOMLEC's proxies without giving any reasons for so doing. Given that 80% or 12 out of the 15 companies included in the DOMLEC sample were included in the IRC proxies, representing 37% of the IRC proxies, this suggest that the proxy companies selected by DOMLEC was in the first instance very appropriate. See Appendix 1.
3. Many of the proxy companies presently chosen by the IRC did not uniformly possess the following characteristics required for them to be usefully comparable to DOMLEC for the purpose of determining systematic risk:

   3,1 Regulated monopoly (The following (8) eight companies operating in jurisdiction where electricity supply is not regulated: First Energy Corporation, PPL Corporation, Pepco Holdings, Portland General Corporation, UIL Holding Corp, El Paso Electric Co, Chesapeake Utilities Corp, and Unitil Corp). See Appendix 1; Filter 3

   3.2 Vertically Integrated Electric Utility (ITC Holdings is a Transmission Only Company). See Appendix 1; Filter 1.

   3.3 Suppliers of Electric Power to Retail End Users(The Laclede Group, Questar Corporation and New Jersey Resources are natural gas companies. AES Corporation and NRG Energy are wholesale generation companies). See Appendix 1; Filter 1.

3.4 Comparable market capitalization (The following (10) ten companies have market capitalizations of more than $10 Billion and have Beta values that are systematically lower than smaller companies: Excel Energy Corporation, Exelon Corporation, Duke Energy, Southern Company, American Electric Power, NextEra Energy, First Energy Corp, Entergy Corporation, PPL Corporation, and Edison International). See Appendix 1; Filter 4.

The Commission's Responses

1. DOMLEC said that the Commission has been inconsistent in its selection of comparable companies. This statement demonstrates a lack of appreciation of the purpose of the public consultation process and the need to involve other stakeholders. Rate setting is not a private matter between DOMLEC and the Commission. It is a matter which impacts the public and, so far as the Commission is concerned, it is required to take into account and have regard to constructive comments or recommendations made at the consultations.

   In the first round of consultation the Commission sought to use the ECSE market as well as OECS based utility companies which were considered to be similar to DOMLEC. DOMLEC in its response to the consultation posited that the ECSE was an immature market with limited trading occurring on a regular basis and furthermore that the list of companies presented as a comparable sample was too small.

   The Commission agreed with DOMLEC's contention and presented in the second consultation a list of 353 companies many of which were from emerging markets. DOMLEC in its presentation said it was difficult to verify the companies in the emerging markets and it would prefer if a list of US companies were used.

   The Commission notes that Jamaica Public Service (JPS) in its rate submission to the Office Of Utilities Regulation (OUR) in Jamaica presented 401 companies as part of the dataset of electric utility companies, many of which were from the emerging market, as comparable companies. This list was accepted in distinct contrast to DOMLEC's assertion that the sample presented by the Commission "is too large".

   However, in giving the benefit of the doubt to DOMLEC, the Commission reduced the sample size to 35 US electric utilities as comparable companies as a consequence of DOMLEC's representation at the consultation of April 14, 2015. These companies could have been easily verified. Suffice it to say that the Commission is nonplussed by DOMLEC's vacillation as it seems to have difficulties with sample sizes that are too small on the one hand and too large on the other.

2. The Commission responds to this query by referring DOMLEC to 1 above and commenting that the Commission is demonstrably willing to accept cogent arguments.

3. The Commission found that it was difficult to find US power utilities with capitalization of less than US$1b. Even those used by DOMLEC had capitalization of over US$1b. It is, therefore, the Commission's considered opinion that the 35 power companies used from Professor Damodaran dataset provide a more appropriate sample size than what was presented by DOMLEC.

   Additionally, the Tariff Regime for Dominica Electricity Services Limited (DOMLEC) Reference 2009/004/D provides guidance on comparable companies when it states at page 20 under the caption "Comparable Companies" that *"The comparable group of companies is an important factor in both the Discounted Cash Flow (DCF) model and the Capital Asset Pricing Model (CAPM). To select a comparable group that provides reasonable risk proxies, analysts rely on the companies' bond ratings and safety ranks. ……………………………………………….. In the absence of similar information for Dominica, companies will have to be identified for which information is available."*

   In choosing its 35 proxy companies the Commission endeavoured to act consistently with the procedure as captured in the quotation above.

Decision 6: The Commission determines the Mature Market Risk Premium of 5.21%, stated by Professor Damodaran as the implied equity risks approach.

Grounds for Reconsideration:

DOMLEC requests that the Decision be reconsidered because:

1. The IRC did not provide data to show how the MMRP stated by Professor Damodaran is computed.
2. The Decision departs from the common practice in rate cases to develop ex-post estimates of the Equity Risk Premium (ERP – referenced throughout the Decision as Mature Market Risk Premium (MMRP), by taking an intermediate to long-term average of annual returns of a broad market basket of stocks (typically the Standard & Poors 500) less the corresponding annual risk free rate usually of 30 year US Treasury Bonds, without giving any reasons for so doing. The said common practice approach has the advantage in that it is readily observable and can be easily explained and understood. Depending on the time period and bond term for comparison these estimates range from approximately 6.0% to 10%.

The 2011 Ibbotson Risk Premium over Time Report Estimates for 1926-2010 published by Morningstar demonstrated just how sensitive the ERP is to the assumptions used. Many additional examples can be provided, but the overall result is the long-term ERP is typically estimated in the 6% to 10% range depending on the time horizon with the longer time horizons usually converging to a number of approximately 8.0%. The 1926-2010 average in the Morningstar publication is 7.2%.

The typical value chosen for this important parameter in electric cases has been around the long-term of 8.0%. This approach has the advantage of providing stability to returns and avoids rate shock to customers that could arise from using a more volatile short term. The following table illustrates the implementation of the CAPM in recent US utility rate cases.

			US CAPM Cost of Equity Estimates by Component					
Date	Jurisdiction	Witness	Bond Used	Risk Free Rate	Risk Premium	Mkt Avg. COE with Beta = 1	Utility Beta	Utility Equity Cost
Nov-11	PSC of Colorado	Sharpe	30 Yr Bond	3.18%	11.0%	14.1%	0.76	11.5%
Apr-12	San Diego Gas & Electric	Morin	30 Yr Bond (fcast)	4.20%	7.9%	12.1%	0.74	10.0%
Nov-14	Lousville Gas & Electric Company	Avera & MacKenzie	30 Yr Bond	3.40%	9.7%	13.1%	0.79	11.1%
Jun-13	Jersey Central Power & Light	Kahal	30 Yr Bond	3.00%	8.0%	11.0%	0.71	8.7%
Jun-12	Northern States Power (SD)	Coyne	30 Yr Bond (fcast)	5.10%	6.6%	11.7%	0.74	10.0%
Dec-14	Public Service New Mexico	Hervert	30 Yr Bond	3.18%	9.7%	12.9%	0.77	10.6%
			Average	3.68%	8.8%	12.5%	0.75	10.3%
				DOMLEC Country Risk Premium				3.3%
				DOMLEC Company Size Premium				1.4%
				DOMLEC Total Equity Cost				15.0%

Figure 2.

The IRC took a novel and unprecedented approach by using an ex ante approach advocated by Damodaran. This approach is more difficult to understand and explain. It attempts to estimate investors' expectations. Damodaran publishes a monthly estimate of the ERP on his website that has significant variability month by month. The IRC chose his monthly estimate of 5.21% as of December 2014. The current May 2015 Damodaran monthly estimate for risk premium is 5.80%. Neither of these estimates fall within the 6% to 10% average range typically observed of the actual difference between stock returns and bond returns.

The Commission's Responses

1. The Commission presented Professor Damodaran as the expert on which its analysis was based. Additionally, on page 17 of the Notice of Proposed Rule Making document reference: 2015/001/NPRM-02 a short biography of Professor Damodaran detailing his competence was given and the link where the data was provided and his explanations for arriving at his solutions were given. The link contained a calculator which could be used to verify his figures and conclusions.

2. DOMLEC is reminded that in their submission on April 16th 2015 entitled 'RESPONSES OF DOMINICA ELECTRICITY SERVICES LTD REGARDING CONSULTATION QUESTIONS IDENTIFIED IN CONSULTATIVE DOCUMENT: NOTICE OF PROPOSED RULEMAKING (DOCUMENT REFEREENCE 2015/001/NPRM-02) and at the consultation on the 14th April 2015 there was no mention made that data was not provided and that there was a difficulty in understanding Professor Damodaran's approach.

   The Commission reiterates that this matter was placed before the stakeholders at the public consultation of April 14, 2015 and the only dissenting voice raised was that of DOMLEC which proposed a Mature Market Risk Premium of 8% as opposed 5.21% proposed by the Commission. The Commission also pointed out at the same consultation that it researched other sources of information during it analysis. One such source was Professor Pablo Fernandez of the IESE Business School who, in his analysis, published a MMRP for 2014 of 5.7% for the US

   DOMLEC also asserts that the approach taken by the Commission in utilizing the works of Professor Damodaran for this rate review and the use of the MMRP of 5.21% as a novel and unprecedented approach. The Commission reminds DOMLEC that the last rate review of JPS, a proceeding which was cited by DOMLEC, utilized this very approach. Interestingly, it was the utility, JPS, which based its case on the works of Professor Damodaran and utilised a MMRP of 5%.

   The mention of fluctuation in the MMRP is understandable as the market fluctuates with time and so does the MMRP. Even DOMLEC in its presentation cited past rates where the MMRP used in Colorado was 11% and that used in Northern States Power was 6.6%. The Commission therefore believes that there is a reasonable precedence for and acceptance of Professor Damodaran's body of work in this area to justify its position.

Decision 7: The Commission has determined that, based on the results of the application of the DCF and CAPM methodologies, DOMLEC's cost of equity for the tariff period shall be 10.44%.

Grounds of Reconsideration

DOMLEC requests that the Decision be reconsidered because:

1. The IRC has not explained why it departed from normal cost of capital principles and adopted an approach that modifies the country risk premium (CRP) by the industry beta (beta = 0.41). It is inappropriate to apply a US beta to modify the country risk premium for Dominica.
2. The Decision ignores the fact that DOMLEC is exposed to the full country risk for the following reasons:
   2.1 DOMLEC has all of its assets located in Dominica
   2.2 DOMLEC has all of its customers located in Dominica
   2.3 DOMLEC's revenue stream is dependent on Dominica's economic health.
   2.4 DOMLEC does not export products or services and has no revenue from outside of Dominica
3. The lambda approach enables each company to have an exposure to country risk that is different from its exposure to all market risk. Like a Beta, lambda will be scaled around 1, with a lambda of one indicating a company with average exposure to country risk and a lambda above or below 1 indicating above or below average exposure to country risk. The cost of equity for a firm in an emerging market can be written as:

   Cost of equity = Risk free rate + Beta (Mature Market Equity Risk Premium) + λ (Country Risk Premium)

   DOMLEC contends that this latter approach is the more appropriate one to be adopted and that a lambda of at least 1 should be applied for the reasons stated in the points listed above at paragraph 2.

4. There is no evidence or reason to suggest that DOMLEC investors are less affected by the higher sovereign debts costs, or country risk as otherwise measured, in either Dominica or the Caribbean Region.

5. IRC has consistently made errors/had inaccuracies in calculating the CAPM thereby significantly skewing the cost of equity and by extension the WACC. The IRC,s CAPM results in its Decision document are again inaccurate. Calculating the results by companies the IRC's assumptions without a country risk or company size adjustment yield a result of 4.32% for the Cost of Equity. This number should be somewhat close to

and consistent with recent rate decisions for Electric Companies in the US (consistently very close to 10.0% for the past several years) and the raw results from the IRC application of the DCF Model (12.5%). This result is so far out of sync with current US regulation and the IRC's own DCF calculations that it must be called into serious question. The results are out of sync because the assumptions chosen are mostly outliers that are not consistent with one another.

The result including the country risk adjustment of 6.5% (with a plus/minus one standard deviation range of 4.0% to 9.0%) is also completely out of sync with the recent decisions in Jamaica (12.25%) and Barbados (12.75%).

The table below illustrates the CAPM results restated with a properly filtered comparison group, Beta estimates reflective of the average of readily available public sources, a more appropriate risk free rate and country and company size risk adjustments. Not surprisingly when assumptions with precedent are chosen the results fall into line with the DCF results and regulatory outcomes witnessed in other jurisdictions.

Risk Free Rate	3.34%
Equity Risk Premium	8.00%
Country Risk Adj	5.34%
Company Size Adj	1.40%

		CAPM Implementation			
Company Name	Symbol	BETA	CAPM Raw	+ Country Risk	+ Size Risk
Westar Energy	WR	0.47	7.11%	12.45%	13.85%
Pinnacle West Corporation	PNW	0.50	7.30%	12.64%	14.04%
Hawaiian Electric Industries, Inc	HE	0.34	6.09%	11.43%	12.83%
Great Plains Energy	GXP	0.61	8.21%	13.55%	14.95%
OGE Energy	OGE	0.68	8.77%	14.11%	15.51%
PNM Resources	PNM	0.65	8.53%	13.87%	15.27%
Ida Corp, Inc	IDA	0.72	9.11%	14.45%	15.85%
Cleco Corporation	CNL	0.58	7.95%	13.29%	14.69%
Allete Inc	ALE	0.79	9.65%	14.99%	16.39%
Otter Tail Power	OTTR	1.04	11.67%	17.01%	18.41%
The Empire District Electric Comp	EDE	0.51	7.39%	12.73%	14.13%
MGE Energy Inc	MGEE	0.69	8.85%	14.19%	15.59%
Teco Energy	TE	0.63	8.39%	13.73%	15.13%
Scana Corporation	SCG	0.40	6.54%	11.88%	13.28%
	Average	**0.61**	**8.25%**	**13.59%**	**14.99%**
	Standard Deviation	0.18	1.45%	1.45%	1.45%
	Avg less 1 Srd Dev.	0.43	6.80%	12.14%	13.54%
	Avg plus 1 Srd Dev.	0.80	9.71%	15.05%	16.45%

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6. The same critique for the country risk and company size with respect to CAPM also applies to the DCF results.

7. The IRC's application of the DCF model without adjustments is reasonable. However, there are a few assumptions chosen by the IRC that could be improved upon:

    7.1 Rather than calculate the yield using a stock price at a point in time, it is suggested that the average of the 52 week high price and 52 week low price for a stock be used. This smooths out the data and eliminates the possibility of daily price volatility skewing the yield number too high or too low.

7.2 It appears that the IRC used the historical 5 year average growth rate in earnings/dividends to arrive at the growth assumption. One of the advantages in using the US market to arrive at the assumptions is that they are well researched. Yahoo! Finance reports the analyst consensus for forecasted growth for the next 5 years for each of these companies. Since investors are forward looking and this is a number that is transparently reported to them it would be preferable to use this forecast.

Figure 4.

		DCF Implementation								
Company Name	Symbol	52 Week High	52 Week Low	Annual Dividend	Average Yield	Growth %	DCF - Raw	+ Country Risk	+ Size Risk
Westar Energy	WR	$ 44.03	$ 38.23	$ 1.44	3.50%	3.07%	6.68%	12.02%	13.42%
Pinnacle West Corporation	PNW	$ 73.31	$ 52.13	$ 2.38	3.79%	4.20%	8.15%	13.49%	14.89%
Hawaiian Electric Industries, Inc	HE	$ 35.00	$ 22.71	$ 1.24	4.30%	4.30%	8.78%	14.12%	15.52%
Great Plains Energy	GXP	$ 30.25	$ 23.91	$ 0.98	3.62%	5.90%	9.73%	15.07%	16.47%
OGE Energy	OGE	$ 39.28	$ 30.82	$ 1.00	2.85%	6.82%	9.87%	15.21%	16.61%
PNM Resources	PNM	$ 31.60	$ 24.26	$ 0.80	2.86%	9.86%	13.01%	18.35%	19.75%
Ida Corp, Inc	IDA	$ 70.48	$ 51.70	$ 1.88	3.08%	3.00%	6.17%	11.51%	12.91%
Cleco Corporation	CNL	$ 59.21	$ 46.11	$ 1.60	3.04%	3.00%	6.13%	11.47%	12.87%
Allete Inc	ALE	$ 59.73	$ 44.19	$ 2.02	3.89%	6.00%	10.12%	15.46%	16.86%
Otter Tail Power	OTTR	$ 33.44	$ 26.53	$ 1.23	4.10%	6.00%	10.35%	15.69%	17.09%
The Empire District Electric Comp	EDE	$ 31.49	$ 23.23	$ 1.04	3.80%	3.00%	6.92%	12.26%	13.66%
MGE Energy Inc	MGEE	$ 48.00	$ 36.30	$ 1.13	2.68%	4.00%	6.79%	12.13%	13.53%
Teco Energy	TE	$ 22.02	$ 16.90	$ 0.90	4.62%	9.20%	14.25%	19.59%	20.99%
Scana Corporation	SCG	$ 65.57	$ 47.77	$ 2.18	3.85%	4.30%	8.31%	13.65%	15.05%
Average		$ 45.96	$ 34.63	$ 1.42	3.57%	5.19%	8.95%	14.29%	15.69%
Standard Deviation		$ 16.12	$ 11.84	$ 0.47	0.64%	2.31%	2.58%	2.58%	2.58%
Avg less 1 Srd Dev.		$ 29.84	$ 22.79	$ 0.95	2.93%	2.87%	6.36%	11.70%	13.10%
Avg plus 1 Srd Dev.		$ 62.08	$ 0.08	$ 0.12	4.21%	7.50%	11.53%	16.87%	18.27%

	IRC	Revised
Avg Yield %	3.42%	3.57%
Avg Gr %	8.77%	5.19%
Raw DCF	12.49%	8.95%

The Commission's Responses

On pages 28 and 29 of the CONSULATIVE DOCUMENT, NOTICE OF PROPOSED RULE MAKING – DOCUMENT REFERENCE: 2015/001/NPRM-02, the Commission provided the reasons for using the sovereign bond formula in its calculation. Therefore it is incorrect to state that the Commission did not provide reasons why the sovereign bond spread method was used rather than the synthetic spread. The Commission stated that it could not adequately verify the equivalency of the CariCRIS rating and furthermore the sovereign bond spread was more market based.

It is also well established that the beta that can be used in DOMLEC's case has to be that of a group of proxy companies. The Commission is well aware of DOMLEC's exposure to country risk and is of the view that it has made compensation for such.

The Commission has listed the group of proxy companies which are in the power sector. These were used to calculate the DCF value of the cost of equity as well as the beta for calculating the cost of equity using the CAPM method. If there are errors in the calculations then these should have been pointed out.

DOMLEC should be aware that in this jurisdiction that the prime reason for averaging the results of the DCF cost of equity and the CAPM cost of equity is to minimize the impact of the errors which may be inherent in each model.

The Tariff Regime speaks of the following: *Estimating the return on equity may give rise to two type of errors. First, the use of any specific model may give rise to errors or biases unique to that model. To reduce errors that may result from the application of any one model, several financial models have been employed to estimate the cost of equity. The final cost of equity figure used in calculating an overall rate of return is the average of the results of the models applied.*

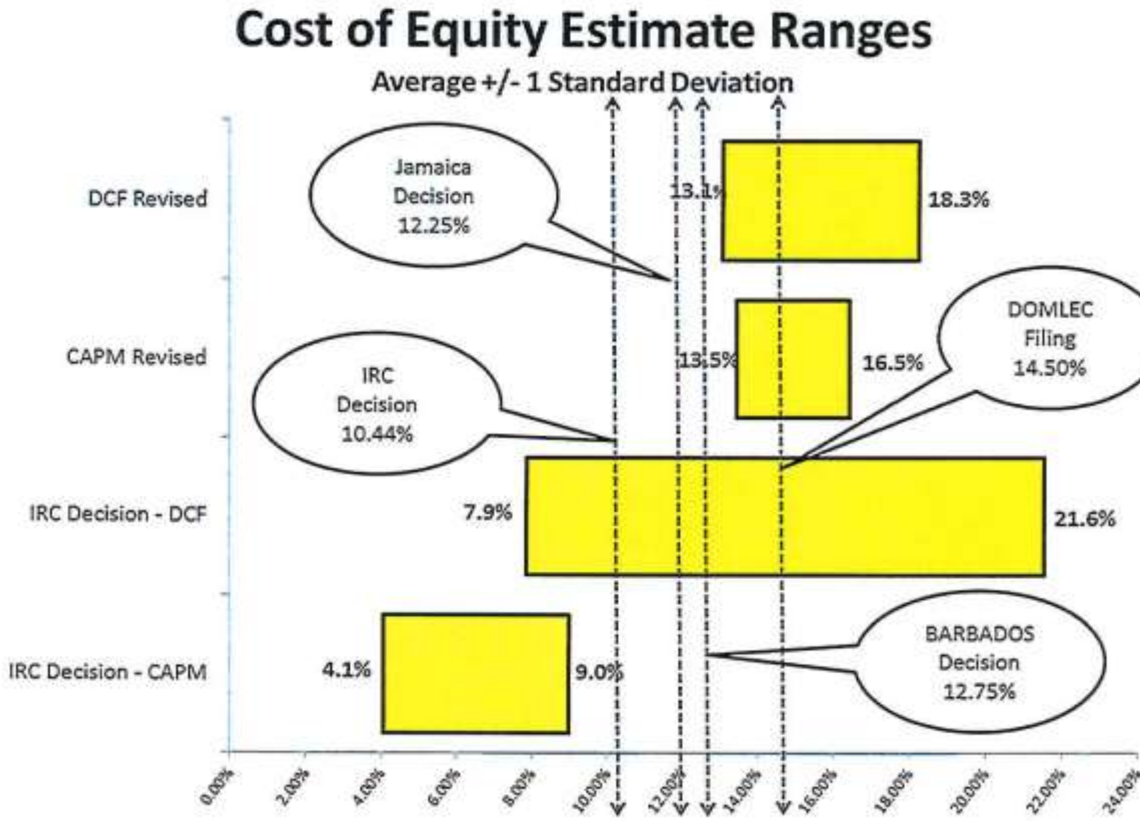
Decision 8: The Commission has determined that the WACC to be applied to DOMLEC's regulatory asset base shall be 8.56%.

Grounds for Reconsideration

DOMLEC requests that the Decision be reconsidered because:

1. As discussed above the IRC application of the CAPM model using the US data selected had several shortcomings. The graph below highlights the results of the various approaches by laying out the range plus and minus one standard deviation. It is revealing in that it shows just how out of sync the IRC's CAPM implementation is from the other estimates.

Figure 5.



One of the main reasons for takin a look at multiple approaches is that they reinforce and validate one another. Of major concern is the IRC;s CAPM assumptions are producing results that are inconsistent with the other approaches and recent regulatory outcomes.

A reasonable range for the Cost of Equity would be 13.1% to 18.3%. The IRC's decision of 10.44 is well outside of this range and if implemented would significantly understate this cost. Moving forward with the decision does not change the true cost and would have an adverse effect on DOMLEC's customers, employees, and investors and should therefore, be revisited prior to its implementation.

2. The IRC has introduced new methodologies in the Decision, different to those adopted in the Proposed Rule Making documents issued during the consultation without affording DOMLEC the opportunity to respond. Overall as it relates generally to this application the IRC has constantly changed their methodology for determining the WACC without good reason for doing so and without giving DOMLEC the opportunity to respond.

CONCLUSION (DOMLEC's)

In the circumstances, DOMLEC implores the IRC to reconsider its decision in light of the factors and methodological recommendations detailed above. This is necessary if the IRC is to come to a decision which reflects its statutory mandate to hold the balance equitably between the interests of end consumers and that of investors in the electricity sector.

The Commission's Responses

1. The Tariff Regime for Dominica Electricity Services Ltd (DOMLEC) Reference 2009/004/D stipulates the procedure the Commission must follow in arriving at and setting rates for DOMLEC. For avoidance of doubt the quotation which follows sets out the use of the DCF and CAPM models in rate setting for DOMLEC:

   > *There are two widely accepted models for estimating the cost of equity capital. The first, the Discounted Cash Flow (DCF) model assumes that the current market price of a company's stock is equal to the discounted value of all expected future dividends. There are various formulations of the DCF model based on different projections of future dividend growth. The version of the DCF typically applied is the constant growth or the Gordon model. The second, the Capital Asset Pricing Model (CAPM) assumes that the cost of equity investment is equal to the risk-free rate of interest plus the risk premium on the market portfolio adjusted by the company-specific risk factor, beta.*
   >
   > *An average of the costs of equity derived from the DCF and CAPM models could then be used as the appropriate value for Cost of Equity.*

   The Commission has faithfully followed this procedure the making of which was heavily subscribed to by DOMLEC. The use of the average of the DCF and CAPM models was adopted as a means of reducing errors associated with the application of any one model. As far as the Commission is concerned, all the examples quoted by DOMLEC arose out of the use of either one or more of the models, and so comparison of the results is flawed.

   DOMLEC, in making comparison with the Jamaica Decision, ignores that, in arriving at the decision, the works of Professor Damodaran was used. Other factors that were used in that Decision included the beta of electric utilities of the emerging market as postulated by Damodaran. It stands to reason that if the beta value of the comparable group is low then the result of the cost of equity using the CAPM would be low. In the consultation DOMLEC made a case for US companies to be used and not the emerging market.

The debt and default spread are other factors that impinged on the result. Given the information below the IRC did not use any methodology different to Jamaica.

	JPS	DOMLEC
Risk-free rate	2.90%	2.17%
Beta	0.88	0.41
MMRP	5.0%	5.21%
CRP	5.58%	5.34%
Cost of debt	8.07%	5.75%

2. As explained earlier the IRC has not introduced any new methodologies that are different to the NPRM.

The Commission is not aware that it changed its methodology during the process. As explained above, the Commission is always mindful of suggestions and recommendation made at its public consultations. It is for this reason as another example that the Commission, contrary to its original position, accepted the recommendation of the other stakeholders in a companion consultation of April 14, 2015 and has approved the construction of a 33 KV line from Fond Cole to Sugar Loaf.

Conclusion

As explained at the beginning of this document, the Commission is of the view that DOMLEC request for a reconsideration of the Commission's decisions fell outside the grounds for reconsideration established in Part 8 of the Commission's Rules of Practice and Procedure, reference 2008/004/D, except possibly "*Any other reason justifying relief from the operation of the order*". All the issues raised formed part of the public consultations held by the Commission on March 13, 2015 and April 14, 2015. As a result the Commission dismisses the petition and confirms the decisions of its Order made on April 23, 2015 and included in the Decision Document, Reference 2015/001/D: Weighted Average Cost of Capital (WACC) for Dominica Electricity Services Ltd.