Comments on Consultation Document Ref: 2009/004/CD-01
Tariff Regime for Dominica Electricity Services Ltd.

Introduction

DOMLEC welcomes the opportunity to present its comments on the referenced Consultation Document. We are of the opinion that the proposed rate regime, being essentially a continuation of the cost-based rate that was formerly in place, is appropriate for DOMLEC at the present time. However, we are very aware that the mechanism and approach outlined in the Document is still very "high level" and still leaves many areas either undefined or poorly defined. We believe this will lead to a longer, and perhaps more contentious, rate filing process. We also believe that this will result in the need for a considerable amount of interchange between DOMLEC and the IRC during the filing process, resulting in increased time and cost being expended by both parties. We feel that more time should be made available at this stage to further define the mechanism, as it will result in a quicker filing process.

Please note that, due to time and resource constraints, DOMLEC has not thoroughly reviewed or commented on Part B of the Document. It is our understanding that there is some leeway in the presentation of the information required, and we also believe that, subsequent to this consultative process, some of these data collection forms may have to be revised. We do not believe that a detailed review of the templates is critical at this stage because applicability of these forms is totally contingent upon reaching understanding and agreement on the major concepts put forth in the main body of the Regime document. However, DOMLEC reserves the right to go over the proposed detail in the templates, with IRC staff, and potentially make changes that reflect agreements reached in the main body.

During our review, an area of concern that has become apparent and that is not addressed at all in the proposed regime is that of energy purchased by DOMLEC from other producers, e.g. small renewable systems, IPP's, etc. In reviewing how possible mechanisms to include such payments might be developed, we have concluded that this is an area that needs significantly more consultation with the IRC before we can present possible solutions. DOMLEC requests that this be given very urgent priority and that no final decision be taken on the tariff regime by the IRC until we have had a chance to discuss and present possible solutions.

In this document, we present our comments based on the order as presented in the Consultation Document and refer to the page and paragraph location, where possible, for clarity. DOMLEC anticipates receiving a comprehensive response to this document as well as significant further discussion and negotiation with the IRC prior to that organization making final deliberations on this important aspect of regulation.

Comments and Responses

Page 2, paragraph 2
In the last sentence "…the Act provides for competition in generation, transmission, distribution and supply, and this regime is expected to continue at least until 2015 …" please explain what regime is being referred to. DOMLEC is also disappointed that the Commission has omitted language that it has included in the past, suggesting that competition in transmission and distribution is impractical given the very small size of the Dominica electricity system. We believe that a clear and consistent message from the IRC is extremely important for all stakeholders.

Page 7, last paragraph
DOMLEC is encouraged by the Commission's recognition that the tariff must provide investors "the opportunity to realize a fair return on investment".

Page 8
DOMLEC has several comments on the formula for revenue requirements:

- Clarification on Terms and Definitions: The term "tariff" usually defines all aspects of service provision, including individual rate components, such as but not limited to, customer charge ($/month), electric rate ($/kWh), demand rate ($/kW), special riders such as a fuel charge ($/kWh) or environmental compliance charge ($/kWh), taxes and fees ($/kWh) as well as the terms under which the services are provided (e.g. Winter v. Summer periods, Time of Use, etc). Throughout the document, we need to be careful to establish and use terms appropriately to avoid confusion. An "average rate" in $/kWh is an appropriate way of presenting the rate at which the Revenue Requirement ($) is recovered from customers via sales (kWh). The tariff contains all the rate components, charges and terms that are used to develop the customer bill. DOMLEC has attempted throughout these comments to use the terms "tariff" and "rate(s)" following the definition described above.
- The IRC shows that three items (RR, GO and RF) add up to T, which is the Average Rate. The Average Rate – by definition - would be in cents per kWh, but none of the terms to the right of the "=" sign are in cents per kWh. We think that this formula is incorrect, and it should instead read:

  $$RR = OC + FC + GO + RF$$

  OC equals operating costs, and FC equals financing costs, as defined on Page 9. Once we have the revenue requirement (RR), we can decide how to spread those costs out over the various customer classes, and set tariffs and apply rates designed to allow DOMLEC to collect revenues equal to the total Revenue Requirement, including DOMLEC's return.

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

Average Rate = Revenue Requirement ($) / Sales (kWh)

- The formula contains terms "GO" for Government Obligations and "RF" for Regulatory Fees. It shows that these terms can be either plus or minus, but it would be quite unusual for these terms to be negative (particularly RF). This could only arise if it were assumed that DOMLEC over-collected either of these items and needed to refund some amount of GO or RF. It does not hurt to have the minus term, however.

Page 9

DOMLEC proposes to further modify the Revenue Requirement definition to clearly establish the concept of the non-fuel base revenue requirement and the fuel revenue requirement to be consistent with the discussion of the non-fuel operating costs which follows later in the document. 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 costs and will change monthly according to an agreed-to formula and process and will not be subject to the procedures outlined in Sections 23 and 24 of the 2006 Electricity Supply Act except as might pertain to the mechanism itself.

RR = NFOC + FOC + FC +GO + RF

Where

RR = Total Revenue Requirement
NFOC = Non-Fuel Operating Costs
FOC = Fuel Operating Costs
FC = Financing Cost (including DOMLEC return)
GO = Government Imposed Obligations
RF = Regulatory Fees

DOMLEC also suggests introduction of some additional definitions at this point. Assuming that fuel costs will be a 100% pass through, the concept of a non-fuel base rate (Base Rate) and a fuel rate (Fuel Charge) helps to clarify and define the ultimate tariff structure. The revenue requirement for the Base Rate is then:

Base Rate RR = NFOC + FC + GO + RF
Fuel Charge = Cost of Fuel

Separating these two key components is important.

For purposes of clarity here, DOMLEC defines the Cost of Fuel as the cost of fuel delivered to its storage facilities at its thermal generating stations. Further, for the purpose of calculating the

monthly FOC to the customer DOMLEC will use the weighted average cost of fuel consumed during the month in question.

In the fourth paragraph, the following statement is made: "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." DOMLEC has significant concerns regarding this statement. Unless there is a clear and unambiguous definition of what constitutes "approved" non-fuel operating expenses, we believe that there is potential for significant contention during the rate filing process. We would have preferred to clarify this as much as possible in advance of the filing but the time constraints imposed by the IRC have prevented this. The sentence also implies that the IRC can determine if all or any of the GO and/or RF should be included in the Revenue Requirement.

DOMLEC would like to modify the last paragraph by inserting the word "including" as follows: "Non–fuel operating costs are all prudently incurred costs which are not directly associated with investment in capital plant *including* salaries and wages; other employee costs; operating costs of generation, …..".

Also in the last paragraph, we contend that income taxes are a component of operating expenses and therefore it is incorrect to exclude them as done in the last sentence of the paragraph: "…information technology costs; taxes *other than income taxes*; and other costs that are determined to be reasonably incurred."

Page 10, paragraph 3
DOMLEC is concerned by the following language: "An example of one-time expenditures to be removed would be costs of one off specific studies that will not be continued or replicated in the future." This seems to imply that certain costs e.g. loss reduction study, hydro expansion study, regulatory consultancy, could be considered "one-off specific costs" and be disallowed. We contend that such costs are very real and form part of the costs of operating a reliable utility. Rather than being removed, such costs should be averaged over an agreed time period and included in operating expenses.

Page 14, paragraph 3
As discussed, DOMLEC has applied for changes to legislation to allow for the setting up of a tax-deductible self-insurance fund. We anticipate that this will be completed before the tariff filing and therefore will be taken into account then. In addition, DOMLEC is pursuing another option being investigated by CARILEC and may wish to entertain this facility as secondary insurance. Further details will be made available to the IRC at filing.

Page 16, paragraph 2
DOMLEC is again encouraged by the last sentence of the paragraph. However, we are disappointed that the IRC has not already taken definitive action on this issue. DOMLEC knows that it is well within the powers of the Commission to order the cessation of the 2.5% penalty

that Domlec now bears. Such an order would clearly demonstrate the independence of the Commission and its desire to act in good faith.

Page 14, Treatment of Costs resulting from Natural Disasters

The IRC says that DOMLEC should self-insure against natural disasters by adding into its revenue requirements an amount need to collect funds that it would have on hand to restore service. This approach does not address several key issues:

1) How large can this amount be? What if there are damaging hurricanes two years in a row? What if a hurricane occurs next year before there are sufficient funds in the account to restore service? Can DOMLEC set aside enough funds to restore service in this case? The IRC requires DOMLEC to make a proposal on this fund within 90 days. DOMLEC may wish to consider approaches other than self-insurance, including the sale of bonds to investors (if feasible) to build up such funds, which will incur interest costs, but not affect consumer rates nearly as much as direct payments into this fund. Also, such funds could be raised much more quickly than a "disaster tax" on consumers.
2) If there are remaining costs after DOMLEC restores service, does the IRC agree that DOMLEC can file a special one-time rate request to recover those costs over time? If so, then there should be another term added to the revenue requirement formula above to allow for disaster-related funds collected over time.
3) Can DOMLEC use funds collected in this self-insurance fund to "harden" the system and lessen the impact of disasters?

Pages 14 - 22, Treatment of Fuel Costs

DOMLEC believes that this entire section becomes largely irrelevant pursuant to our agreement, at the meetings of April and August 12/13, to treat fuel costs as a 100% pass-through. DOMLEC has prepared a proposed formula to be used to calculate the monthly fuel cost and which will incorporate the fuel efficiency target desired by the Commission. Please see Appendix A.

Pages 24 – 25

DOMLEC is pleased to see that the IRC acknowledges that DOMLEC must undertake a major capital investment program. We also note that the IRC require DOMLEC to justify every major project before it can be included in rate base. However, even with a hybrid test year, DOMLEC's expenditures will span multiple years, and DOMLEC cannot make initial expenditures (e.g., in new generation) without completing those expenditure programs in following years. Thus, DOMLEC would like to point out that the IRC's agreement to include certain costs in rate base this year will imply that certain future costs will be included in rate base as well.

DOMLEC notes that the IRC has suggested that DOMLEC develop costs associated with the future multiple year capital programs necessary for reliability improvements and use the "blended approach" for adjustments to the test year. We interpret this to mean that DOMLEC

can develop the test year underlying costs using historic normalized expenditures and then adjust those cost levels by the average of the relevant cost elements forecast for the rate period (in this case 3 years). We believe this approach is consistent with 1) the IRC acknowledging forward capital spending patterns are NOT consistent with historic patterns and 2) that the IRC wants to reduce volatility of rates. Again, DOMLEC points out that capital investment programs anticipated will require multiple year commitments and expects that the Capital Investment Program review in combination with DOMLEC's demonstrated commitment to cost and schedule of such investments will assure that all planned and prudent capital investments will be incorporated into Rate Base and recovery through rates assured in future years and future rate cases.

We note that the IRC raises a concern that is very common in cost of service ratemaking - if DOMLEC has to defer the specific capital investment, those costs have already been embedded in the approved rates, and thus DOMLEC is receiving revenue to cover costs that did not occur. In the case of deferral of planned spending, DOMLEC will have to explain the deferral in subsequent rate proceedings. The IRC would then make a ruling based on the entire circumstance, allowing or disallowing the alternative spending as prudent AND determining if the original proposed spending was appropriate and still required, if the deferral of the specific project was prudent and that the alternative spending (if applicable) was prudent given the circumstances.

The IRC says on Page 25 that the IRC "does not expect to manage the Company's capital budget"; however, it also says that DOMLEC must justify each capital project, and DOMLEC must submit an updated 5-year Capital Investment Plan every year. We believe that there needs to be a mechanism to implement this philosophy. DOMLEC requests that there is some threshold – either above $x million or above some percentage of the overall capital plan (e.g., 10%) – below which DOMLEC has the discretion to undertake projects without project-specific approval. Unless there is some threshold, we believe that the IRC could question every computer, every spare part and every automobile that DOMLEC purchases. Justifying small expenditures would be onerous, unnecessary and an inefficient use of IRC and DOMLEC resources. We note that the IRC does suggest a "blanket work order" approach for smaller, routine annual capital expenditures and are in agreement with this approach.

In paragraph 2 on page 25, please provide an explanation of what is meant by item 4) "lost generation" in the context of capital investment.

Pages 28 – 30, Weighted Average Cost of Capital

As stated at the recent meeting DOMLEC rejects the concept of determining return on equity (ROE) using the actual ROEs earned over the last ten years. The actual earnings are not representative of the returns expected by any of DOMLEC's investors in today's climate, especially in light of the significant changes in legislation and policy that have occurred within the last three years. DOMLEC is of the opinion that the risk to investors is now significantly higher than it has been in the past and hence their return on equity invested should be commensurately greater.

DOMLEC suggests that the methodology proposed for deriving the cost of equity capital (based on average of DCF and CAPM approaches) is appropriate. These methodologies (along with the Risk Premium approach) are most commonly adopted in rate-making proceedings worldwide.

However, the choice of comparable companies is the key to determining the cost of capital, and DOMLEC feels there are real problems with the approach recommended in the IRC document:

1) The IRC states that it intends to use comparable companies based purely on bond ratings and ranking across various industries with no regard to industry affiliation. DOMLEC contends that the bond ratings for other industries (e.g., metals, refining, etc.), where there are a variety of companies with different ratings, cannot possibly apply to DOMLEC.
2) Since DOMLEC has no bond rating, it is not clear how to select comparable companies based on that factor.
3) The IRC does not mention country risk. If DOMLEC uses comparables from less risky and more liquid markets, there needs to be a positive risk adjustment for operating in Dominica.
4) The IRC does not take into consideration the small size of the utility in terms of market capitalization and geographic expanse, which makes its earnings largely a function of the economic, social, and regulatory factors affecting its limited service area.

In lieu of the significant challenges associated with identifying regional comparables as well as inaccuracies associated with picking companies in other industries, DOMLEC is submitting a position paper (see Appendix B) with recommended ranges of ROE and RORB using the IRC accepted CAPM and the DCF methodologies. Comparables from US electric utility industry have been selected and appropriate adjustments have been made for differences in economic, financial, and political risks of operating in Dominica vs. the U.S.

On Page 28, the IRC says that the cost of equity (ROE) should be what investors would expect to earn with comparable investments. DOMLEC agrees. However, in Consultation #3 on Page 30, the IRC suggests that DOMLEC should perhaps have to return “excessive profits”. DOMLEC strongly objects to this concept. Either a mutually agreed range of Return on Rate Base (RORB) should be determined or there should be no range and just an agreed “target” return for initial rate setting purposes. In the former case, if the actual return exceeds the top end of the range rates will be adjusted downwards and conversely, if the actual return is below the lower end of the range it will trigger an adjustment upwards in the rate. In the latter case, with no agreed range of RORB, the risk to DOMLEC of having no lower limit to its return must be balanced by the reward of having no upper limit on RORB.

Also, it should be remembered that the cost of equity is an expected return only, and in any given year, the actual return could be significantly different. For example, ROE may be very low in years affected by hurricanes or other natural disasters. The IRC suggests comparing the ROE to other utilities in the Caribbean; again, one would need to find comparable companies, since

the ROE for an affluent island (e.g., the Cayman Islands, Barbados) would not be appropriate for Dominica.

It is also important to note that due to the hybrid test year approach being recommended, adjustments need to be made for any debt issued in the forecast portion of the test year, or even during the first few months of the rate effective period. Also, given DOMLEC's expanded capital investment plans and commensurate financing costs, there needs to be a standard that allows for the test year to be adjusted to account for cost of debt for the entire rate effective period rather than being constrained to just the first few months. The exact standard needs to be determined based on further discussions with the IRC.

Page 30, Government Imposed Obligations
DOMLEC is in general agreement with the principle of treatment for any Government Imposed Obligations. However, the threshold amount for determination if the imposition is material or not should be reduced to a cumulative sum of EC$100,000. Additionally, any such charge that is due to a Government Imposed Obligation must appear as a separate line item on customer's bills.

Page 31 – 32, Regulatory Fees
DOMLEC is in agreement with the proposed treatment of Regulatory Fees. Again, this charge must appear as a separate line item on customer's bills.

Page 33 - 35, Tariff Design
DOMLEC notes that for the purposes of the first filing, the rate design shall remain the same as that currently in use. DOMLEC also wishes to emphasize that the cost-of-service study that the IRC says it will require before the second tariff application is not a trivial exercise. DOMLEC would like the IRC to recognize that such a study is very likely to show that residential and small commercial customers should actually be paying <u>higher</u> rates than at present. This conclusion, if borne out by the study, would, we believe, be problematic. We request that this issue be carefully considered and that we meet to discuss the approach in much greater depth prior to undertaking this study.

The IRC also suggests interruptible rates and net metering as ways to lower rates for consumers. In DOMLEC's view, neither of these programs will benefit the average consumer. Instead it is only the large or relatively well-off consumers that stand to gain from such programs. With regard to interruptible rates, in general, these only make sense from the utility's perspective when it can negotiate such rates with large consumers, whose removal from the network will make significant differences to capacity requirements. Interruptible rates need to correspond to lower costs than DOMLEC achieves by not having to use its least efficient (highest cost) generation. However, among residential consumers (which the IRC seems to have in mind), most customers like this idea until their service is interrupted. Thus, it is not clear that such a program will work well, unless DOMLEC puts the telemetry in place to force the shutoffs, and that will require additional capital investment that the IRC will need to approve.

With regard to net metering, that term applies to what DOMLEC would pay for customers who generate their own power on site (e.g., through renewables) and feed it back into the grid. Net metering can be viewed as an "extreme" form of energy conservation, in that it is possible for the customer to have either a net zero energy consumption or a net negative energy consumption (energy export). However, being able to take advantage of this program will require substantial investment in on-site generation, and this type of investment can only be made by the more well-off consumers. Under a net metering scheme, a consumer actually consumes grid services (the fixed cost component of the energy rate) with the potential of not having to pay for these services. Therefore, if net metering is allowed to proliferate, the end result will mean that the utility company is forced to allocate the same fixed costs for grid services across fewer kWhs sold, thereby increasing the cost of service to those customers who cannot afford on-site generation. DOMLEC has suggested, in its Interconnection Policy which has been submitted to the IRC, that net metering be restricted to systems under 5kW peak installed capacity and that there must be a cap on the quantity of such systems that are allowed to interconnect.

Pages 35 - 36, Performance Standards

We have several comments on the Performance Standards:

- The IRC's discussion of performance standards is focused on the idea of imposing penalties on DOMLEC for sub-standard performance. We feel there should be corresponding rewards for superior performance. We have included such a mechanism in the proposal for the fuel charge mechanism. Please see Appendix A.
- To support this balanced approach, there could also be a range of acceptable performance for some parameters, and not a hair-trigger basis for penalizing or rewarding DOMLEC.
- There should be a linkage between the loss reduction and capital investments. In particular, DOMLEC would like to point out that its Capital Investment Plan must be consistent with achieving these reductions, and the IRC should favor these types of investments in particular, assuming they are prudent.
- Performance standards should not apply in years when there is a major natural disaster.
- DOMLEC believes that the exact definitions of terms used in establishing the performance standards are extremely important and must be agreed in advance with the IRC.

Page 38 – Paragraph 1

DOMLEC requests clarification from the IRC regarding the statement that "At the beginning of years 2 and 3, the tariff will be adjusted by the point to point inflation rate recorded in the Dominican economy over the previous twelve months." DOMLEC assumes that the inflation adjustment would be applied to the non-fuel Revenue Requirement and thus impact Base Rate revenues only. DOMLEC also assumes that no adjustment would be made to the underlying costs used to establish the non-fuel Revenue Requirement in the original rate case. However, the opportunity exists in this process to refresh the sales forecasts for Year 2 and Year 3 and incorporate that update into the non-fuel Base Rate adjustment.

For example, if the sales forecast is unchanged then the non-fuel Revenue Requirement is adjusted by inflation and divided by the original sales forecast kWh resulting in the new non-fuel Base Rate. If the sales forecast is increased, then the non-fuel Revenue Requirement is adjusted by the inflation rate and then divided by the updated sales forecast, which because it is higher than the original sales forecast, results in a lower non-fuel Base Rate than would have resulted had the original sales forecast been applied. Conversely, if the updated sales forecast is lower than the original sales forecast, then the non-fuel Revenue Requirement is adjusted by the inflation rate and then divided by the updated sales forecast, resulting in a correspondingly higher non-fuel Base Rate than would have resulted had the original sales forecast been applied. The use of a refreshed sales forecast along with the inflation adjustment is consistent with the intent of making rational adjustments in rates for material factors over which DOMLEC has no control.

Pages 43 – End
In general, most of Sections B – D are generic templates and forms and will require substantial review between IRC and DOMLEC staff for applicability in the DOMLEC rate case environment once the main mechanisms of the Regime are fully developed and agreed to by parties.

Section 2.5, Pages 47 & 48
In DOMLEC's opinion, all these definitions require substantial additional work, fleshing out the specific meanings, particularly the use of "estimated data", the reconciliation requirements and the "13-month average". Greater detail and understanding of the IRC's intent is needed. DOMLEC requests that IRC and DOMLEC staff meet to provide this further necessary detail.

Schedule B: Pages 66-68
DOMLEC requests that the IRC provide clarification regarding IRC intent and views on the treatment of Capital Work In Progress (CWIP).

Two common approaches for treatment of CWIP are in use in regulated cost of service regimes:

1. Allowance for Funds Used During Construction (AFUDC)
   Under AFUDC, financing costs associated with CWIP are accumulated during the construction period and are added to the total capital investment that is placed into Rate Base when the asset is placed into service. AFUDC is commonly accrued at the WACC. The effect is to defer return to the utility on the capital and financing costs until the investment is operational and placed in rate base. The utility essentially advances the capital during the construction period and recovers the principle and the AFUDC through rates over the service life of the project. From an accounting perspective, assuming a $50 Million CWIP amount, the debt costs are booked at an after-tax rate, say at 9.5% (using a hypothetical 50:50 capital structure, an equity rate of 15%, debt rate of 5%, and corporate taxes at 20%). In this case, the AFUDC will be recorded on the asset side of the balance sheet at $4.75 Million ($50 Million*9.5%), other income increases by $3.75 Million, and interest expenses reduce by $1 Million. Earnings actually increase by $4.75 Million with no impact on cash for the utility.

2. CWIP into Rate Base
   Under this approach, CWIP is placed into rate base as the capital is expended by the utility eliminating the creation of a deferred capital financing cost (AFUDC) that is added to the total capital cost that goes into rate base when the asset is placed in operation. This approach is very commonly used for large capital investments that may span several years and has the effect of reducing the rate shock of adding a large capital investment plus a potentially substantial deferred financing cost to rate base at a single point in time in the future. In other words, if the investment is a significant portion of the total rate base of the utility, it would be beneficial for both the utility and the rate-payers to use the CWIP mechanism to roll the investment into the rate base. From an accounting perspective, assuming a $50 M CWIP amount and a 10% pre-tax WACC, the rate increase would be $5 Million, there would be a $5 M cash increase on the balance sheet, and revenues on the income statement increase by $5 Million as well. (** Is the CWIP investment depreciated as well? I would think not as the asset has not yet begun performing)

It is important to emphasize the need for CWIP for large capital investments, for example, geothermal plant investment, new diesel generation investment, or transmission investment. These investments will be significant percentages of the current total rate base of the utility. High level of capital investment coupled with the expected higher debt financing costs in the future (resulting from the global financial crisis and non-availability of tax free NBD debt) employing CWIP may actually lower costs for rate-payers.

There is no mention of AFUDC or CWIP-into-rate-base in earlier rate base section pages 22-27. The Schedule B is also not clear as to the treatment. DOMLEC would like to meet with IRC staff to discuss this in more detail and examine the potential benefits associated with rolling CWIP into rate base as opposed to using the AFUDC approach.

Appendix A

Proposed Fuel Charge Calculation Methodology

Ref.	Name	Formula	Units	Below Efficiency Target	At Efficiency Target	Above Efficiency Target
	Hydro energy generation		kWh	1,823,750	1,823,750	1,823,750
A	Diesel energy generation	Measured	kWh	5,374,750	5,374,750	5,374,750
	Total energy generation		kWh	7,198,500	7,198,500	7,198,500
B	Monthly energy sales	Measured	kWh	5,951,729	5,951,729	5,951,729
C	Monthly fuel used	Measured	Imp. Gal. (IG)	330,754	311,580	294,507
D	Average Fuel price	Weighted Average	EC$/IG	6.50	6.50	6.50
E	Actual cost of fuel	C x D	EC$	2,149,900	2,025,268	1,914,295
F	Actual diesel efficiency	A/C	kWh/IG	16.25	17.25	18.25
G	Mandated diesel efficiency		kWh/IG	17.25	17.25	17.25
H	Fuel Efficiency Benefit/(Penalty)	((A / G) x D) - ((A / F) x D)	EC$	(124,632)	-	110,974
J	DOMLEC portion of FEB/P	If H > 0 then H x 0.5 else H	EC$	(124,632)	-	55,487
K	Adjusted cost of fuel	E + J	EC$	2,025,268	2,025,268	1,969,781
L	Fuel charge (100% pass through)	K / B	EC$/kWh	0.3403	0.3403	0.3310
	Cross check					
M	Total expense	E	EC$	2,149,900	2,025,268	1,914,295
N	Total revenue	B x L	EC$	2,025,268	2,025,268	1,969,781
	Gain/(Loss) to DOMLEC	N - M	EC$	(124,632)	-	55,487

Appendix B

DOMLEC POSITION PAPER
PROPOSAL FOR DETERMINING ALLOWED RATE OF RETURN ON RATE BASE
September 2009

Introduction

DOMLEC agrees that the Return on Rate Base (RORB) is equivalent to the Weighted Average Cost of Capital (WACC) as defined in the IRC's Consultation Document 2009/004/CD-01 entitled Tariff Regime for Dominica Electricity Services Ltd. DOMLEC also agrees that the IRC should regulate the RORB to ensure that the company is allowed to earn a rate of return that is expected by its shareholders, while at the same time ensuring that the cost of electricity is maintained at the lowest possible level.

DOMLEC recognizes that, as was the case in the past, having a figure for allowed return that was fixed in legislation ("guaranteed") was not the most effective method of regulating the company's return. Moving forward, it would seem that rather than focusing on a predetermined single figure for RORB, the IRC should determine a range of allowable RORB, and the company should therefore be allowed to earn any actual return within this range. The application of such a range offers advantages for consumers on both ends: a) it provides strong incentives to the company to make its operations more efficient in order to achieve the higher end of the range, and b) it affords strong protection to the rate-payer (along with performance standards) against wasteful or inefficient company operations resulting in returns at the bottom of the range. DOMLEC proposes that once such a range is agreed and established during the tariff filing, there need be no intervention by the IRC in between rate cases with respect to RORB unless actual returns fall outside the range. In this event, the IRC would be required to authorize a rate adjustment (either up or down) to correct the situation. We believe that if the range is set prudently, such cases would be rare or non-existent.

As discussed in the referenced Consultation Document, RORB (or WACC) is comprised of two components, the Cost of Equity and the Cost of Debt, weighted by the forecast capital structure (debt/equity ratio) of the company. In this document, DOMLEC sets out its proposed basis for determining both the Cost of Equity and the Cost of Debt and how this will then determine what an allowable range of RORB might be established. DOMLEC has chosen comparable companies from the regulated electric utility industry in the U.S and then applied sovereign risk models to take into account country risks specific to Dominica. Additionally, we have highlighted that there are additional risks that investors face due to DOMLEC's size and lack of geographical diversity. Based on this analysis, DOMLEC is of the opinion that the allowed Return on Rate Base would be in the range of 12.1% to 14.6%.

Cost of Equity Analyses

Selection of Comparable Companies:

Selection of a comparable group of companies for DOMLEC is a complex undertaking. Ideally, the comparable group of companies should be from the same geographical region, have similar industry affiliation, ideally similarly sized (in terms of market capitalization) and have comparable credit ratings. In terms of geography, the two regional utilities (other than DOMLEC) that are traded on the Eastern Caribbean Securities Exchange are Grenada Electricity Services Limited and St Lucia Electricity Services Limited. However, these companies not only have significantly higher market capitalizations, they also cannot be used as comparables as they do not have adequate trading history or appropriate empirical data to construct an equity risk parameter. Also companies in Latin America have spotty price history which causes the equity risk parameters to be highly unreliable. Hence, in the absence of any suitable comparable from the Caribbean, Central or Latin American region, comparable companies from the US electric utility industry have been selected. The US has a stock market that is extremely liquid and also has globally traded sovereign debt instruments that can be used as benchmarks for estimating sovereign risk. Lastly many countries issue debt denominated in US dollars which offers additional flexibility to develop sovereign risk spreads.

Outlined below is our process of selection of comparable companies.

First we identified U.S. electric utilities that were highly regulated given that DOMLEC's assets and revenues will be 100% regulated. We consider this to be an important screening criteria as unregulated companies have more market risk which results in a higher cost of equity. We started with Edison Electric Institute's 44 "regulated" class of companies. Members of this group of companies have 80% or more of their assets subject to regulation and such companies are geographically well diversified within the US.

Second, we eliminated 7 companies that were privately owned or were subsidiaries of foreign energy companies. Such companies do not have publicly available information on betas or dividends and are not considered.

Third, we eliminated an additional 7 companies that did not pay dividends or whose dividend information was not available. This was done to keep a consistent set of comparable companies across the various methodologies used in calculating the cost of equity.

This elimination process led us to the final selection of 30 U.S based comparable companies. These are listed in Appendix I.

Note that we did not exclude any companies based on credit rating given the lack of clarity on DOMLEC's own credit rating and also because we did not identify a strong correlation between credit rating and market risks amongst the comparable group of companies. We also did not eliminate companies based on market capitalization as we could find no company that was as

small as DOMLEC. In fact the smallest utility in the comparable group of companies was Unitil Corporation (UTL) with US$180 M in market capitalization.[1] This is more than ten times the size of DOMLEC which, at a trading price of EC$3/share, has a market cap of US$12M. Additionally, we found very little correlation between market risks and market capitalization for U.S electric utilities, maybe because of the regulated nature of the businesses, although, as we will discuss later, it is well proven that returns for smaller companies are more volatile than returns of larger companies.

Methodologies Used in the Calculation of Cost of Equity

Neither the Courts nor economic/financial theory have developed exact and mechanical procedures for precisely determining the cost of capital. This is the case because the cost of capital is an opportunity cost and is prospective looking, which dictates that it must be estimated. There are several useful methods that can be employed to assist in estimating the cost of equity capital, which is the capital structure item that is the most difficult to determine. These include the Capital Asset Pricing Model ("CAPM"), the Discounted cash Flow Model ("DCF"), the Risk Premium Model ("RP") and Comparable Earnings ("CE") methods. Each of these methods differs from the other in its application. For the purposes of this analysis, we have used the CAPM, DCF, and RP methods.

The Capital Asset Pricing Model:

The CAPM is generally considered to be the mostly widely referenced method for estimating the cost of equity both among academics and professional practitioners, with the pioneering researchers of the method receiving the Nobel Prize in 1990. The CAPM is a theory of market equilibrium that measures risk using the beta coefficient. Because investors are assumed to be fully diversified, the relevant risk of an individual asset (e.g common stock) is its volatility relative to the market as a whole, with the equity beta reflecting the tendency of a stock's price to follow changes in the market. The CAPM is mathematically expressed as

$$ke = rf + B(rm-rf)$$

where

ke = required market return on equity
B = equity beta of an individual stock or company
rf = risk free rate of return
rm = required return on the market as a whole or equity market risk premium.

The CAPM, just like the DCF is an ex-ante, or forward looking approach based on expectations of the future. As a result, in order to produce a meaningful estimate of the investors' required

[1] Note that the utility with the smallest market capitalization in the EEI "Regulated" class of companies was Maine and Maritime Corporation (MAM) with a market capitalization of $60 MM. However, the utility was excluded from the list of comparable companies due to lack of pertinent financial data.

rate of return, the CAPM must be applied using estimates that reflect the expectations of actual investors in the market. Traditionally, equity beta calculations have been conducted using historical stock prices regressed against the broader market index such as the S&P 500 index. As the cost of equity is forward-looking, we adjusted the equity betas obtained from historical stock prices to forward looking betas using an adjustment which assumes that over time, betas will converge to the market beta of 1.

The key parameters for use in the CAPM are the risk free rate, the equity risk premium, and equity beta. As mentioned above, the equity beta is a measure of the market risk and has been obtained from Bloomberg using an estimation period of 5 years and a weekly return interval. We used a risk free rate of 4.6% corresponding to the 20-year T bond rate [2] and a long horizon equity risk premium of 6.5%. [3] For the CAPM analyses, we made adjustments to account for differences between the financial risks of the comparable companies and DOMLEC. This was done by first unlevering the equity beta obtained for the comparable companies to generate the asset beta of 0.35 and then relevering the asset beta using a target capital structure to generate the relevered beta of 0.67. We then used the CAPM to generate the cost of equity of 9.1%. As explained in the discussion on company size, adding a size premium of 4.25% then produces a CAPM based size adjusted cost of equity of 13.4%.

Discounted Cash Flow Analyses

The DCF approach attempts to replicate the market valuation process that sets the price investors are willing to pay for a share of a company's stock. The model rests on the assumption that investors evaluate the risks and expected returns from all securities in the capital market. Given these expectations, the price of each stock is adjusted by the market until investors are adequately compensated for the risk they bear. Therefore, we look to the market to determine what investors believe a share of common stock is worth. By estimating the cash flows investors expect to receive from the stock in the way of future dividends and capital gains, we can calculate their required rate of return. In other words, the cash flows that investors expect from a stock are estimated, and given its current market price, we can "back-into" the discount rate or cost of equity, that investors implicitly used in bidding into the stock.

DCF models assume that the price of a share of common stock is equal to the present value of the expected cash flows (future dividends and stock price change) that will be received while holding the stock, discounted at the investors' required rate of return. Thus, the cost of equity is the discount rate that equates the current price of a share of stock with the present value of all expected cash flows from the stock.

The form of DCF model that is most commonly used in regulatory proceedings is the perpetuity growth model (also called the Gordon growth model).

[2] Bloomberg/Federal Reserve H15 data, June 18, 2009
[3] Ibbotson's Associates, "Stocks, Bonds, Bills, and Inflation", 2009 Yearbook Valuation Edition, Page 127

K = D1/P0 + g where K is the expected market return on equity

The constant growth model of the DCF recognizes that the rate of return to stockholders consists of two parts: 1) dividend yield (D1/P0) and 2) growth (g). In other words, investors expect to receive a portion of their total return in the form of current dividends and the remainder through price appreciation.

We used Valueline as our source for the estimated dividends for Year 2010 and the average of last 3 months stock price to calculate the dividend yields. For growth (g) we employed two separate methodologies. One assumed growth based on historical long-term GDP growth rate [4]and the second relied on Analyst growth expectations. For the Analyst projections, we relied on Valueline, Zacks.com, and Thompson Financial to produce the earnings growth forecasts needed for the DCF model.

Our analyses produced a cost of equity of 12.5% using the long term historical GDP growth estimate and 12.1% using the Analyst estimates. Taking the average of the two methods produced a DCF cost of equity of 12.3%.

Risk Premium Analyses

Risk Premium approaches generally estimate the cost of equity as the sum of the equity risk premium and the yield on a particular class of bonds. Since the equity risk premium is not directly observable, it is typically estimated using one of a variety of approaches that themselves must incorporate an estimate of the cost of equity in the analyses. An alternative approach is to use actual authorized ROEs for electric utilities as the historical measure of the cost of equity. Since both authorized ROEs and utility bond yields are directly observable, this approach substantially mitigates the estimation error.

It is important to recognize that both academic literature and market evidence indicates that the equity risk premium is inversely related to the level of interest rates. That is, as interest rates increase (decrease), the equity risk premium decreases (increases). Consequently it is important to develop analyses that 1) reflect the inverse relationship between interest rates and the equity risk premium and 2) is based on more recent market conditions. If we let authorized electric utility ROEs serve as the measure of required equity returns and define utility bond yields as the relevant measure of interest rates, the risk premium simply would be the difference between those two points.

To develop an empirical relationship between the authorized returns and the utility yields, we ran a regression analysis using Moody's BAA Utility Bond Index as the independent variable and the risk premium as the dependent variable, using quarterly data from 1990 up until the first quarter of 2009.

[4] Based on historical GDP data at http://www.research.stlouisfed.org/fred2/data/GDPA.txt

RP = a + b(y)

Where:

RP = Risk premium (difference between allowed ROEs and Moody's Baa Utility Bond Yield)

a = intercept term; b = slope term y = Moody's Baa Utility Bond Yield

Our analyses showed a strong negative relationship between risk premium and interest rates on utility bonds as evidenced by the following regression equation.

Y = - .04944x + .0734

Based on the regression analyses and using a current yield of 7% for utility bonds[5], we calculated a risk premium of 3.9% for a total return of 10.9%.

Adjustment for Sovereign Risks

To determine the expected return on equity capital for a firm based outside the U.S., adjustment for sovereign risk is appropriate given the differences in political, financial, and economic risks between the U.S. and the country in which the firm is domiciled. We have chosen to use the country-spread model which adds a country specific spread to cost of equity calculated from the US comparable company analyses. We calculated the cost of equity using US data, as above, then added a spread to "internationalize" it. This spread is intended to measure the additional risks inherent in the foreign investment.

Dominica does not have a credit rating but we have assumed that countries such as Grenada, Belize, Dominican Republic, and Jamaica, have country risks similar to that of Dominica and hence their ratings would be reflective of the credit ratings of Dominica. We note that all four countries have an S&P designated credit rating in the B or a B- category.[6] We calculated 3-month average spreads on B/B- rated dollar denominated sovereign bonds relative to an equivalent maturity long term U.S government bond. Based on this approach, we calculate the average sovereign risk premium would be approximately 6.5% (see Exhibit 1). Note that the current spreads are much higher which we think is a reflection of the global credit crisis. Hence we chose to use a 3 month average spread ending in September 2008. We think this period more reasonably reflects the actual spreads.

[5] Source: Moody's BAA utility bond index as of June 23, 2009 from Bloomberg

[6] Source: www2.standardandpoors.com

Exhibit 1: Representation of Sovereign Risks

Country	Maturity Date	Issue Date	US T Bond Yield *	3 mos Average Spread *	Current Yield	S&P Credit Rating
Jamaica	10/17/2025	10/18/2005	4.0	4.7	8.7	B-
Dominican Republic	1/23/2018	5/11/2005	4.0	5.3	9.4	B
Belize	9/15/2025	2/20/2007	4.0	8.1	12.2	B
Grenada	9/15/2025	11/15/2005	4.0	7.7	11.7	B-
Average				6.5	10.5	

* Three months ending Sept 30, 2008

We would like to point out that the average sovereign risk adjustment above is conservative, and that Grenada could be considered to be a closer proxy to Dominica than Jamaica or Dominican Republic. Both Grenada and Dominica are part of the Eastern Caribbean Central Bank currency union and probably are closer in their economic and social construct than Jamaica, Dominican Republic, or potentially even Belize. However, we believe that the sovereign risk premium for Dominica is even higher than that for Grenada, perhaps by as much a 30 basis points, and hence our proposed sovereign risk adjustment of 8.0% is in order. (7.7% for Grenada specific sovereign risk premium and 0.3% for additional DOMLEC sovereign risk)

The spreads between the bonds is intended to measure the additional returns required to compensate for the additional risks inherent in the foreign investment. However, though the spread may measure incremental returns due to currency risk and other country-specific risks, it is important to note that there may be additional risks inherent in the equity markets of a particular country that are not captured in the yield spread. One model widely used by academics and practitioners to capture sovereign risk is the Country Risk Rating model. [7] This model is also used by Ibbotson's Associates for the development of country cost of capital estimates. Most cost of equity models require market data in order to produce a cost of equity estimate. However, most countries lack sufficient data to incorporate into the cost of equity models. The Country Risk rating model assumes that given a risk rating and equity returns of developed market economies, one can make inferences about expected returns in developing markets or non-market based economies. One needs only a credit rating which is available for most countries. As mentioned before, Dominica does not have a sovereign credit rating but other CARICOM countries such as Bahamas, Barbados, Belize, Haiti, Trinidad &Tobago, Jamaica, and Grenada do. Hence, we have used the above group of seven countries as a proxy to determine sovereign risk for Dominica. Based on the Ibbotson's cost of capital 2008 report, the average sovereign risk premium across the seven countries using the Country Risk rating model is approximately 14.7%. [8] Again, if we were to consider Grenada alone, the sovereign risk premium will be approximately 20%. The incorporation of additional equity risk forms the basis for the upper bound of the determination of ROE.

[7] Country Risk and Global Equity Selection, Erb, Harvey, and Viskanta, Journal of Portfolio Management, Winter 1995

[8] Ibbotson Associates, "International Cost of Capital Report 2008"

Adjustments for Company Size

Another adjustment we feel must be included at this point is the size premium. The magnitude of the size disparity between DOMLEC and other firms in the electric utility industry has important practical implications with respect to the risks faced by investors. All else bring equal, it is well accepted that smaller firms are more risky than their larger counterparts, due in part to their relative lack of diversification and lower financial resiliency.

In the case of a smaller utility, its earnings are principally dependent on the economic, social, regulatory, and other factors affecting its limited service area. Meanwhile, larger utilities typically service customers in numerous geographical locales and in many cases operate in multiple states. Thus, larger firms are able to mitigate risks through geographical and regulatory diversification. DOMLEC's shareholders are exposed to the uncertainties associated with economic conditions, natural disasters, demographics, and other factors that may impact its smaller, more concentrated service area. Other comparable firms may have a more diverse mix of operations and a more diverse generation mix. Because profitability is not tied to a small geographic area, this diversification helps to offset the investment risks associated with a particular area.

In addition, a number of smaller utilities in the US have some of the advantages of larger firms, in that they are part of a power pool that enables them to diversify their sources of generation, hold lower reserves, share the cost of the transmission grid, and benefit from the critical mass that such a larger market provides. In other words, they become "larger" in terms of their perceived risk due to such conditions, but such advantages are clearly not available on an island like Dominica. Furthermore, larger electric utilities are generally followed by multiple investment advisory and bond rating services. This improved exposure to financial markets enhances their ability to raise additional capital relative to smaller utilities.

The median market capitalization of the proxy group companies is approx US$1.9 Billion. As DOMLEC's market capitalization is small (approx US$12 Million) with accompanying trading and liquidity issues, a liquidity or size premium of at least 4.25% is reasonable on CAPM based returns. The size premium is based on empirical studies conducted by the University of Chicago's Center of Research in Securities Prices (CRSP)[9] on market risks and actual returns of stocks of various market capitalizations. This size premium when added to the CAPM derived returns of 9.1% produces a size adjusted CAPM expected return of 13.4%.

[9] Ibbotson's Associates, "Stocks, Bonds, Bills, and Inflation", 2009 Yearbook Valuation Edition, pages 46-47 and Appendix C, page 200. The 4.25% premium is derived by taking the size premium corresponding to the decile (5^{th}) in which the proxy group resides and subtracting it from the decile (10^{th}) in which DOMLEC resides.

We believe that the small size of DOMLEC relative to other electric utilities with which it is compared and with whom it competes for capital must be viewed as an additional risk and should be a consideration in assessing whether an authorized rate of return for DOMLEC meets the IRC's requirements of attracting capital and maintaining financial integrity.

Cost of Debt Analysis

DOMLEC's recent primary source of debt financing has been with the National Bank of Dominica (NBD) with whom the company raised approx EC$40 M in late 2005 at an interest rate of 6.25%. This loan was recently renegotiated for an interest rate of 5.75%. This seemingly low interest rate is due to the fact that the earned interest on loans issued to DOMLEC is tax free and the Bank has passed along the tax savings to DOMLEC. Going forward, however, DOMLEC believes that access to financing from NBD is limited and there is reasonable certainty that the future sources of financing are more from foreign sources such as the European Investment Bank or International Finance Corporation. Another potential source of financing is the Bank of Nova Scotia but since that bank is held by an outside entity, it is not clear whether the Bank will be amenable to passing along the tax savings to DOMLEC. Thus, future debt costs may be closer to the pre-tax value corresponding to 5.75% which is approximately 8.25%. This figure is further corroborated from the Eastern Caribbean Central Bank which published a prime lending rate of 8.50% [10]for Dominica.

In a hybrid test year construct as proposed by the IRC [11], it is appropriate to use an embedded cost of debt for the historical test period and make adjustments for any estimated debt to be issued in the forecast portion of the test year. Given DOMLEC's expanded capital investment plans and the commensurate financing costs, it will be important to establish a standard that allows for the test year to be adjusted to account for cost of debt estimates for the entire rate effective period rather than be constrained to just the first few months. The exact standard will need to be determined based on further discussions and deliberations with the IRC.

For the purposes of this analysis, we have assumed new debt of approximately EC$50m. Based on this assumption, the embedded cost of debt for the company after removal of capital grants is approximately 7.1%.This figures comes from averaging the cost of NBD debt and the cost of debt for new capital investment.

Capital Structure

The capital structure during the historical period[12] is approximately 49% debt with total interest bearing liabilities of $EC 51,217 and equity (share capital + retained earnings) of EC$53,462. Again, using the assumed new debt of EC$50m, the debt/equity ratio becomes approximately 1.6, or 62% debt.

[10] http://www.eccb-centralbank.org/Currency/country_intrates.asp
[11] Although not very clearly defined by the IRC, it is assumed that the historical test period is Jan – June 2009 and the forecasted period is July – December 2009.
[12] Historic Period defined here to mean January – June 2009

Pre-Tax Weighted Average Cost of Capital

The table below summarizes the results of the cost of equity and the cost of debt analyses. We conclude that given the risks faced by equity and debt holders in investing in DOMLEC, a Return on Rate Base range of 12.1% to 14.6% is appropriate. The lower end of the RORB includes the US average ROE plus makes an adjustment for sovereign risks using the more conservative country spread model. The upper end of the RORB includes the U.S average ROE plus adjusts the sovereign risk to account for additional risks that equity holders bear in investing into the stock market in such countries.

ROE using US Comps	
CAPM method	13.4%
DCF Method	12.3%
Risk Premium Method	10.9%
Average	12.2%
Sovereign Risk Adjustment	
Sovereign Risk Adjustment using Country Spread Model	8.0%
Sovereign Risk Adjustment with Country Risk Rating Model	14.7%
ROE Lower Bound	20.2%
ROE Upper Bound	26.9%
Cost of Debt	7.1%
Assumed Capital Structure (debt %)	62.0%
RORB Lower Bound	12.1%
RORB Upper Bound	14.6%

APPENDIX I: SELECTED COMPARABLE COMPANIES

Stock Symbol	Name
ALE	Allete Inc
AEE	Ameren Corp
AEP	American Electric Power Co Inc
CNL	Cleco Corp
CMS	CMS Energy Corp
DPL	DPL Inc
EDE	Empire District Electric Co/The
GXP	Great Plains Energy Inc
VVC	Vectren Corp
WR	Westar Energy Inc
WEC	Wisconsin Energy Corp
CV	Central Vermont Public Service Corp
CHG	CH Energy Group Inc
ED	Consolidated Edison Inc
NU	Northeast Utilities
NST	NSTAR
PGN	Progress Energy Inc
SO	Southern Co/The
TE	TECO Energy Inc
UIL	UIL Holdings Corp
AVA	Avista Corp
IDA	IDACORP Inc
PCG	PG&E Corp
PNW	Pinnacle West Capital Corp
UTL	Unitil Corp
MGEE	MGE Energy Inc
PNM	PNM Resources Inc
POR	Portland General Electric Co
UNS	Unisource Energy Corp
XEL	Xcel Energy Inc