The Yukon Electrical Company Limited
An ATCO Company

January 31, 2014

Yukon Utilities Board
Box 31728
Whitehorse, YT Y1A 6L3

Attention: Mr. Bruce McLennan

Dear Sir:

RE: Revised Proposals on the Diesel Contingency Fund (DCF) and Rate Schedule 42 Energy Reconciliation Adjustment (ERA)

1) Background & Overview

In Board Order 2013-01, Yukon Energy Corporation (YEC) and The Yukon Electrical Company Limited (Yukon Electrical or YECL) were directed to provide a revised DCF proposal as well as a joint recommendation on how the DCF will affect the ERA in Rate Schedule 42. YEC chose not to follow this direction as part of its 2012-2013 GRA compliance filing. In response, the Board stated the following in Board Order 2013-03:

> The Board notes that the revised DCF proposal was not filed jointly by YEC and YECL and that there was not a joint recommendation by the companies on how to amend the wording regarding the ERA in Rate Schedule 42. The Board considers that the revised DCF proposal has not been tested in a proceeding. Given the foregoing, the Board does not approve the revised DCF proposal filed in YEC's 2012-13 GRA compliance filing. Consequently, the Board will not allow any changes regarding 2012 and the effects of any DCF proposal.
>
> YEC may file a future revised DCF proposal and ERA application. The Board prefers a joint filing from YEC and YECL. However, if agreement cannot be reached, a filing in which the companies state which aspects of the revised DCF proposal and ERA amendment they agree upon, the aspects they disagree upon, and the position of each company on those aspects they disagree upon is acceptable. The filing must also address the concerns raised in Board Order 2013-01 Attachment A: Reasons for Decision.

Since the June 2013 issuance of Board Order 2013-03, Yukon Electrical has met with YEC on a number of occasions to develop a joint proposal for both the DCF and the ERA effective January 1, 2012. Unfortunately, the two utilities have been unable to agree on a proposal. YEC has been unwilling to make any substantive changes to the proposals for the DCF and ERA in its May 1, 2013 Compliance Filing, notwithstanding the significant concerns Yukon Electrical has raised with those proposals.

In accordance with Board Order 2013-03, Yukon Electrical respectfully makes this submission based on its understanding of YEC's DCF and ERA proposals as of January 17, 2014.

An overview of the DCF and ERA, and the changes YEC has proposed to those mechanisms, is set out below in Section 2 of this submission. Yukon Electrical's concerns with YEC's proposals are outlined below in Section 3 of this submission. To summarize, YEC's proposed changes would fundamentally alter the design of the DCF and ERA from what was originally agreed upon and approved by the Board. YEC's proposed changes do not appear to be based on well accepted regulatory principles. Rather, YEC's proposals rely on a complicated, opaque model with questionable accuracy and assumptions that are not consistent with current or reasonably anticipated circumstances. If adopted, YEC's proposals would result in greater regulatory inefficiency and will, in the long run, increase regulatory costs to ratepayers. Having regard for those concerns, Yukon Electrical has proposed the simpler, more principled solution of using a deferral account instead of the DCF, as explained in Section 4 of this submission. Finally, in Section 5 of the submission, Yukon Electrical has provided its respectful submissions as to the process that might best achieve an efficient resolution of the issues with respect to the DCF and ERA.

2) Overview of the DCF, ERA and YEC's Proposed Changes

The DCF was jointly proposed by YEC and Yukon Electrical, and ultimately approved by the Board, as part of their Joint Negotiated Settlement with respect to their 1996-1997 GRAs. The DCF was designed to apply narrowly based on the specific circumstances of the time. The purpose of the DCF was to ensure that ratepayers, rather than YEC and Yukon Electrical, covered the risk of changes in grid diesel generation due to fluctuations in hydro generation resulting from factors outside of the utilities' control (i.e. drought conditions). The effect of the DCF was to allow rates to be based on long-term forecast hydro generation versus short-term hydro generation, thereby shielding rates from volatility due to hydro generation variances based on fluctuating water levels. The activation of the DCF was based on a simple concept: YEC would determine whether it was actually burning diesel in a given month to determine if diesel was "on the margin" in that month. To the extent that the fund accumulated revenues in excess of the approved threshold, the surplus balance at the end of the year would be refunded or collected by way of a rider to Yukon ratepayers.

The ERA was jointly proposed by YEC and Yukon Electrical, and ultimately approved by the Board, as part of their Joint 1993-1994 and 1996-1997 GRAs. The ERA and DCF were designed to be closely integrated. The ERA allowed YEC to flow-through its incremental diesel generation costs — as determined by the DCF — to YECL when actual wholesale sales varied from the companies' joint Board-approved forecast.

It is important to understand the circumstances at the time the DCF and ERA were agreed upon and approved to understand why the mechanisms were introduced and

how the mechanisms were intended to operate. At the time, YEC and Yukon Electrical were jointly managed by Yukon Electrical. All forecasts were prepared by Yukon Electrical and used jointly for both Yukon Electrical and YEC in common test period GRAs. If actual wholesale sales were higher (or lower) than the joint forecast, then one company would benefit to the detriment of the other. Given this arrangement, the ERA was developed to facilitate the two companies sharing sales forecast risk. The appropriateness of YEC flowing through charges to Yukon Electrical in such a manner was wholly predicated on the joint management of the companies.

The application and interpretation of the DCF and ERA was complex and subject to ongoing disputes. In July 1999, Yukon Electrical and YEC concluded a negotiated settlement with respect to the mechanisms that was later approved by the Board in Order 1999-4. Under that settlement, it was agreed that the ERA mechanism would only apply during months when diesel was on the margin for the Whitehorse-Aishihik-Faro (WAF) system.

Further to the above, the ERA mechanism was only active for a short period of time, and it has long since gone unused. Following the closure of the Faro mine in 1997, the ERA was not used for approximately 15 years. However, in 2012, YEC purported to charge $439,000 to Yukon Electrical based on YEC's unilaterally modified DCF and ERA mechanisms.

It should be noted that when the DCF and ERA were approved and last used, the cost of diesel has risen dramatically – from $0.29/L in Table 3.2 of the 1996/1997 GRA to a range from $1.05/L to $1.17/L in Tab 2 of YEC's 2012/2013 GRA.

With respect to YEC's proposals, it is Yukon Electrical's understanding that:

i. instead of looking at whether diesel was actually on the margin, YEC proposes to use its YECSIM model to forecast diesel consumption;

ii. YEC proposes that diesel should always be considered to be on the margin;

iii. YEC proposes to increase the cap on the DCF from +/-$4M to +/-$8M;

iv. YEC proposes to invoice an amount to Yukon Electrical, pursuant to the ERA, that will be based on a simulated fuel volume variance cost and YEC's calculated wholesale sales variance;

v. YEC proposes that Yukon Electrical would only be permitted to recover through rates the amount that YEC deems as not being recovered by added revenue based on YEC's calculated wholesale sales variance; and

vi. YEC proposes to use the payment from Yukon Electrical to finance, in part, the DCF balance as determined by YEC's assumptions and calculations.

In essence, YEC's proposed DCF — which is based on complicated and untested assumptions and calculations that Yukon Electrical addresses below — would be

financed, in part, by Yukon Electrical when YEC's wholesale sales are higher than forecast.

3) Yukon Electrical's Concerns with YEC's Proposals

3.1 The ERA is no longer appropriate in the circumstances

YEC has relied on the historical regulatory approval of the DCF and ERA to justify its attempt to revive the mechanisms now. However, circumstances have changed. The original ERA, and YEC's proposed DCF and ERA, are no longer appropriate.

Effective January 1, 1998, YEC moved to direct management. Since then, YEC and Yukon Electrical have prepared their own forecasts and filed separate GRAs. The ERA allowed for the sharing of forecast risk between the two companies, which was appropriate because the companies were under joint management and shared forecasts. This is no longer the case.

YEC has also suggested that its ERA proposal is consistent with OIC 1995/90, which provides that wholesale rates "must be sufficient to recover its costs that are not recovered from its other customers." However, YEC's proposed ERA calculation is not based on actual costs incurred; instead, the calculation is based on a derived variance cost from an untested simulator.

3.2 YEC's proposal is based on unclear or flawed premises

YEC's proposed DCF and ERA mechanisms are complicated and untested.

The use of the YECSIM to forecast diesel generation will require careful testing. For example, in 2012 the YECSIM forecasted 15.6 GWh of diesel generation at actual grid load, but actual diesel generation was 2.7 GWh. In 2013, the YECSIM forecasted 13.3 GWh of diesel generation at actual grid load, but actual diesel generation was 1.1 GWh. Recent experience therefore shows that differences between the YECSIM model's forecast and actuals can be material. Notwithstanding that apparent inaccuracy, YEC proposes to use these as the simulated diesel amounts to calculate its fuel variance, i.e. as the basis for its proposed DCF and ERA. If the YECSIM is to be relied upon going forward (and is to be relied on to justify YEC's proposed 2012 ERA charge to Yukon Electrical), Yukon Electrical believes significant additional testing will be required to support the figures the model is generating and confirm the appropriateness of using the model in the manner YEC is now proposing. Yukon Electrical is concerned, however, that testing of the YECSIM may be unduly difficult given the quantum of the variables and assumptions that the model appears to incorporate. Yukon Electrical does not yet have a sense of what level of resources and expertise will be required to complete the work.

Additionally, the suggestion that diesel is now "always" on the margin appears to be flawed. At a minimum, the contention merits considerable scrutiny. As one example, secondary sales were available for a considerable amount of time in 2012 and 2013, suggesting that diesel was not always on the margin and that the ERA and DCF should not have been activated during those periods.

A further flaw in YEC's proposals is that it will create a regulatory structure where Yukon Electrical's actual sales revenue will be no greater or no less than what YEC forecasts in a YEC GRA. The YEC proposal appears to provide that all sales margin growth for Yukon Electrical in Yukon Electrical non-test years will flow through to Yukon Energy.

Moreover, as shown in the attached Table 3.1 in Section 3 of Appendix A, had YEC's original 2012 wholesale sales forecast been equal to what wholesale sales actually were, the additional forecast diesel costs would have been recovered from all ratepayers via YEC's Rider J.

For example, in 2012, if YEC's original wholesale sales forecast been equal to Actual Wholesale sales (310GWh instead of 296GWh), YEC would have forecast $1.2M in additional revenue, and $1.7M in additional expense. In turn, this would have increased YEC's revenue shortfall by $0.5M, which would have been recovered from ratepayers through Rider J. Rider J for non-industrial customers would have increased from 6.85% to 7.58%, and Rider J for industrial customers would have increased from 3.34% to 4.04%.

YEC is therefore proposing the unprincipled approach of determining who the ultimate recipient of these costs will be based on the accuracy of YEC's forecasts. If YEC's forecasts are consistent with actuals, then YEC proposes to recover these costs from ratepayers via Rider J; if YEC's forecasts are different than actuals, then YEC proposes Yukon Electrical receives these costs through the ERA.

Furthermore, YEC's proposal also purports to attribute specific diesel costs to a specific customer (Yukon Electrical). As YEC has recognized on numerous occasions (including during its oral testimony in its 2012-2013 GRA), attempts to assign responsibility for new "incremental" diesel generation to specific customers or customer classes are fraught with serious issues of principle. While YEC has claimed that it looks at cost as a total package and does not allocate the higher diesel portion to a single customer that is exactly what YEC's proposal would do. YEC's proposal is therefore discriminatory, unjust and unreasonable.

3.3 YEC's proposal will result in significant inefficiency

If YEC's proposal is adopted and Yukon Electrical's actual sales revenue can be no greater (or no less) than what YEC forecasts in a YEC GRA, and all sales margin growth for Yukon Electrical in Yukon Electrical non-test years will flow through to Yukon

Energy, Yukon Electrical will be required to vigorously test YEC's wholesale sales forecast and diesel consumption forecasts, as well as the manner in which YEC operates its generation (to ensure that Yukon Electrical has prudently managed those assets in incurring diesel costs that YEC would seek to pass on to Yukon Electrical and its ratepayers). Yukon Electrical also anticipates that it would need to make every future year a test year (since it would have sales margin growth to offset any increases in Yukon Electrical's rate base or operating costs).

Yukon Electrical respectfully submits the creation of this type of regulatory framework going forward is neither efficient nor in the interest of ratepayers. Ratepayers directly benefit from reduced regulatory costs and increased inefficiency. YEC's proposal will significantly erode the benefits that Yukon Electrical's (and Yukon Energy's) ratepayers currently enjoy in this regard.

3.4 YEC's proposal is contrary to other well accepted regulatory principles

As noted, under YEC's proposals the ultimate recipient of costs will be dependent on the accuracy of YEC's wholesale sales forecasts. That outcome would be inconsistent with the longstanding regulatory principles of cost causation and risk allocation. Costs are properly assigned to the parties who caused the costs, not based on whether a utility's forecast is accurate or not. Additionally, Yukon Electrical and its ratepayers should not solely bear the risk of YEC's forecasting accuracy.

That YEC's proposal would extinguish any potential for Yukon Electrical to benefit from increased sales to its customers runs counter to a basic utility principle which holds that grid growth (namely, increased sales) and utility expenses are correlated. As long as additional expenses are mitigated by additional revenues, a utility may be able to avoid seeking rate increases via rate applications. As noted above, Yukon ratepayers have benefited from this principle during the past two decades.

3.5 YEC's proposal does not address the Board's concerns with the DCF

Yukon Electrical believes YEC's proposed DCF mechanism suffers from over-reliance on untested simulated diesel variances derived from the YECSIM model. This has resulted in YEC's proposed mechanisms to credit more than $7.2M into the DCF in 2012 and 2013 with a dispersal trigger at +/-$8M.

By this design, YEC is failing to address the following Board concerns regarding the DCF, namely that the DCF masks market signals and results in some intergenerational inequity:

> "…is concerned that the DCF masks market signals and that, in times of a drought, consumers will be removed from the signal to reduce consumption. The problem with smoothing rates is that it mutes market signals and hence consumer behavior." (Board Order 2013-01, p. 54)

> "….the use of the fund in the past has been sporadic as evidenced by the fact that the fund has not been active since 1999. Such periods of infrequent use raise issues of intergenerational inequity in that a consumer contributing to a fund today may benefit another consumer several years later." (Board Order 2013-01, p. 54)

Not only does YEC's proposal fail to address the Board's concerns in this regard, YEC is actually proposing to exacerbate the potential for masked market signals by increasing the size of the DCF from +/-$4M to +/-$8M.

Yukon Electrical has not suggested a dispersal "trigger" for a water level variance fund, but believes there is a direct relationship between the magnitude of a dispersal trigger, intergenerational inequity, and masked market signals.

Yukon Electrical believes the magnitude of the proposed DCF credits during YEC's test years, as well as the speed at which the fund has approached its proposed threshold of $8M, indicate further review and testing of the YECSIM model (which is used for the DCF) as well as the dispersal trigger threshold is required.

4) Yukon Electrical's Proposal

Yukon Electrical is not opposed to a fund related to water level variances for Yukon Electrical and YEC and supports the ability of both utilities to recover prudently-incurred costs in an appropriate fashion. Although Yukon Electrical supports YEC's need for a diesel deferral mechanism to recover prudently-incurred diesel costs, Yukon Electrical is unable to accept YEC's ERA proposal because Yukon Electrical disagrees with the design and principles of YEC's proposed mechanism to determine fuel variance amounts that affect the ERA.

Yukon Electrical submits that more simplified approach would be to create a straightforward YEC diesel deferral. A basic outline of the deferral follows:

A. Determine diesel revenues recovered by YEC rates.
B. Determine actual diesel costs.
C. Take the difference between A) & B) and either deposit-to or withdraw-from the deferral account.

The proposal above was submitted to YEC during the utilities' discussions. However, YEC's interpretation of Yukon Electrical's proposal, Option B, still relies on simulated diesel variances and does not address all of Yukon Electrical's concerns.

While Yukon Electrical recognizes that the design of a deferral account will require further consideration, Yukon Electrical submits a deferral account can provide a more simple and transparent solution that would better accord with well established regulatory

principles, as opposed to the complex custom rate-smoothing mechanism YEC has proposed. A deferral account would eliminate the perverse outcome of allocating diesel costs to either Yukon ratepayers or Yukon Electrical based on the accuracy of YEC's forecast. The use of a deferral account would obviate the need for the inefficient and time consuming testing that will be required of YEC's YECSIM and YEC's future forecasts and operations. A deferral account can also be designed in a manner that will at least partially mitigate the Board's concerns with respect to the DCF muting market signals and creating intergenerational inequity.

Yukon Electrical would also note that the Board, in Decision 2009-02, approved a wholesale purchase power deferral flow through for Yukon Electrical. This approved deferral was also referenced in Board Order 2010-13 as follows:

> 168. In Board Order 2009-2, the Board approved YECL's wholesale purchase power deferral account that dealt with the treatment of variances between the actual and forecast cost of purchase power for the hydro zone during the period when diesel generation was on the margin and when the approved run-out rate set out under the Energy Reconciliation Adjustment (ERA) in Schedule 42 was different than the rates used to determine the forecast cost of purchase power for diesel generation.

As well, the Board indicated the following:

> 181. Implicit in the Board's approval of the purchase power deferral account is the approval of a future rider to dispense of the accumulated balances in the deferral account.

Based on the above approvals, if it is ultimately determined that an ERA amount should be charged to Yukon Electrical, then Yukon Electrical respectfully submits this amount would be flowed through to all Yukon ratepayers. Further, if 100% of the ERA is to be recovered from all Yukon ratepayers, then, as submitted in Yukon Electrical's argument in YEC's 2012-2013 GRA, and agreed by YEC in its January 17, 2014 proposal, the ultimate recovery of the outstanding deferral is, from a regulatory efficiency perspective, better served being administered by YEC.

5) Board-Facilitated Dispute Resolution Process

Yukon Electrical recognizes the complexity of the issues associated with the DCF and ERA, and remains committed to achieving a solution that will work for all parties. In that regard, Yukon Electrical respectfully submits that this matter may be more efficiently resolved through a Board-initiated mediated dispute resolution process, similar to the process that was used by the parties in 1999 to resolve earlier disputes with respect to the DCF and ERA and culminated in Board Order 1999-4.

For more information regarding the DCF and ERA, please see the attached Appendix A.

Should you have any questions, please contact me at (780) 733-2489.

Yours truly,

Original Signed by James Grattan

James Grattan, CA
Director Regulatory

Yukon Electrical Position on Fuel Volume Variances

1.0 Introduction

As part of its 2012-2013 General Rate Application ("GRA") filed in April 2013, Yukon Energy applied to update and reactivate the Diesel Contingency Fund (DCF) and the Energy Reconciliation Adjustment (ERA) provisions of Rate Schedule 42 as of January 1, 2012. Yukon Electrical was opposed to both the DCF and ERA mechanisms proposed by Yukon Energy and suggested that, as an alternative, Yukon Energy could file for a deferral account as part of its Compliance Filing to address increased or decreased diesel costs from forecast, to be administered by Yukon Energy and dispensed amongst all ratepayers by Yukon Energy.

As outlined in Yukon Electrical's Final Argument and summarized by the Yukon Utilities Board (the "Board") in Board Order 2013-01, Yukon Electrical's concerns with the proposed mechanism were as follows:

a. Yukon Electrical was not consulted regarding the proposed changes;
b. the ERA as proposed by Yukon Energy may not allow Yukon Electrical to recover its prudently incurred costs;
c. the ERA charges may have a material impact on Yukon Electrical and its customers;
d. Yukon Electrical has to carry a forecast risk based largely on a forecast prepared by Yukon Energy;
e. Yukon Electrical does not accept Yukon Energy's wholesale forecast, which could result in erroneous ERA charges;
f. the proposed ERA has no mechanism to account for system growth; and
g. the designed ERA process is administratively inefficient.

In Board Order 2013-01, the Board did not approve Yukon Energy's proposed DCF and ERA mechanisms and ordered Yukon Energy to revise the DCF with consideration of the following comments:

- "…the DCF has never been fully tested (it was the product of a negotiated settlement)" (p. 53)
- "…is concerned that the DCF masks market signals and that, in times of a drought, consumers will be removed from the signal to reduce consumption. The problem with smoothing rates is that it mutes market signals and hence consumer behavior." (p. 54)
- "….the use of the fund in the past has been sporadic as evidenced by the fact that the fund has not been active since 1999. Such periods of infrequent use raise issues of intergenerational inequity in that a consumer contributing to a fund today may benefit another consumer several years later." (p. 54)
- "…Yukon Energy is to work with Yukon Electrical, and the two utilities will provide a joint recommendation on how the DCF will affect the Energy Reconciliation Account in Rate Schedule 42 and any proposed wording changes to that rate schedule. The Board will leave it to the discretion of Yukon Energy and Yukon Electrical as to when the revised DCF proposal is to be filed with the Board." (p. 54)

As part of Yukon Energy's 2012-2013 GRA Compliance Filing filed in May 2013, Yukon Energy submitted a revised DCF proposal. Yukon Electrical continued to express its concerns in its comments to the Board dated May 10, 2013, recommending that the Board reject the DCF and ERA proposals and suggesting that the utilities develop a joint proposal. Subsequently, the Board issued Board Order 2013-03, noting that the revised DCF proposal was not filed jointly by Yukon Energy and Yukon Electrical and that there was not a joint recommendation by the utilities on how to amend the wording regarding the ERA in Rate

Schedule 42. Thus, the Board again did not approve the revised DCF proposal and, consequently, the Board did not allow any changes regarding 2012 and the effects of Yukon Energy's DCF proposal. In addition, the Board ordered a joint filing from Yukon Energy and Yukon Electrical. However, if agreement could not be reached, a filing in which the utilities state which aspects of the revised DCF proposal and ERA amendment they agree upon, the aspects they disagree upon, and the position of each utility on those aspects they disagree would be acceptable.

Since the Board's issuance of Board Order 2013-03, the two utilities have met to present and discuss each other's proposed approaches to handle the DCF and the ERA. Yukon Electrical does not believe the concerns it raised during Yukon Energy's GRA proceeding or the comments made by the Board in Board Order 2013-01 are being addressed by Yukon Energy. Yukon Energy continues to rely heavily on past practices and methods even when they do not make sense in today's environment. Thus, the two utilities have agreed to disagree and are correspondingly making separate filings to the Board regarding this matter.

2.0 Background

Beginning in the early to mid-1990s, there were two mechanisms in place for Yukon Energy to address the cost impact of diesel fuel volume variances:

- The Diesel Contingency Fund (DCF) was to address diesel energy volume shortfalls/surpluses due to water availability. The theory was to allow rates to be based on long-term forecast hydro generation versus short-term hydro generation, and shield rates from volatility due to hydro generation variances based on fluctuating water levels.

- The Energy Reconciliation Account (ERA) was to address diesel energy volume differences from GRA-approved wholesale sales forecast.

Even though these mechanisms originated in the early to mid-1990s, they have operated sporadically since 1997 and have been completely dormant since 1999 due to the fact that diesel generation has not been on the margin.

2.1 History of the Diesel Contingency Fund (DCF)

The Diesel Contingency Fund (DCF) was created as part of the Negotiated Settlement regarding Yukon Energy and Yukon Electrical's joint 1996-97 GRA, when the Faro mine was operating and the DCF only pertained to the Whitehorse-Aishihik-Faro (WAF) system. The fund was established to ensure that ratepayers and the utilities where kept whole from changes in grid diesel generation due to fluctuations in hydro availability from long term averages resulting from factors outside of the utility's control (e.g. drought or high water conditions outside the utilities' control).

- Pursuant to the 1996/97 Negotiated Settlement Agreement, the cap was set to the initial contribution to the DCF of $4,040,046. The same amount was used to set the "negative cap" with the reverse sign (-$4,040,046). All DCF terms and conditions were to be reviewed at the time of the next GRA.

- Between 1996 and 1999, approximately $3.4M of net withdrawals from the DCF occurred for both non-water (such as general rate relief) and water related purposes. The DCF has had no activity since 1999 with only interest/service fee transactions occurring. (Source: YEC 2012/13 GRA, Undertaking #23)

2.2 History of the Energy Reconciliation Account (ERA)

The Energy Reconciliation Account (ERA) was originally proposed as part of Yukon Energy and Yukon Electrical's joint 1993-1994 GRA and was first approved for use in Board Order 1993-7 [Source: YEC's submission, Attachment 2.1: Background for the ERA Mechanism]. Since that point in time, the ERA has been a source of significant disagreement between Yukon Electrical and Yukon Energy in how the ERA was to be interpreted and applied.

This disagreement was evident when Yukon Energy filed its April 28, 1998 Revised Application requesting that certain amendments be approved with respect to the wholesale rate applicable during 1996 and 1997. In Board Order 1998-5, the Board agreed that the matter should be dealt with in a separate process after the public hearing. By letter on February 5, 1999, the Board agreed that the outstanding issues be resolved between the utilities utilizing the British Columbia Utilities Commission (BCUC) negotiated settlement process guidelines.

The negotiated settlement process, facilitated by the BCUC, highlighted the two utilities had very different views on the ERA and how it was to be interpreted and applied from its beginnings in 1993. Regardless of this situation, a settlement was reached between the two utilities that stated the following with respect to the ERA:

- ERA +10% issue: On an ongoing basis from January 1, 1999, and until such time as the Board approves an amended wholesale rate, Yukon Energy and Yukon Electrical agree the ERA applies without any +10% limit.

- ERA Diesel on the Margin Issue: Yukon Energy and Yukon Electrical agree the companies will not adjust payments made January 1, 1993 through to December 31, 1998 with respect to the ERA Diesel on the Margin issue under the Wholesale Rate Schedule 42. On an ongoing basis from January 1, 1999 and until such time as the Board approves an amended wholesale rate, Yukon Energy and Yukon Electrical agree that the ERA mechanism will apply only during months when diesel is on the margin for the WAF system. This treatment recognizes the fact that this principle is not explicitly set out in the currently approved wording of Rate Schedule 42.

Since the above-noted settlement, approved in Board Order 1999-4, the ERA has remained dormant and there have been no wholesale rate schedule issues between Yukon Electrical and Yukon Energy; that is until Yukon Energy's 2012-2013 GRA and the submission of its proposed changes to the ERA and DCF.

2.3 What Has Changed Since the Creation of the DCF and ERA

- The final closure of the Faro Mine in 1998 resulted in diesel no longer being 'on the margin.' The issue of if or how the ERA should operate and its interrelationship with the DCF have, therefore, not been addressed since diesel generation was not an issue. However, recently diesel has again been 'on the margin' (at least in some months) which has driven the need to update the methodology and provisions prior to the reactivation of the DCF and ERA or, conversely, create another easier to understand and/or test mechanism to address the forecast risk associated with diesel generation in the Yukon.

- The DCF and ERA mechanisms were created at a time when Yukon Electrical and Yukon Energy were jointly managed by Yukon Electrical and shared GRA test periods and forecasts. Assumptions were vetted jointly by the two utilities before being presented to the Board. In 1997, the joint management of the two utilities was dissolved, allowing the utilities to operate independently. Each utility's management is now responsible for determining if and or when a

GRA for their respective utility is required. This is evidenced by Yukon Energy filing a GRA for the test period 2012-2013 and Yukon Electrical filing a GRA for a test period of 2013-2015.

- Significant changes to the Yukon Interconnected System have occurred since the inception of the DCF and the ERA in the early 1990s, including the connection of the WAF and Mayo Dawson grids and the introduction of new hydro facilities (Mayo B and the Aishihik Third turbine). The system is more complex and the forecasting of diesel has become more complex – it is no longer a case of diesel on or off the margin throughout the year as a result of the Faro mine being on or off the system.

- Forecasting the impact of changing loads has become more complex as there is no longer a single customer (the Faro mine) that determines whether the Yukon grid is on or off diesel on the margin. Changes in load (up or down) will be met with a mix of changes in hydro and diesel generation.

- Retail rates in the 1996 – 1997 GRA were linked to the wholesale rate structure. This is no longer the case.

2.4 Summary of Yukon Energy's Current Proposal

2.4.1 Diesel Contingency Fund

In Yukon Energy's 2012-2013 GRA, Yukon Energy sought updates or changes to the methods of operation of the DCF required to consider the effects of the connection of the WAF and Mayo Dawson grids and the introduction of new hydro facilities (Mayo B and the Aishihik Third turbine). Yukon Energy sought approval to adjust the terms of the DCF and reactivate it in consideration of Yukon Energy diesel generation costs effective January 1, 2012. Yukon Energy requested that the DCF be switched on permanently on using a "formulaic approach" rather than a "fixed value" approach; as a result, there would no longer be a diesel on the margin test for activating the DCF. The formulaic approach included a table (Table 3.2-2: Expected Diesel Generation Based on Long-term Average Hydro Generation) that would provide the expected diesel at various grid generation levels based on polynomial equations derived from the untested "YECSIM" model. The expected diesel based on actual grid generation would be used in comparison to actual diesel to determine the amount deposited or withdrawn from the DCF.

Based on information filed in Yukon Energy's 2012-2013 GRA, the balance of the DCF was $0.9M as of December 31, 2011 and, based on Yukon Energy's letter to the Board dated July 5, 2013, Yukon Energy's calculations of the DCF additions for 2012 using the applied-for methodology would grow the DCF by $3.7M, to a balance of $4.6M by December 31, 2012. In 2013, Yukon Energy's calculations would contribute another $3.5M to the DCF, growing the balance to $8.1M.

Yukon Electrical also notes, as part of Yukon Energy's 2012-2013 GRA Compliance Filing, Yukon Energy submitted a revised DCF which also included increasing the DCF dispersal "trigger" from ±$4M to ±$8M.

2.4.2 Energy Reconciliation Adjustment

To correspond with the fact that diesel is forecast to be 'on the margin' from 2012 onward, Yukon Energy's 2012-2013 GRA included changes to the ERA provisions in Rate Schedule 42 to correspond with the changes proposed to the DCF. The ERA is proposed to be triggered based on a comparison of expected diesel and actual diesel generation related to Yukon Electrical's wholesale purchases. Yukon Energy's wholesale sales forecast for 2012 was substantially lower than the actual wholesale sales for 2012. This leads to a lower base-line starting point for the ERA mechanism.

3.0 Yukon Electrical's Position on Yukon Energy's Proposal

Yukon Energy's proposed methodology for operating the DCF and ERA has not changed substantially from that presented to the Board as part of the 2012-2013 GRA proceeding. Based on Yukon Energy's, letter to the Board dated July 5, 2013, the proposed method would result in Yukon Electrical being billed $1.176M and $3.7M of revenue collected from rate payers being allocated to the DCF. Yukon Energy has recently provided Yukon Electrical with a revised calculation of the ERA to include the effects of Yukon Energy's incremental revenue caused by actual wholesale sales being greater than forecast resulting in Yukon Electrical's invoiced ERA balance changing to $0.439M.

Yukon Energy has also suggested in its latest proposal that Yukon Electrical should not be permitted to pass on the additional ERA costs to customers, despite Yukon Electrical having an approved Purchase Power flow-through deferral, and instead is suggesting that Yukon Electrical should net any incremental sales it experienced in 2012 (above the sales included in its last test year of 2009) against the ERA charges.

Below is a summary of issues that Yukon Electrical has with Yukon Energy's current proposal:

- Yukon Energy's proposal is extremely complicated and difficult to test.
- Yukon Energy proposes that the ERA invoiced to Yukon Electrical should be based on the variance between Yukon Energy's wholesale sales forecasts and actual wholesale sales to Yukon Electrical. Yukon Electrical was not consulted for a detailed, GRA-quality forecast for Yukon Energy's 2012-2013 GRA. As 2012 was not a test year for Yukon Electrical, it did not internally prepare a detailed, GRA-quality sales forecast.
- Yukon Energy's proposal bases the ERA on what Yukon Energy expects the amount of diesel to be utilized at certain grid loads. The expected diesel amounts come from the YECSIM model which has not been tested. It is unclear as to what level of expertise is required to test the YECSIM model. A thorough testing of these numbers would require significant in-depth experience and access to all of Yukon Energy's forecast generation data and associated assumptions. Notwithstanding, Yukon Electrical believes basing diesel variances on a simulated diesel forecast from this model introduces a level of complexity beyond what is required to adequately deal with diesel variances.
- For 2012 & 2013, Yukon Energy used significantly less diesel generation than was forecast and included in Yukon Energy's rates. Despite the fact that Yukon Energy would have already had substantial savings over the forecast on diesel costs, they are proposing an additional recovery of simulated diesel costs is appropriate.
- The current mechanics of the proposed ERA mechanism would allow diesel costs to be invoiced to Yukon Electrical if there was (A) positive system sales variance and (B) positive wholesale sales variance. Because Yukon Energy's proposed ERA mechanism is based on Yukon Energy's last GRA-approved forecast, this would invariably result in Yukon Electrical being invoiced diesel costs. (ie. Consider a future year, say 2017, and compare the expected increased wholesales sales of that year with YEC's 2013 GRA wholesales forecasts and all positive variances being invoiced at an incremental diesel rate.)
- Yukon Energy's latest proposal, which suggests that Yukon Electrical should be required to incur an additional $0.439M in ERA costs in 2012 and not be able to recover this expense from customers, implies a situation where Yukon Electrical is unable to recover prudently-incurred costs.

- Yukon Electrical has an approved deferral account for Purchase Power charges flowed through but does not have an approved mechanism (such as Rider D) to recover the cost that Yukon Energy wants to pass on to Yukon Electrical. Despite having an approved deferral, Yukon Energy has proposed that Yukon Electrical should not be permitted to collect the additional ERA charges from customers.

- The following table shows that, had Yukon Energy's Wholesale forecast been accurate, the resulting diesel variance would have been recovered from ratepayers via a higher Rider J amount. This is a problem with Yukon Energy's proposal because it shows that Yukon Energy believes diesel expense can be recovered from two sources: (1) ratepayers if Yukon Energy's forecast is accurate; or (2) Yukon Electrical if Yukon Energy's forecast is inaccurate. Yukon Electrical maintains that prudently-incurred costs must be recovered from ratepayers.

Table 3.1

Line		Approved Forecast (ties to Table 1.3 from YEC Compliance filing)		Approved Forecast Adjusted for Actual Wholesale Sales		Variance	
		MWh	$000s	MWh	$000s	MWh	$000s
	WHOLESALE FORECAST						
1	Wholesale	296,000	24,562	310,264	25,746	14,264	1,184
2	Forecast Expected Diesel Due to Wholesale (derived from *YECSIM* model, net of Fish Lake variance)	6,288	1,805	12,136	3,484	5,848	1,679
3 = 2 - 1	Diesel Shortfall for Wholesale Variance only						**495**
	REVENUES AT EXISTING RATES						
4	Consolidated Revenues of Non-Industrial		51,188		52,372		1,184
5	Consolidated Revenues of Industrial		4,955		4,955		-
6 = 4 + 5	Total Consolidated Revenues		**56,143**		**57,327**		**1,184**
	YUKON ENERGY REVENUE REQUIREMENT						
7	Revenue Requirement		59,815		61,494		1,679
8 = 7 - 6	Total Shortfall		**3,672**		**4,167**		**495**
	RIDER CALCULATIONS						
Formula	Rider J - Non-Industrial		6.85%		7.58%		0.72%
Formula	Rider J - Industrial		3.34%		4.04%		0.70%
	RIDER RECOVERIES						
9 = 4 * Rider J	Recovery of Shortfall from Non-Industrial		3,507		3,967		461
10 = 5 * Rider J	Recovery of Shortfall from Industrial		165		200		35
11	**Total Shortfall Recovery (matches Line 8)**		**3,672**		**4,167**		**495**

Table 3.1 Conclusion from calculations above: If YEC's Wholesale Sales forecast had been accurate and equal to actuals, 100% of the diesel cost would have been recovered from ratepayers.

4.0 Yukon Electrical Proposal

Yukon Electrical continues to propose that diesel variances could be addressed through the use of a simple deferral account for Yukon Energy. As noted in Board Order 2009-2, "the typical criteria used in determining whether to approve the use of a deferral account are the level of uncertainty regarding the accuracy of the forecast and the utility's ability to control the factors influencing the forecast." It is Yukon Electrical's view that the forecasting of diesel generation by Yukon Energy has a high level of uncertainty with respect to diesel generation costs being materially higher or lower than forecast. The table below summarizes the factors that affect Yukon Energy's forecast as well as actual diesel generation requirements and identifies which utility has the ability to forecast, or not be able to forecast, these factors in Yukon Energy's GRAs:

Factors That Affect Diesel Generation Requirements	Yukon Energy	Yukon Electrical
1) Availability of water and/or wind	ü	
2) Quantum of interconnected grid sales	ü	(1)
3) Location of load (line losses)	ü	
4) Operation of the system	ü	
5) Unexpected event/loss (RID event)		

(1) Yukon Electrical has the ability to forecast its sales and associated purchase power but does not prepare a GRA -quality forecast on an annual basis for the purposes of Yukon Energy GRAs.

This deferral account concept is similar to that approved and used by Northland Utilities (NWT) Limited for its hydro rate zone, except that in Northland's case diesel generation is not used to supplement hydro supply but to replace it when it is not available. In the NWT hydro rate zone, most supply comes from NTPC's Taltson Dam; however, at times hydro energy is not available due to maintenance or forced outage of the hydro supply tie-line. When NTPC is unable to supply Hay River from the Taltson Dam, Northland's Hay River diesel plant is required to be run. It is very difficult for Northland to accurately forecast the availability of hydro supply as the factors that can influence the availability are not within Northland's control. As a result, the NWT PUB has approved a deferral account to allow Northland to collect the additional costs from customers or refund any savings back to customers when diesel is required or not required to replace the hydro.

4.1 The Principles

In consideration of Yukon Electrical's concerns with Yukon Energy's proposal above and to resolve the Board's concerns as stated in Board Order 2013-01, Yukon Electrical believes the mechanism to address diesel volume variances must adhere to the following principles:

1) Simple, transparent, easily explainable and easily testable
2) Allow a utility to recover its prudently-incurred costs
3) Based on actual data and relates to all fuel volume variances on the interconnected system
4) Dispersed in a timely manner, so as to not mask market signals in times of a drought or flood and to avoid intergenerational inequity

5) The deferral account balance thresholds that trigger the disposal should be set at a reasonable level so as to not cause undue rate changes or rate impacts to customers.

4.2 Mechanism

To address these principles, Yukon Electrical proposes that Yukon Energy calculate a full fuel volume variance for a DCF based on the following:

A. Determine diesel revenues recovered by YEC rates.

B. Determine actual diesel costs.

C. Take the difference between A) & B) and either deposit-to or withdraw-from the deferral account.

Line		Approved Forecast (ties to Table 1.3 from YEC Compliance filing) MWh	Approved Forecast (ties to Table 1.3 from YEC Compliance filing) $000s	Approved Forecast Adjusted for Actual Wholesale Sales MWh	Approved Forecast Adjusted for Actual Wholesale Sales $000s	Variance MWh	Variance $000s
	WHOLESALE FORECAST						
1	Wholesale	296,000	24,562	310,264	25,746	14,264	1,184
2	Forecast Expected Diesel Due to Wholesale (derived from *YECSIM* model, net of Fish Lake variance)	6,288	1,805	12,136	3,484	5,848	1,679
3 = 2 - 1	Diesel Shortfall for Wholesale Variance only						**495**
	REVENUES AT EXISTING RATES						
4	Consolidated Revenues of Non-Industrial		51,188		52,372		1,184
5	Consolidated Revenues of Industrial		4,955		4,955		-
6 = 4 + 5	Total Consolidated Revenues		**56,143**		**57,327**		**1,184**
	YUKON ENERGY REVENUE REQUIREMENT						
7	Revenue Requirement		59,815		61,494		1,679
8 = 7 - 6	Total Shortfall		**3,672**		**4,167**		**495**
	RIDER CALCULATIONS						
Formula	Rider J - Non-Industrial		6.85%		7.58%		0.72%
Formula	Rider J - Industrial		3.34%		4.04%		0.70%
	RIDER RECOVERIES						
9 = 4 * Rider J	Recovery of Shortfall from Non-Industrial		3,507		3,967		461
10 = 5 * Rider J	Recovery of Shortfall from Industrial		165		200		35
11	**Total Shortfall Recovery (matches Line 8)**		**3,672**		**4,167**		**495**

Conclusion: If YEC's Wholesale Sales forecast had been equal to actuals, 100% of the cost would be recovered from Ratepayers through Rider J

	Compliance Filing	2012 Actual Wholesale	Variance
Residential			
Customers	1,526	1,526	-
Sales in MWh	12,325	12,325	-
MWh Sales per customer	8.1	8.1	-
Revenue ($000s)	1,803	1,803	-
Cents per KWh	14.6	14.6	-
General Service			
Customers	460	460	-
Sales in MWh	21,693	21,693	-
MWh Sales per customer	47.1	47.1	-
Revenue ($000s)	3,582	3,582	-
Cents per KWh	16.5	16.5	-
Industrial			
Sales in MWh	42,783	42,783	-
Revenue ($000s)	4,955	4,955	-
Cents per KWh	11.8	11.8	-
Street lights			
Sales in MWh	279	279	-
Revenue ($000s)	88	88	-
Cents per KWh	31.6	31.6	-
Space lights			
Sales in MWh	15	15	-
Revenue ($000s)	4	4	-
Cents per KWh	26.8	26.8	-
Total Company - Firm Retail & Ind			
Customers	1,986	1,986	-
Sales in MWh	77,095	77,095	-
Revenue ($000s)	10,432	10,432	-
Cents per KWh	13.5	13.5	-
Wholesale sales			
Sales in MWh	296,000	**310,264**	14,264
Revenue ($000s)	24,562	**25,746**	1,184
Cents per KWh	8.30	8.30	-
Total Company - Firm			
Sales in MWh	373,095	387,359	14,264
Revenue ($000s)	34,994	36,178	1,184
Cents per KWh	9.4	9.3	(0)
Secondary sales			
Sales in MWh	-	-	-
Revenue ($000s)	-	-	-
Cents per KWh	-	-	-
Total Company			
Sales in MWh	373,095	387,359	14,264
Revenue ($000s)	**34,994**	**36,178**	1,184
Cents per KWh	9.4	9.3	(0)

Description		Units	Source
Forecast Fuel at GRA Forecast Load	7,926	MWh	From Table 2, Page 9 of YEC January 17, 2014 Proposal
Forecast Total Grid Sales	373,095	MWh	From Table 2, Page 9 of YEC January 17, 2014 Proposal
% Fuel Included In Base Rates	2.1%		% Fuel Included in wholesale rate at GRA Forecasts = Forecast Fuel at GRA Forecast Load / Forecast Grid Sales
Incremental Diesel in Base Rates	40.5%		From Table 2, Page 9 of YEC January 17, 2014 Proposal
Fish Lake Variance	992	MWh	From Table 2, Page 9 of YEC January 17, 2014 Proposal
Consolidated Revenues of Non-Industrial	51,188	$000s	From Table 1.3, YEC 2012/2013 GRA Compliance Filing
Consolidated Revenues of Industrial	4,955	$000s	From Table 1.3, YEC 2012/2013 GRA Compliance Filing
Revenue Requirement Shortfall	3,672	$000s	From Table 1.3, YEC 2012/2013 GRA Compliance Filing
Losses	8.7%		
Price of Diesel	0.2871	$/kWh	