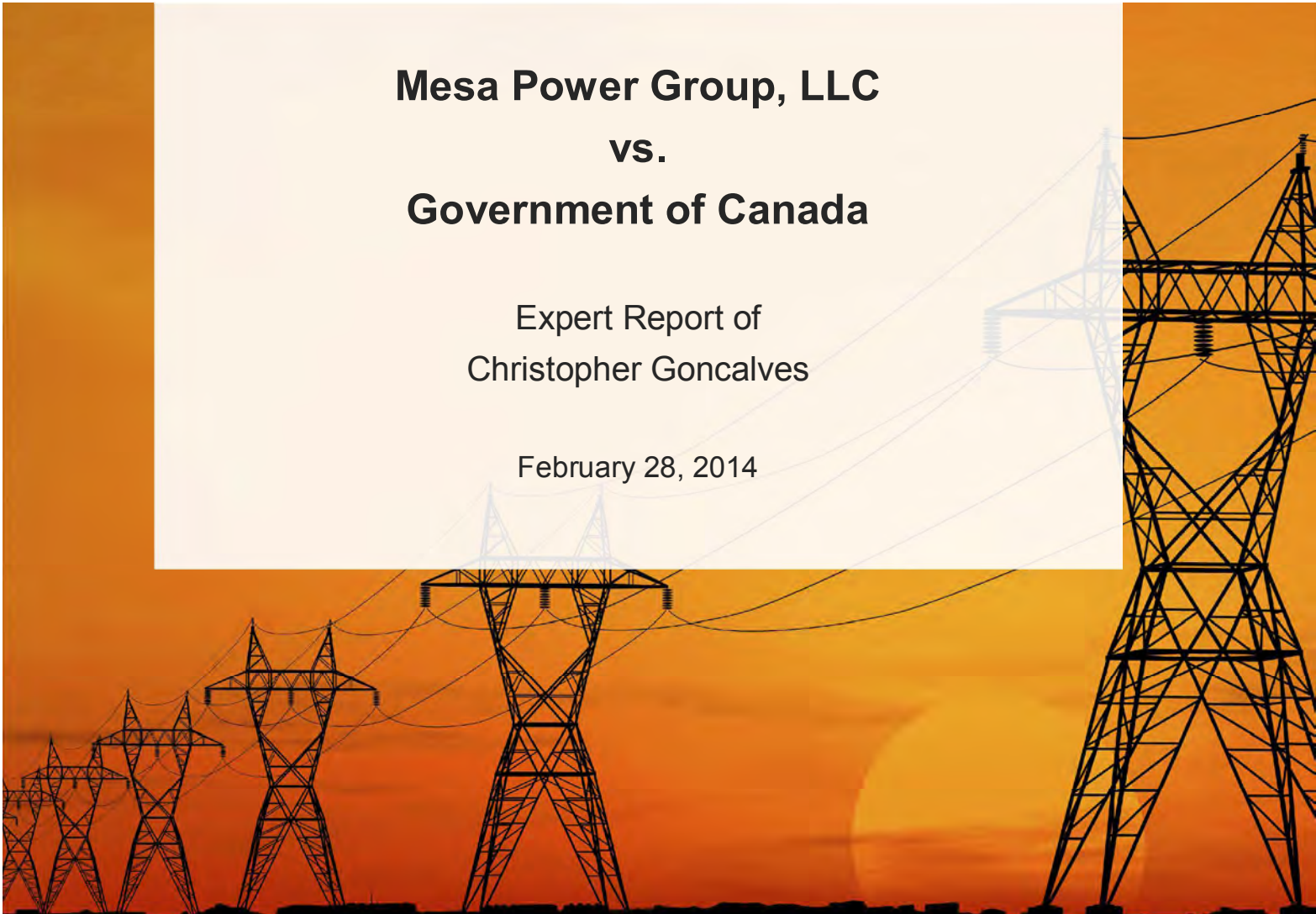




**Mesa Power Group, LLC  
vs.  
Government of Canada**

Expert Report of  
Christopher Goncalves

February 28, 2014



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# 1 INTRODUCTION

## 1.1 Instructions

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- 1 BRG has been retained by the Government of Canada to provide an independent analysis of the alleged causes of harm and applicable damages to Mesa Power Group LLC (“Mesa Power”) resulting from the alleged violations of Canada’s treaty obligations under Chapter 11 of the North American Free Trade Agreement (“NAFTA”) by the measures of the Government of Ontario (“Ontario”) and the Ontario Power Authority (“OPA”).
- 2 We were asked to assume that the alleged violations were in fact inconsistent with Canada’s treaty obligations, and we do not offer any opinion as to whether this was the case. Rather, we evaluate:
  - a. The extent to which each of the alleged violations caused harm to Mesa Power,
  - b. If so, the way in which the violations caused harm to Mesa Power, both individually and in combination, and
  - c. The quantum of damages associated with the alleged violations, individually and as a group.
- 3 We were also asked to use this analysis to provide an independent analysis of the damages evaluation prepared by Richard Taylor and Robert Low of Deloitte (“Deloitte Report”).

## 1.2 Expert Credentials

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- 4 This report was prepared by Christopher John Goncalves. Mr. Goncalves leads BRG’s energy advisory practice, including economic analysis, market and price modelling and forecasting, supply chain analysis, regulation, commercial terms and conditions, negotiations, financing requirements, and industry expert services for dispute resolution. He has over 23 years of international experience in the energy and financial industries, with extensive industry advisory experience for large-scale energy infrastructure and commerce, including conventional and renewable power generation, natural gas and LNG, oil and liquid fuels. His professional experience in these areas spans the Americas, Western Europe, Eastern Europe, Eurasia, the Middle East, and Asia. Mr. Goncalves has advised large global energy companies and utilities, national energy companies, state energy agencies, independent developers, equity investors, banks, and law firms in relation to strategic business planning, commercial strategy, contract negotiation, economic and market analysis, regulatory assessments, project development and financing, asset acquisitions and divestitures, international carbon markets, and international energy litigation and arbitration matters. Mr. Goncalves has served as an industry and damages expert in significant international litigation and arbitration proceedings concerning disputed values, prices, markets, contracts, commercial standards, and financing requirements for energy projects, assets, contracts, and transactions. He has advised clients in both investment and

commercial disputes heard under the auspices of ICSID, UNCITRAL, the ICC, the AAA, and the Milan Chamber of Commerce. He holds a B.A. in International Relations and Economic Development from Brown University and a M.A. in International Affairs and International Economics from the Johns Hopkins School of Advanced International Studies. Mr. Goncalves' full CV is provided in Attachment 1.

- 5 Mr. Goncalves has been assisted by members of the BRG energy team in the preparation of this report. All work in this report has been carried out under his direct supervision and the views in this report are his own.

### 1.3 Disclaimers and Disclosures

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- 6 This opinion has been prepared solely for the arbitration between Mesa Power and Canada. In giving this opinion, neither Mr. Goncalves nor BRG accept or assume responsibility for any other purpose, or to any other person to whom this opinion is provided. Mr. Goncalves confirms that he is not aware of any issue that would constitute a conflict of interest or detract from my providing a wholly independent opinion in relation to this matter. Additional disclaimers and disclosures are provided in Attachment 2.

### 1.4 Documents and Information Provided and Reviewed

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- 7 In addition to the Memorial of the Investor ("Memorial") presented by the Claimant with all supporting exhibits, the Deloitte Report, the Witness Statements of Mr. Cole Robertson, Mr. Shawn Cronkwright, Mr. Bob Chow, Mr. Richard Duffy, Mr. Rick Jennings, Mrs. Susan Lo and Mr. Jim MacDougall and the Expert Report of Queen's Quay Consulting, we have reviewed numerous documents disclosed by the Claimants and Canada during the arbitration in preparation of this report.
- 8 We have also reviewed the financial model provided by the Claimant in support of Deloitte's damages valuation calculations.
- 9 Finally, we have conducted independent research covering the economics and commercial practices of the wind industry globally and in North America. We have provided a particular emphasis in the Ontario market.

### 1.5 Mesa Power's Claim

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- 10 Beginning in 2009, Mesa Power pursued a series of wind development efforts in Ontario, Canada. These efforts include the acquisition of the Twenty Two Degree Wind Energy ("TTD") and Arran Wind ("Arran") projects as well as the development of North Bruce Wind Energy ("North Bruce") and Summerhill Wind Energy ("Summerhill") projects (collectively, the "Mesa Power Projects," the "Projects," or the "Investment").

- 11 Mesa Power submitted applications to Ontario's Feed-in Tariff ("FIT") Program ("FIT Program") for the Mesa Power Projects in November 2009<sup>1</sup> and May 2010.<sup>2</sup> These applications were for contracts to sell power at an attractive price designed to stimulate wind energy investments.
- 12 Mesa Power alleges that Ontario failed to treat Mesa Power's Investment in accordance with Canada's NAFTA treaty obligations. Specifically, Mesa Power makes three primary claims regarding the ways its Investment was harmed by Ontario and the OPA. These are outlined below:
  - a. Mesa Power claims that Ontario and OPA provided more favorable transmission treatment to Samsung C&T Corporation ("Samsung") and Korea Electric Power Corporation ("KEPCO"), both Korean-based companies comprising the Korean Consortium ("KC") through the Green Energy Investment Agreement ("GEIA"). Mesa Power also claims that unfair treatment was provided to another FIT applicant, Boulevard Power, a Canadian company owned and controlled by a large United States consolidated energy company.<sup>3</sup> According to Mesa Power, the priority access to available transmission capacity given to the above companies was detrimental to Mesa Power Projects' chances to obtain a contract under the FIT Program ("FIT Contract").<sup>4</sup>
  - b. Mesa Power claims it was harmed by allegedly arbitrary and unpredictable changes in the rules ("FIT Rules") governing the FIT Program.<sup>5</sup> The changes in FIT Rules refer to the modifications of provisions pertaining to transmission connection point (the "Connection Point Change Window").
  - c. Finally, Mesa Power claims that domestic content requirements imposed under the FIT Program (the "Domestic Content Requirements") caused harm to its Investment by requiring compliance as a precondition to receive a FIT Contract.<sup>6</sup>
- 13 The Claimant states that as result of the alleged unfavorable treatment of its Investment by Canada, it suffered damages in the amount of \$653.2 million plus interest.<sup>7</sup> This figure is based on the analysis of potential damages provided in the Deloitte Report.

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<sup>1</sup> C-0364, OPA FIT application submitted for Twenty Two Degree Wind Energy Project, November 25, 2009 and C-0129, OPA FIT Application submitted for Arran Wind Project, November 25, 2009

<sup>2</sup> C-0360, OPA FIT Applications for North Bruce I; C- 0361 OPA FIT Applications for North Bruce II , C-0368, OPA FIT application submitted for Summerhill I, and a C-0369, OPA FIT application submitted for Summerhill II , May 29, 2010.

<sup>3</sup> Memorial, para. 17, p.4.

<sup>4</sup> Memorial, para. 17, p.4.

<sup>5</sup> Memorial, para. 17, p. 4.

<sup>6</sup> Memorial, para. 17, p. 4.

<sup>7</sup> Memorial, para. 962, p.239.

## 1.6 Scope of the Report

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- 14 Our approach to assessing the alleged damages has been somewhat different to the approach taken by Deloitte. Whereas Deloitte's instructions were to focus on establishing the damages for Canada's alleged violations of various NAFTA articles,<sup>8</sup> our analysis is focused on the underlying causation for the harm allegedly suffered by Mesa Power. Our analysis was constructed as follows:
- a. We first sought to identify the underlying sources of harm to Mesa Power that were allegedly caused by the actions of Ontario and the OPA.
  - b. We next carefully analyzed available evidence and industry information related to these alleged causes of harm.
  - c. Finally, we used our analysis of the Project evidence and industry information as a basis to inform our independent evaluation of:
    - Whether and how each alleged violation caused harm to Mesa Power,
    - The Deloitte Report and Deloitte's damages calculations, and
    - The damages to Mesa Power that would be applicable to each of the alleged violations.

## 1.7 Structure of the Report

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- 15 To present the analysis described above, this report first provides our independent analysis of relevant evidence and background information regarding the wind industry, the FIT Program, and Mesa Power and its Projects in Ontario – all as relevant to our analysis of causation for the alleged harm suffered by and the applicable damages to Mesa Power. It then outlines our analysis of the Deloitte Report and damages analysis. Finally, it provides our own independent damages analysis and conclusions.
- 16 Our report is organized in the following six chapters:
1. Introduction
  2. Executive Summary
  3. Industry and Factual Background
  4. Deloitte's Damages Analysis
  5. Correction of Applicable Damages

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<sup>8</sup> Deloitte Report, para. 4.1, p. 22.

## 2 EXECUTIVE SUMMARY

- 17 This chapter summarizes our primary conclusions regarding the alleged harm and damages to Mesa Power that resulted from alleged violations of Canada’s treaty obligations under Chapter 11 of the NAFTA by Ontario<sup>9</sup> and the OPA in relation to administration of its FIT Program.
- 18 In its damages analysis, Deloitte uses the term “Economic Losses” to refer collectively to past costs and future losses incurred as a result of the alleged actions of the Government of Ontario and the OPA.<sup>10</sup> However, in one instance Deloitte uses “Economic Losses” to refer only to future losses.<sup>11</sup>
- 19 To provide for clear and simple terminology, in this report and our analysis of damages, we refer to “sunk costs” and “future losses” as follows:
- a. “Sunk costs” are those costs that have occurred in the past, prior to the date of harm, and cannot be recovered. They include the forfeiture of the GE turbine deposit and past development costs. Our “sunk cost” concept corresponds to Deloitte’s valuation of “past costs” including the GE turbine deposit, but we refer to “past cost” as only the development costs exclusive of the GE turbine deposit.
  - b. “Future losses” correspond to the lost opportunity to earn a return on investment. Future losses are calculated using the Net Present Value (“NPV”) from discounted cash flow (“DCF”) analysis. This concept corresponds to Deloitte’s concept for “economic Losses” (exclusive of “past costs”). Deloitte’s analysis of future losses reflects the lost opportunity to earn financial returns above the weighted average cost of capital, in the form of a positive NPV.<sup>12</sup>
  - c. We refer to the combination of “sunk costs” and “future losses” as “potential damages.”
- 20 Deloitte’s calculation of appropriate damages<sup>13</sup> for sunk costs and future losses of \$164,933,000 and \$488,069,000, respectively, yields total potential damages of \$653,002,000.<sup>14</sup>

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<sup>9</sup> For simplicity in this report, we use “Ontario” to refer to all Ontario provincial authorities (including the Ministry of Energy).

<sup>10</sup> Deloitte Report, para. 1.17, p. 9.

<sup>11</sup> Deloitte Report, para. 4.19, p. 29.

<sup>12</sup> In DCF analysis, value is only created in present value terms when returns are in excess of the project’s cost of capital. If they are not, the NPV would be zero or negative. A positive NPV indicates the creation of excess value by the project. BRG-041, Investment Valuation: Tools and Techniques for Determining the Value of Any Asset, 3<sup>rd</sup> Edition, Aswath Damodaran, p.17: “[I]t is not earnings per se that create value, but earnings in excess of a required return.”

<sup>13</sup> In this report, all figures are presented in Canadian dollars, unless otherwise indicated.



## 2.1 Applicable Damages Analysis

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- 21 As presented below, our analysis of relevant Project evidence and industry background for the Mesa Power claim indicates that Deloitte's analysis includes unclear and inaccurate causation, an optimistic discount rate, unrealistic assumptions, and several calculation errors. As a result, Deloitte's damages analysis is broadly inaccurate and vastly overstated.
- 22 Our approach to damages analysis is significantly different. We focus on the economic position of Mesa Power but for the alleged violations of NAFTA by Canada. By contrast, Deloitte analyzed the economic position of Mesa Power had it received a FIT Contract with terms similar to the GEIA.<sup>15</sup> This is a critical difference of approach and underlying assumptions.
- 23 Whereas Deloitte analyzed damages by NAFTA provision and by category of future loss,<sup>16</sup> we have analyzed damages according to each alleged underlying violation and cause of harm, as well as scenarios for their possible combinations.
- 24 Employing this approach and after correcting for a variety of problems in the Deloitte analysis (discussed below), we conclude based on the currently available information that the applicable damages for sunk costs and future losses are \$6,420,000 and \$6,909,000, respectively. Total potential damages are therefore \$13,329,000.
- 25 A breakdown of these comparative results is provided at the end of this Chapter.

## 2.2 Deloitte's Alleged Damages Analysis

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- 26 Deloitte's instructions focused on calculating damages for each area of legal liability under NAFTA.<sup>17</sup> The Deloitte Report organizes damages calculations by the NAFTA articles (Articles 1102, 1103, 1105, and 1106) under which the Claimant alleges Canada is liable for violations by Ontario. The approach is confusing:
  - a. The potential damages arising from alleged violations of the Minimum Standard of Treatment provision (Article 1105) include all of the potential damages under the National Treatment (Article 1102) and the Most-Favored Nation Treatment (Article 1103) provisions.<sup>18</sup>

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<sup>14</sup> Deloitte's past losses calculation of \$653,002 referred to here is slightly different than the \$653,683 reported in Schedule 1A of their report. We believe the difference is due to rounding assumptions made by Deloitte when aggregating categories of damages. Our numbers for Deloitte's Sunk Cost Damage are taken from Schedule 1A of their report. Numbers for future losses come from Schedules 2A, 3A, 4A, and 5A of their report. Those schedules report future losses by Mesa Project.

<sup>15</sup> Deloitte Report, para. 1.17, p. 9.

<sup>16</sup> Deloitte Report, para. 4.1, pp. 22-23.

<sup>17</sup> Deloitte Report, para. 4.1, pp. 22-23.

<sup>18</sup> Deloitte Report, para. 1.26, pp. 11-12.

- b. The Domestic Content Requirements damages arising from alleged violations of Performance Requirements obligations (Article 1106) relate to the alleged additional capital and operating costs and lower revenue that allegedly would have been realized in the future as a result of the FIT Program's Domestic Content Requirements.<sup>19</sup>
  - c. Confusingly, the potential damages arising from Domestic Content Requirements (Article 1106) are also included in the potential damages related to Articles 1102, 1103, and 1105.<sup>20</sup>
- 27 The Deloitte Report's organization by NAFTA provision and form of liability clouds the relationship among Canada's alleged liability, the ways in which Ontario allegedly caused harm to Mesa Power, and ultimately the appropriate damages for each form of harm caused. The way in which Deloitte has deployed this approach makes it difficult to understand and evaluate how Deloitte thinks each alleged breach purportedly caused harm to Mesa Power and, therefore, how damages should be calculated.
- 28 We identified four principal problems with the Deloitte analysis:
- a. Deloitte **does not address causation** and, therefore, does not evaluate whether and how the alleged violations harmed Mesa Power. Instead, Deloitte provides only assumptions that are unstated or unclear, inappropriately bundled, and not accurately applied. These are used to back a series of inaccurate conclusions that vastly overstate the harm to Mesa Power and applicable damages.
  - b. Deloitte's **discount rate analysis is unduly optimistic** and assumes unrealistically low levels of risk for the Projects.
  - c. Deloitte makes several **unrealistic assumptions and erroneous calculations** in its analysis of future losses. Several of these assumptions are inaccurate, speculative, and inappropriate for damages analysis. The Deloitte damages calculations are built on several assumptions that were provided by Mesa Power and taken for granted without independent verification. There are also a variety of mistaken calculations.
  - d. Deloitte makes **inappropriate and inconsistent assumptions in its selection of a valuation date** ("Valuation Date") for the date Mesa Power may have suffered harm under each area of alleged liability.

### Unclear and Inaccurate Causation

- 29 Deloitte's analysis bundles damages in a manner that is unhelpful to evaluating whether and how specific loss was caused by the alleged wrongdoing. Deloitte wrongly assumes

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<sup>19</sup> Deloitte Report, para. 4.62, p. 42.

<sup>20</sup> Deloitte Report, para. 1.23, p. 11.

that all Mesa Power Projects should enjoy the priority transmission allocation afforded to the KC. Therefore, Deloitte does not analyze the prospects for each Project in a scenario where the GEIA is not considered a violation of NAFTA and/or the award for damages does not include priority access to the grid for all the Mesa Power Projects. As a result, Deloitte's all-or-nothing approach to evaluating causation is not useful for assigning damages to individual violations.

- 30 Deloitte's conflation of the various alleged causes of harm to Mesa Power also yields sweeping conclusions about causation that are inaccurate and serve to significantly inflate damages. As described below, these include:
- a. The assumption that Mesa Power is entitled to all of the benefits of the GEIA even though it did not provide the same investment commitments as the KC.
  - b. The assumption that due to the GEIA and the Connection Point Change Window, all of the Mesa Power Projects would have been deprived of FIT Contracts even though two of the Projects had no prospect of receiving FIT Contracts in any scenario.
  - c. The assumption that the alleged Domestic Content Requirements violation would have caused incremental harm to Mesa Power because it would have required the Mesa Power Projects to use less economically efficient turbines than they would otherwise have used, even though it is not clear that the turbines were available at an economically beneficial cost.
  - d. The assumption that the any of the alleged violations caused Mesa Power to forfeit its GE turbine deposit even though Ontario and the OPA neither caused Mesa Power to pay the deposit (which occurred before Mesa Power was engaged in Ontario) nor to forfeit it (which occurred after Mesa Power had stopped development activity in Ontario).
- 31 First, a central pillar of Deloitte's analysis is the assumption that each of the Mesa Power Projects should have received the same treatment and terms granted to the KC and its affiliated companies under the GEIA,<sup>21</sup> including priority access to the provincial transmission grid and FIT Contracts. Deloitte assumes such treatment for its Base Case Scenario, which is the basis for all its other damages scenarios. This unrealistic counterfactual Base Case scenario forms the basis of the damages alleged for the Claimant's bundled Articles 1102, 1103 and 1105 claims.
- 32 In addition, Deloitte supplements its Base Case DCF analysis with assessments of two benefits afforded to the KC under the GEIA – one or both of the economic development adder ("Economic Development Adder") and what it refers to as the capacity expansion option ("Capacity Expansion Option"). Both of these terms were provided to the KC in

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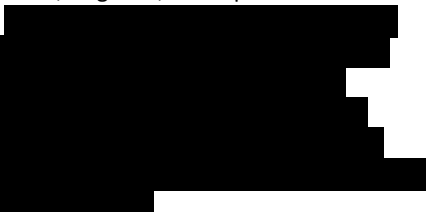
<sup>21</sup> Deloitte Report, para. 4.71, p. 44.

return for the increased economic development it was bringing to Ontario in terms of opening and operating manufacturing facilities and job creation.<sup>22,23</sup>

- 33 Deloitte does not consider that to obtain the GEIA benefits, Mesa Power should have borne similar responsibilities for large-scale manufacturing investments and job creation borne by the KC.<sup>24</sup> Further, an appropriate damages analysis should not extend to Mesa Power the allegedly wrongful benefits of the GEIA. Rather it should correct for any harm the wrongful action caused to Mesa Power. The harm caused, if any, was to deprive Mesa Power of access to transmission capacity and therefore potentially, FIT Contracts.
- 34 Second, despite employing such an unrealistic Base Case scenario, at other points, Deloitte also reasons that one or both of Ontario's priority transmission allocation to the KC and implementation of the Connection Point Change Window harmed all the Mesa Power Projects by making it impossible to receive FIT Contracts due to lack of transmission capacity.<sup>25</sup> We agree with this component of Deloitte's logic as the proper approach to causation, but Deloitte does not offer any clear evaluation of how these alleged violations actually caused harm to the Mesa Power Projects. Deloitte simply assumes they were all harmed, but fails to identify or acknowledge that there is no scenario in which the Summerhill and North Bruce Projects could have received FIT Contracts, even but for these alleged violations.
- 35 Third, with regard to the Domestic Content Requirements (related to the Claimant's Article 1106 allegation) under the FIT Program, Deloitte's assumed causation is confusing and may be speculative. Deloitte suggests that the requirements caused incremental harm to Mesa Power,<sup>26</sup> and it provides a separate quantification of applicable damages.<sup>27</sup> However,

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<sup>22</sup> C-0329, Samsung Consortium/MEI Negotiation, "Minutes/Action Items", August 7, 2009. p. 4.

<sup>23</sup> Benefits under the GEIA are covered in detailed in Attachment IV. 

<sup>24</sup> We sought but did not find any section of the Deloitte Report or the Claimant's Memorial that directly or indirectly address the issue of how Mesa Power would bear the cost of compliance with obligations under the GEIA.

<sup>25</sup> Deloitte Report, paras 1.16 (a), (b), (c) and 4.1, pp. 8, 22-23.

<sup>26</sup> Deloitte Report, para. 4.1 b, p. 32: "[T]he claim related to Article 1106 relates to the Domestic Content Requirements imposed by Canada thereby increasing the capital and operating costs of the Projects, which we understand to be included in the claim for Articles 1102 and 1103, as discussed above. Such costs were considered to be incremental Economic Losses and were quantified based on the assumption that Mesa Power was not obligated to comply with the Domestic Content Requirements in the FIT Program. Deloitte Report, para. 1.29, p. 12: "The Economic Losses related to Article 1106 while separately determined as \$101.2 million to \$111.3 million, with a midpoint of \$106.3 million, are included in the Economic Losses for Articles 1102, 1103 and 1105, and are not additive thereto." Deloitte Report, para. 1.29, p. 12.

Deloitte also says these damages are not additive to other damages<sup>28</sup> and its quantitative analysis does not in fact isolate these damages from other alleged violations but rather assumes them all together in a bundled fashion.<sup>29</sup> In fact, Deloitte's analysis of damages arising from the Domestic Content Requirements of the FIT Program assumes that each of the Mesa Power Projects would have received the prioritization, Economic Development Adder, and so-called Capacity Expansion option of the GEIA.

- 36 In our analysis, the Domestic Content Requirements did not, on their own, prevent any of the Mesa Power Projects from receiving FIT Contracts. Therefore, they did not harm Mesa Power or cause any damages. Specifically, the Domestic Content Requirements did not cause Mesa Power to sign the original GE Master Turbine Sales Agreement ("MTSA"), incur the turbine deposit, or forfeit the deposit. Nor have we seen any evidence that the Domestic Content Requirements caused Mesa Power to incur additional expenses.
- 37 Deloitte's analysis appears to assume the Domestic Content Requirements harmed Mesa Power and quantifies the harm in combination with other violations. The alleged harm was caused by requiring Mesa Power to use less economically efficient turbines, namely GE 1.6 MW turbines (known as the "GE 1.6xle") rather than the allegedly economically preferable, larger GE 2.5 MW turbines (the "GE 2.5XL" model). The Deloitte Report states that the only reason Mesa Power would not have used GE 2.5XL turbines was due to Domestic Content Requirements.<sup>30</sup> Deloitte assumes that the GE 2.5XL wind turbines were available<sup>31</sup> at economically beneficial prices, but it is not clear that they were available at any price<sup>32</sup> or that their costs would in fact yield incremental economics benefits to Mesa Power. Therefore, it is too speculative to determine whether the Domestic Content Requirements actually caused harm or produced any damages in combination with other alleged violations.
- 38 Fourth, Deloitte implicitly assumes that Mesa Power's forfeiture of its deposit under the GE turbine agreement ("GE Turbine Agreement") was caused solely by Ontario's and OPA's alleged violations of Canada's National Treatment (Article 1102) and Most-Favored Nation Treatment (Article 1103) obligations.<sup>33</sup> Deloitte's assumption is misleading because Mesa Power did not purchase the GE turbines specifically for the Ontario wind farms, and Ontario and OPA actions did not cause Mesa Power to originally make or ultimately forfeit the

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<sup>27</sup> Deloitte Report, para. 1.23, p. 11.

<sup>28</sup> Deloitte Report, para. 1.23, p. 11.

<sup>29</sup> Deloitte Report, para. 4.1, pp. 22-23.

<sup>30</sup> Deloitte Report, para. 4.15a, pp. 26-27.

<sup>31</sup> Deloitte Report, paras. 4.15, 4.27, 4.62- 4.63, pp. 26, 42 and 43.

<sup>32</sup> C-0379, Amended and Restated Master Turbine Sale Agreement For The Sale Of Power Generation Equipment and Related Services between General Electric Company and Mesa Power Pampa LLC [REDACTED]

[REDACTED] (Emphasis added).

<sup>33</sup> Deloitte Report, para. 4.1(a) iv, p. 22-23.

deposit. The original GE MTSA was initiated in 2008 for the Pampa wind project in the Texas panhandle, one year prior to the inception of the FIT Program in Ontario. After the Pampa project failed and before, during, and after Mesa Power's pursuit of FIT Contracts in Ontario, Mesa Power actively but unsuccessfully pursued other U.S. wind power development projects utilizing the GE turbines. Ontario and the OPA did not cause Mesa Power to incur or forfeit the GE turbine deposit and, therefore, there are no applicable damages.

- 39 In summary, our analysis indicates that the inaccurate causation assumed in the Deloitte Report disqualifies several categories of damages that we exclude from our analysis. These include:
- a. Potential damages for Mesa Power's Summerhill and North Bruce projects;
  - b. Future losses from the GEIA terms for the Economic Development Adder and the so-called Capacity Expansion Option;
  - c. Future losses for the Domestic Contents Requirements (subject to further analysis of critical wind turbine availability, cost, and performance information); and
  - d. Sunk costs for the GE turbine deposit.

#### Optimistic Discount Rate

- 40 In its evaluation of future losses for all scenarios, Deloitte does not identify and properly analyze the risks associated with the allegedly impaired Investment. The Mesa Power Projects were mid-stage development projects, not going concerns with guaranteed revenue. If harm was caused, it was to deprive Mesa Power of the chance for continued development and investment in mid-stage development projects in hopes of generating future positive cash flow.
- 41 Prior to generating future cash flow and, potentially, positive value (measured as NPV), such development projects carry important risks related to potential delay, failure, financing availability, and/or cost of capital. Even a mid-stage project with a FIT Contract in hand would still face significant development, financing, and construction risks. For projects that successfully obtained FIT Contracts, the Renewable Energy Approvals ("REA") process has presented the largest component of completion risk which has led to delay or failure for several projects.
- 42 Among other methods,<sup>34</sup> the appropriate NPV for a development project can be determined by increasing the discount rate to properly reflect the risk of the investment as

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<sup>34</sup> In business transactions, investors acquiring development projects sometimes determine the price by calculating the full project NPV assuming it were already operational and then discounting that by a

of the valuation date (in this case the date of alleged harm). In this case, the discount rate should reflect the risks associated with mid-stage development projects sponsored by a small company in Canada.

- 43 Deloitte has wrongly overlooked completion risk and assigned full value to each of the Mesa Power Projects, without reflecting realistic project completion risks in its discount rate. By calculating damages as 100 percent of the future losses from discounted future cash flows from each of the Mesa Power Projects at optimistic discount rates, Deloitte implicitly assumed that Mesa Power Projects would have faced no further completion risks because they were comparable to “late-stage projects.”<sup>35</sup> Deloitte’s overly optimistic discount rate serves to inflate damages.
- 44 Deloitte uses several optimistic adjustments to decrease the discount rate, as detailed in Section 4.3:
- a. First, Deloitte’s analysis of the impact of changing leverage on the cost of equity capital is deficient in two ways:
    - Deloitte bases its leverage analysis on the book value of debt and equity, rather than the market values; and
    - Deloitte assumes that as the Mesa Power Projects repay the outstanding principal on their debts, the cost of equity capital will approach the Weighted Average Cost of Capital (“WACC”) of the fully levered project.<sup>36</sup>
  - b. Second, based upon instructions from the Claimant, Deloitte assumed that all the Mesa Power Projects would have received financing from the Export-Import Bank of the United States (“U.S. Ex-Im Bank”) financing.<sup>37</sup> Although the Deloitte Report states “[t]he U.S. Export-Import Bank prepared a letter of intent indicating they were interested in financing Mesa Power’s Projects”<sup>38</sup> the letter cited only mentions the TTD project, does not mention any other project, and does not provide a guaranteed financing commitment.<sup>39</sup> Further, the level of U.S. export content required by the U.S. Ex-Im Bank would have been inconsistent with the FIT Program’s Domestic Content Requirement. As a result of these apparent

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percentage that reflects estimation of the remaining project development risks and probability of successful completion.

<sup>35</sup> Deloitte Report, para 4.71, p.44: “Given the assumption that the Projects would have each benefited from the rights and privileges conveyed by the GEIA including the facilitation commitments of the province and received a FIT Contract, the Projects would be more comparable to late-stage projects. Further, it is our view that the rights and privileges of the GEIA reduced the risks related to the Projects and accordingly increased their value relative to the projects below.”

<sup>36</sup> Deloitte Report, para. 4.57, p. 41.

<sup>37</sup> Deloitte Report, para 4.41, p.37.

<sup>38</sup> Deloitte Report, para. 4.41, p. 37.

<sup>39</sup> C-0377, Letter from Barbara A. O’Boyle (Export-Import Bank of the United States) to Steven W. Howlett (GE Capital Markets Corporate), September 23, 2010.

inconsistencies, it is inappropriate to speculate about the availability of U.S. Ex-Im Bank financing and the cost of debt assumed in Deloitte's discount rate is too low.

- c. Third, Deloitte makes optimistic discount rate assumptions related to size premium, the company-specific risk adjustment, the country-specific risk adjustment, and the target cost of equity capital.

### Unrealistic Assumptions and Erroneous Calculations

- 45 Deloitte's assumptions regarding the timing of Mesa Power's payments for the GE turbines appear to be fabricated without any apparent factual basis. Deloitte's DCF analysis assumes that all construction costs would not occur until 2013 and 2014 – including the cost of purchasing turbines, but there is no explanation as to why that is an appropriate assumption.
- 46 Deloitte also makes an inappropriate assumption regarding maintenance expenses that is inconsistent with the GE MTSAs. Deloitte's inappropriate assumption on the timing of warranty expiration has the effect of artificially increasing the valuations of the Projects.
- 47 Deloitte also mistakenly eliminated \$13.8 million in capital expenditures at TTD and \$10.8 million in capital expenditure at Arran. Deloitte's model treats these costs as debt financed when calculating equity costs, and as equity financed when calculating debt costs. As a result, the expenses simply disappear and artificially inflate Deloitte's DCF valuations of TTD and Arran. Correcting this error reduces the damages by \$23,517,000.
- 48 Deloitte's analysis also underestimated damages because Deloitte did not capitalize the financing costs incurred during the construction period.<sup>40</sup> Deloitte's calculations artificially inflated the Projects' tax burden. Had these costs been capitalized,<sup>41</sup> they would have increased the TTD and Arran Projects' NPVs and damages by \$2,297,000.
- 49 Deloitte also made four additional spreadsheet errors. While one error increases the valuation, the net impact of all the errors is a \$152,000 reduction in damages for the TTD and Arran Projects.

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<sup>40</sup> BRG-071, Canada Revenue Agency, "Ontario's FIT/microFIT Programs, Frequently Asked Questions about FIT/microFIT Programs", website extract, undated. <http://www.cra-arc.gc.ca/tx/bsnss/thrtpcs/nt-ft/q1-eng.html#a5> (accessed February 24, 2014): "Generally, amounts paid for legal, engineering, installation, and other fees that relate to the acquisition of the renewable energy property, would be included as part of the capital cost of the property."

<sup>41</sup> When cash expenditures are capitalized, they increase the balance sheet value of a capital asset by an amount exactly equal to the cash outflow. Thus, instead of reducing taxable income in the current period, capitalized expenses reduce taxable income over time as the capital asset is depreciated (through depreciation expense).



2.3 Correction of Alleged Damages

- 50 Because it is based on inaccurate causation, an optimistic discount rate, unrealistic assumptions, and incorrect calculations, Deloitte’s analysis of potential damages is vastly overstated. Specifically, Deloitte’s analysis of:
- a. Sunk costs and future losses are both inflated by the inappropriate assumption that the alleged violations prevented North Bruce and Summerhill from receiving FIT Contracts.
  - b. Future losses are inflated by flawed causation, inclusion of the GEIA terms (and adders), calculation errors, unrealistic assumptions, and an optimistic discount rate.
  - c. Sunk costs are inflated by the assumption that the GE turbine deposit was forfeited solely due to Mesa Power’s failure to obtain FIT Contracts.
- 51 Our analysis aims to rectify the limitations of Deloitte’s analysis. We focus on the underlying actions of Ontario and the OPA (namely the GEIA, the Connection Point Change Window, and the Domestic Content Requirements of the FIT Program) that allegedly violated NAFTA and caused harm to Mesa Power, if and how these actions caused harm to Mesa Power, and what should be the appropriate quantum of damages, if any. To do this, we undertake detailed analysis of Project evidence and industry information available from discovery materials and our independent research. Figure 1 below illustrates the differences between Deloitte’s and our approaches to quantification of damages.

**Figure 1 Comparison of Analytic Approach for Deloitte and BRG**

Deloitte Approach	BRG Approach
<b>Focus on NAFTA Liability with Causes of Harm assumed and bundled</b>	<b>Focus on Causes of Harm, both unbundled and combined</b>
National Treatment (1102) + Most-Favored Nation Treatment (1103) + Minimum Standard of Treatment (1105) <u>includes and is equal to 1102 and 1103</u>	GEIA
	Connection Change Point Window
	GEIA and Connection Change Point Window
Performance Requirements (1106) <u>are included in 1102, 1103, and 1105 above and are not additive</u>	Domestic Content

- 52 In our analysis of causation, we conclude that:

- a. If either the Bruce to Milton transmission line capacity allocations under the GEIA and/or the Connection Point Change Window are considered violations of NAFTA, then only the TTD and Arran Projects would have received FIT Contracts and suffered harm. There are no sunk cost or future loss damages related to Summerhill or North Bruce because they would not have received FIT Contracts but for the alleged violations. Therefore, they could not have been caused any harm by the alleged violations.
  - b. Even for TTD and Arran, the appropriate but for scenario involves receipt of transmission access and a FIT Contract and not receipt of the allegedly wrongful GEIA terms (including the Economic Development Adder and the so-called Capacity Expansion Option). The harm caused could not involve losing the GEIA terms because those would not have been reasonably available in any scenario.
  - c. On their own, the Domestic Content Requirements could not have been the counterfactual cause of harm to any of the Projects. This is because none of the Projects would have received FIT Contracts but for the Domestic Content Requirements. Even when combined with other scenarios it is not clear this alleged violation actually caused harm or damages to Mesa Power.
  - d. The GE turbine deposit forfeiture was not caused by the FIT Program and should not be attributed to Ontario. Therefore, no damages are appropriate.
- 53 In our analysis of sunk costs and future losses for TTD and Arran, we conclude that:
- a. The only remaining cause of harm to these projects was the loss of transmission capacity due to the GEIA priority capacity allocation and /or the Connection Change Point Window.
  - b. The sunk costs incurred by Mesa Power for TTD and Arran (other than the GE turbine deposit) are the most tangible applicable damages if a violation is found.
  - c. The estimation of future losses involves judgments about Project completion likelihood, installed costs, expected energy production, operations and maintenance costs, and the appropriate rate at which to discount future cash flows. In the case of the TTD and Arran projects, it is difficult to make these judgments without making a series of speculative assumptions, as Deloitte has done.
  - d. Nevertheless, we offer an alternative damages calculation after correcting for optimistic risk and discount rate analysis, unrealistic assumptions and erroneous calculations, and inappropriate assumptions about the appropriate Valuation Date.
- 54 After correcting for Deloitte's errors, Figure 2 presents our estimate of total potential damages, including sunk costs and future losses.

Figure 2: Comparison of Deloitte and BRG Damages for All Alleged Violations<sup>42,43</sup>

(\$000s)	Sunk Costs			Future Losses		Total
	Past Costs - TTD & Arran	Past Costs - SH & NB*	GE Deposit	TTD & Arran	SH & NB*	
<b>Deloitte Damages</b>	<b>\$6,420</b>	<b>\$1,680</b>	<b>\$156,833</b>	<b>\$232,322</b>	<b>\$255,747</b>	<b>\$653,002</b>
Inaccurate Causation	\$0	(\$1,680)	(\$156,833)	(\$71,795)	(\$255,747)	(\$486,055)
<b>Damages Without Inaccurate Causation</b>	<b>\$6,420</b>	<b>\$0</b>	<b>\$0</b>	<b>\$160,527</b>	<b>\$0</b>	<b>\$166,947</b>
<b>Adjustments to Deloitte Base Case (TTD and Arran Only)</b>						
Optimistic Discount Rate	\$0	\$0	\$0	(\$112,529)	\$0	(\$112,529)
Unrealistic Assumptions and Erroneous Calculations	\$0	\$0	\$0	(\$32,354)	\$0	(\$32,354)
Valuation Date	\$0	\$0	\$0	(\$3,506)	\$0	(\$3,506)
<b>BRG Damages (TTD and Arran Only)</b>	<b>\$6,420</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,909</b>	<b>\$0</b>	<b>\$13,329</b>

\*\*SH" stands for Summerhill. "NB" stands for North Bruce

- 55 Assuming the Tribunal finds liability for one or more of the alleged violations, we calculate \$6,420,000 of sunk cost damages and \$6,909,000 of future loss damages for a total of \$13,329,000 in potential damages.
- 56 Our damages calculations and conclusions are contingent on the evaluation of additional information and three potential adjustments that may be needed for any final determination of damages:
- We have not received adequate information to audit and verify the "past costs" for any of the Projects, including TTD and Arran;
  - We do not have adequate information on offers from third parties to purchase TTD and Arran (or any of the Projects)<sup>44</sup> or other information on the Project's physical

<sup>42</sup> Deloitte mid-point damages of \$653,002 reported here are slightly different than Deloitte's damages of \$653,683 reported in Schedule 1A of their report. We believe the difference is due to rounding assumptions made by Deloitte when aggregating categories of damages. Our numbers for Deloitte's Sunk Cost Damage are taken from Schedule 1A of their report. Numbers for future losses come from Schedules 2A, 3A, 4A, and 5A of their report. Those schedules report future losses by Mesa Project.

<sup>43</sup> BRG's adjustments to damages are not strictly additive because of interactions between the individual adjustments. For example, the Discount Rate adjustments reduce the impact of the adjustments made for Unrealistic Assumptions and Erroneous Calculations.

and commercial assets, as needed to evaluate the residual value of TTD and Arran after the projects failed to receive FIT Contracts on July 4, 2011. The residual value should be subtracted from any sunk cost damages because Mesa Power retained the assets and could have sold them or used them to generate value.

- c. We do not have adequate contemporaneous information and evidence regarding the availability, cost, and performance of the GE 2.5XL turbines to determine whether the Domestic Content Requirements actually caused any harm to Mesa Power in combination with other violations.

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<sup>44</sup> Memorial, para. 530, p. 139. In this paragraph, the Claimant asserts that “The Korean Consortium and its partners also sought to purchase wind power projects from Mesa, which further indicates the extent to which they were in competition and in like circumstances. [These attempts took place in 2010 and 2011.]”; C-0038, Email from George Hardie (Pattern Energy) to Cole Robertson (Mesa), July 11, 2011

### 3 INDUSTRY AND FACTUAL BACKGROUND

57 This Chapter identifies and assesses critical assumptions that are embedded in Mesa Power’s Memorial and Deloitte’s quantification of damages. We identify these assumptions and analyze how they comport with relevant industry, commercial, and market fundamentals. This analysis provides a critical foundation for our analysis of Deloitte’s damages analysis in Chapter 4 and our own damages analysis presented in Chapter 5.

#### 3.1 Industry Assumptions Embedded in the Deloitte Analysis

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58 The following industry assumptions form critical foundations for Deloitte’s damages analysis, but they have not been clearly stated or analyzed, and some of them are quite speculative.

- a. **FIT Program and Rankings:** Deloitte discusses the priority rankings for the Mesa Power Projects at the transmission area or regional level.<sup>45</sup> The Claimant’s Memorial describes the process as having two different rankings: “one that was province-wide and a regional one based on regions drawn up by the OPA.”<sup>46</sup>
- b. **Causes of Harm:** Deloitte assumes that Ontario’s and the OPA’s alleged violations of Canada’s NAFTA obligations related to the GEIA, the Connection Point Change Window, and Domestic Content Requirements were all applicable in combination.<sup>47</sup> The Deloitte Report assumes that Mesa Power should have been entitled to the terms of the GEIA.<sup>48</sup> Deloitte’s analysis of the harm to Mesa Power caused by the GEIA makes the stated assumption that Mesa Power was entitled to the same wind power development and generation benefits as the KC.<sup>49</sup> Deloitte also makes the unstated assumption that Mesa Power should not be responsible for any of the economic development obligations assumed by the KC (e.g., making multi-billion dollar investments and creating jobs in renewable power technology manufacturing).<sup>50</sup>
- c. **Project Risks:** Deloitte’s damages analysis and discount rate assume that Mesa Power’s alleged right to the GEIA terms would remove completion risk for the

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<sup>45</sup> Deloitte Report, paras. 1.2, 1.3, and 1.4 pp.5-6.

<sup>46</sup> Memorial, para. 188, p. 55.

<sup>47</sup> Deloitte Report, paras. 1.17, 1.21 and 1.27, pp. 9, 11 and 12.

<sup>48</sup> Deloitte Report, para, 4.18a, p. 28.

<sup>49</sup> Deloitte Report, paras. 1.16, 1.17, 4.18a, pp. 8, 9, 28.

<sup>50</sup> We sought but did not find any section of the Deloitte Report or the Claimant’s Memorial that directly or indirectly address the issue of how Mesa Power would bear the cost of compliance with obligations under the GEIA.

Projects.<sup>51</sup> Deloitte reasons that if the Mesa Power Projects had received FIT Contracts, they would not have faced further completion risks (e.g., from project development, completion, financing, or construction) that could have delayed or prevented initiating commercial operation and positive cash flow.<sup>52</sup>

- d. **GE Turbine Applications and Availability:** The Deloitte damage calculations for the harm caused by the FIT Program's Domestic Content Requirements and the GE turbine deposit implicitly assume the GE 1.6xle turbines acquired by Mesa Power were dedicated to Ontario and that the GE 2.5XL turbines were available at an economically beneficial cost.

59 To provide a factual basis for evaluation of Deloitte's causation, assumptions, and calculations in Chapter 4, the remainder of this Chapter (and several supporting attachments) provide relevant factual background. This chapter is organized topically in sections that provide:

- a. A timeline for the relevant activities discussed in this report as a reference tool.
- b. A brief introduction to Ontario's electricity sector and the FIT Program, to provide background regarding the project rankings, permitting procedures, and transmission access.
- c. A summary of each of the alleged causes of harm, including the GEIA, the Connection Point Change Window, and the FIT Program's Domestic Content Requirements as background for evaluation of the harm caused to Mesa Power, if any.
- d. An assessment of typical wind industry and FIT Program development practices and risks as related to completion and operation of the Mesa Power Projects.
- e. Analysis of the GE MTSA and Mesa Power's wind development activity in the U.S. and Canada as background for analysis of the alleged sunk costs for the wind turbine deposit, financing risk for the Mesa Power Projects, and availability and cost of larger GE turbines.

### 3.2 Timeline for Relevant Activities

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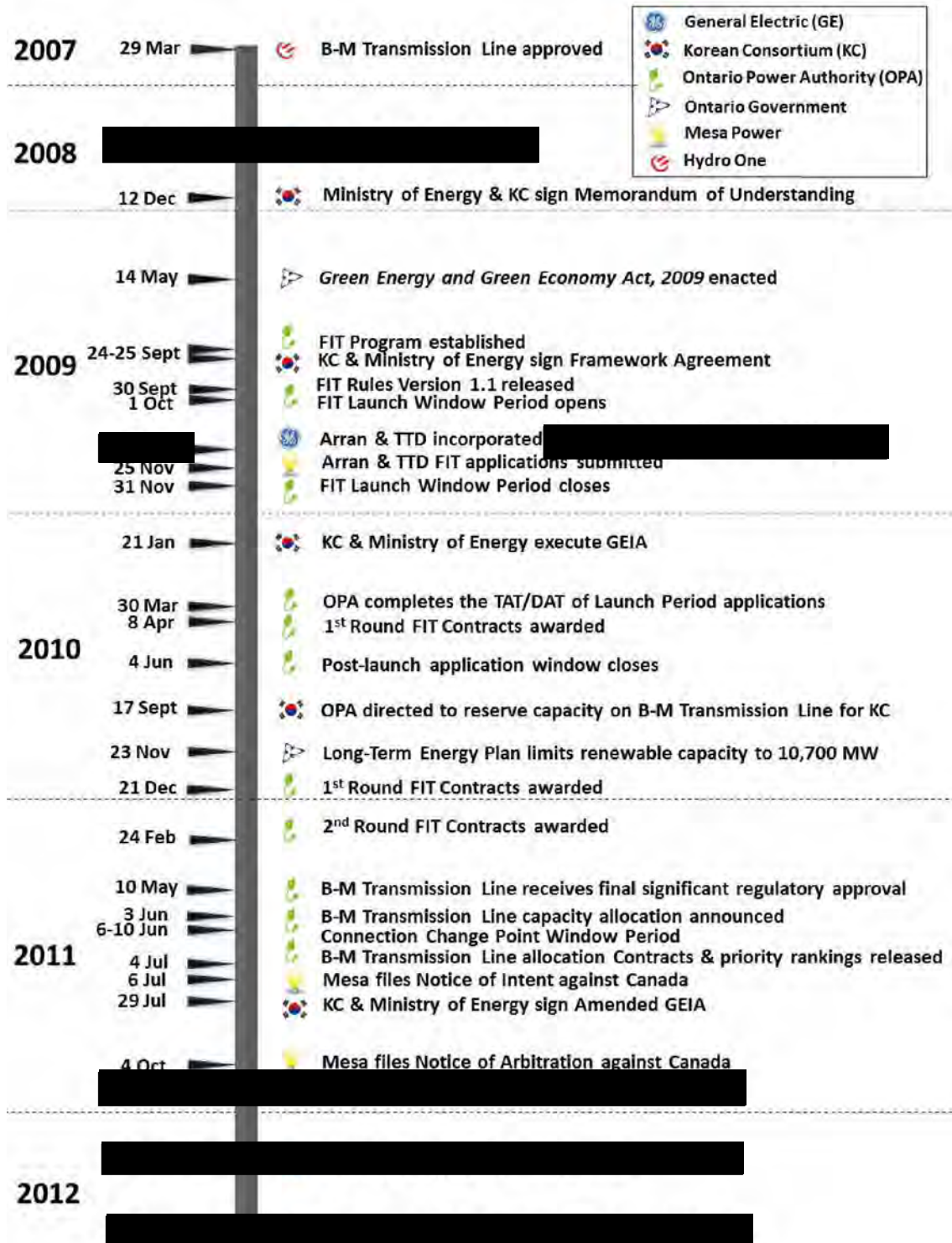
60 The timeline in Figure 3 below provides an overview of the relevant FIT activities and actions by Ontario and Mesa Power that are relevant to our industry background and damages analysis. Many of the milestones on this timeline are addressed in this chapter and throughout this report.

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<sup>51</sup> Deloitte Report, para. 4.71, p. 44.

<sup>52</sup> Deloitte Report, paras. 4.18 and 4.71, pp. 28 and 44.

Figure 3 Timeline of Relevant Events



### 3.3 Ontario's FIT Program

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- 61 While Ontario has a wholesale market for electricity, it also utilizes contractual mechanisms to compensate for the provision of generation capacity (procured through, for example, bi-lateral contract negotiations and requests for proposal), including renewable generation capacity (most recently procured under the FIT Program).
- 62 The FIT Program was designed to facilitate the increased development of renewable generating facilities of varying sizes, technologies and configurations via a standardized, open and fair process.<sup>53</sup>
- 63 The price that would have been paid to Mesa Power for the Projects' electricity would have been specified in the FIT Contracts.<sup>54</sup> A summary of the Ontario electricity market is provided in Attachment III and full evaluations are provided in the Export Report of Queen's Quay Advisors and the Witness Statements of Mr. Bob Chow and Mr. Rick Jennings.<sup>55</sup>
- 64 For purposes of our analysis, we highlight the following information on FIT Program application ranking procedures and methodology (a more detailed review of the FIT Program is provided in Attachment III):
- a. The FIT Program opened for applications on October 1, 2009. The day before, the OPA released to the public several documents including the FIT Rules.<sup>56</sup> The FIT Rules established a series of steps for FIT applicants to submit applications to the Program and a methodology for ranking FIT applications.<sup>57</sup> According to the FIT Rules, applications to the Program received a time-stamp based on the exact date and time the online application is received by the OPA.<sup>58</sup> Applications were assessed in sequential order based on their time-stamp to determine their priority ranking on a provincial basis.
  - b. From October 1, 2009 to November 30, 2009, the OPA held the FIT Launch Window Period. During the FIT Launch Window Period the OPA conducted a special review of applications to prioritize the most viable projects with the earliest expected commercial operation ("COD") dates. Applicants could accelerate their time-stamp

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<sup>53</sup> C-0143, Feed-In-Tariff Program, FIT Rules, Version 1.2, November 19, 2009, p. 1.

<sup>54</sup> C-0141, Ontario Power Authority, Feed-in Tariff Program, Program Overview, August, 2010, pp. 1-4.

<sup>55</sup> Expert Report of Queen's Quay Consultants ("Dorey Report"), Chapter IV; Witness Statement of Mr. Bob Chow, OPA's Director of Transmission Integration; paras. 4-15; Witness Statement of Mr. Rick Jennings, Assistant Deputy Minister at the Ontario Ministry of Energy and head of the Energy Supply Division, in its entirety.

<sup>56</sup> C-0258, Ontario Power Authority, Feed-in Tariff Program, FIT Rules Version 1.1, September 30, 2009.

<sup>57</sup> C-0258, Ontario Power Authority, Feed-in Tariff Program, FIT Rules Version 1.1, September 30, 2009, Section 13.

<sup>58</sup> Applicants were required to submit an online application and then submit a complete hard-copy application package by mail to the OPA within five business days.



(i.e., move it to an earlier date) by bidding for COD acceleration days.<sup>59</sup> In order to be awarded COD acceleration days, a FIT applicant was required to meet at least one criteria point from the list outlined in the FIT Rules.<sup>60</sup> The OPA also allowed every launch period applicant to state that they would be ready up to 365 days earlier than otherwise required by the contract without submitting any evidence at all.<sup>61</sup>

### 3.4 The Alleged Causes of Harm

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- 65 The Deloitte damages analysis is premised on the alleged harm caused to Mesa Power by Ontario and the OPA through three alleged violations of Canada's investment protection obligations under NAFTA.<sup>62</sup> Each of the violations reflects a commercial or policy action taken by Ontario that allegedly caused harm and led to damages suffered by Mesa Power.<sup>63</sup> These include:
- a. The GEIA,
  - b. The Connection Point Change Window, and
  - c. The Domestic Content Requirements.
- 66 Each of these alleged violations is summarized below.

#### The Korean Consortium and the Green Energy Investment Agreement

- 67 According to the Claimant, Ontario violated Canada's NAFTA investment treatment provisions by "[p]roviding more favorable transmission treatment to Korea-based Samsung, to Samsung's Canadian-based local wind projects in Ontario."<sup>64</sup> The harm allegedly caused to Mesa Power by the preferential terms received by the KC and its affiliated companies is the central pillar of Deloitte's damages analysis.<sup>65</sup>
- 68 The Deloitte Report states that:
- "a) the GEIA signed between the Korean Consortium and Ontario's Premier and Ontario's Minister of Energy granted the Korean

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<sup>59</sup> C-0258, Ontario Power Authority, Feed-in Tariff Program, FIT Rules Version 1.1, September 30, 2009, Section 13.4

<sup>60</sup> C-0258, Ontario Power Authority, Feed-in Tariff Program, FIT Rules Version 1.1, September 30, 2009, Section 13.4(a)

<sup>61</sup> C-0143, Ontario Power Authority, Feed-In Tariff Program, FIT Rules, Version 1.2, November 19, 2009, s. 13.4(b)(i).

<sup>62</sup> Deloitte Report, paras. 1.14 -1.27, pp. 9-12.

<sup>63</sup> Deloitte Report, para. 1.16, pp. 8-9; para. 1.21 pp. 10-11.

<sup>64</sup> Memorial, para. 17, p. 4.

<sup>65</sup> Deloitte Report, paras. 1.14- 1.18, pp. 8-9.

Consortium guaranteed priority access to supply renewable energy to the Province of Ontario's energy grid that was not available to other energy providers in the province;

"b) The Korean Consortium received a guaranteed right of first refusal on transmission access in certain transmission zones in the Province of Ontario including 500 MW in the Haldimand, Essex and Chatham-Kent transmission zone [for the KC's phase 1 projects] and 500 MW in the Bruce Region [for the KC's phase 2 projects] of Ontario. No other company was granted such favourable treatment. This prevented Mesa from receiving an allocation of the capacity in those regions.

"...in the GEIA and Amended GEIA, the Korean Consortium was offered an Economic Development Adder which gave the Korean Consortium more favourable treatment than other investors;

"... in the GEIA, the Korean Consortium was offered the ability to increase the capacity of its Projects by 10% and possibly 20% which gave the Korean Consortium more favourable treatment than other investors."<sup>66</sup>

- 69 We evaluated the development of the investment deal between the Government of Ontario and the KC. Our analysis sought to establish the nature and timing of the agreement and obligations and benefits borne by the parties.
- 70 As presented in Attachment V, our analysis of the evidence yields two primary conclusions:
- a. The benefits provided to the KC and its affiliated companies in transmission allocation, preferential Power Purchase Agreement ("PPA") terms, and expedited PPA contracting were all in exchange for the KC obligations to make investments in Ontario valued at approximately \$7 billion,<sup>67</sup> including manufacturing facilities and job creation as well as renewable energy generation.
  - b. The GEIA transaction was very different from FIT Program transactions, such as the Mesa Power Projects. As described by the Claimant, Mesa Power's investment in Ontario<sup>68</sup> would not have involved manufacturing and was not at the same scale as the GEIA investment commitment. Presumably therefore, Mesa Power's investments would not have provided Ontario the same economic development benefits as provided in the GEIA.

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<sup>66</sup> Deloitte Report, para. 1.16, pp. 8-9.

<sup>67</sup> BRG- 017, Office of the Premier, News, "Korean Companies Anchor Ontario's Green Economy", January 21, 2010. <http://news.ontario.ca/opo/en/2010/01/korean-companies-anchor-ontarios-green-economy.html>(accessed December 16, 2013)

<sup>68</sup> Memorial, paras. 32-40, pp. 8-12.

- c. Also, the so-called Capacity Expansion Option is misleading and Deloitte's analysis is wrong. This benefit did not allow for the GEIA capacity to be increased 10 percent overall, but rather appears to have provided only for shifting of capacity between project phases.<sup>69</sup>

### The Connection Point Change Window

- 71 The Connection Point Change Window is a secondary cause of harm underlying Deloitte's analysis. Deloitte asserts that the Connection Point Change Window was an unexpected change in the FIT Rules,<sup>70</sup> but our analysis indicates that, prior to June 3, 2011, FIT applicants knew and expected the Connection Point Change Window to take place. Specifically, we find that:
- a. On June 3, 2011, the Minister of Energy directed the OPA to open a five-day window during which FIT applicants could alter their connection points. The Connection Point Change Window applied only to applicants in the Bruce and West of London transmission areas.<sup>71</sup> The connection point change was posted on the OPA website on the same day that the Minister issued his direction.<sup>72</sup> Additionally, the OPA released revised FIT Rules to reflect the Connection Point Change Window.<sup>73</sup>
  - b. The opportunity to change the point of connection had been anticipated for some time. The Bruce-to-Milton transmission line had long been planned, but the capacity that it eventually provided was not available at the time of the FIT Launch Period or the second round of FIT applications.<sup>74</sup> The OPA had been publicly planning to allow changes in connection points as part of the process to allocate the capacity on that line since March 2010.<sup>75</sup> On November 22, 2010, the OPA posted on its website a Questions and Answers document explaining that it was developing a process to accommodate changes in the points of connection.<sup>76</sup>

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<sup>69</sup> C-0322, Green Energy Investment Agreement (GEIA) between Ontario, KEPCO and Samsung C&T, January 21, 2010, art. 3.4.

<sup>70</sup> Deloitte Report, paras. 1.3-1.4, pp. 5-6

<sup>71</sup> C-0046, Directive from Ministry of Energy to Mr. Colin Andersen, CEO, OPA, June 3, 2011.

<sup>72</sup> C-0140, Ontario Power Authority, Allocating Capacity and Offering FIT Contracts for Bruce to Milton Enabled Projects, June 3, 2011.

<sup>73</sup> C-0005, Ontario Power Authority, Feed-In Tariff Program, FIT Rules, Version 1.5, June 3, 2011. Section 5.4.1.

<sup>74</sup> BRG-020, Ontario Power Authority, Ontario Feed-in Tariff Program- Background, April 8th 2010.

[http://fit.powerauthority.on.ca/Storage/10985\\_Apr\\_8\\_Backgrounder\\_FINAL.pdf](http://fit.powerauthority.on.ca/Storage/10985_Apr_8_Backgrounder_FINAL.pdf) (Accessed January 8, 2014)

<sup>75</sup> C-0034, Ontario Power Authority, Presentation, "The Economic Connection Test Process", March 23, 2010, slide 14.

<sup>76</sup> BRG-029, Government of Canada, Transmission Related Questions and Answers, November 22, 2010, p. 3. We have been advised by counsel that this document was previously published on the OPA website.

### The FIT Program's Domestic Content Requirements

- 72 According to the Claimant, Ontario violated Canada's NAFTA Article 1106 obligations by "imposing minimum domestic content restrictions upon the Investor as a precondition of participating in the renewable electrical energy market in Ontario."<sup>77</sup>
- 73 Deloitte's quantification of damages from Ontario's Domestic Content Requirements assumes that, but for the Domestic Content Requirements, Mesa Power could have deployed GE 2.5XL turbines in the Mesa Power Projects. The Deloitte Report states that quantification of damages is based on the reduced capital cost, decreased operating cost and incremental returns that Mesa Power Projects would have experienced/attained had they not being subjected to the allegedly wrongful "buy local" provisions.<sup>78</sup> Deloitte says the Mesa Power Projects would have been more valuable if they had been allowed to use the GE 2.5XL turbines, which at the time of the FIT application may not have complied with Domestic Content Requirements of the FIT.<sup>79</sup>
- 74 For wind projects entering commercial operations before January 1, 2012, the FIT Program required 25 percent Domestic Content. The requirement increased to 50 percent thereafter.<sup>80</sup>

### 3.5 Wind Power and FIT Program Development Risks

- 75 Deloitte assumes that upon receiving FIT Contracts the Mesa Power Projects would have faced little or no future risks to project completion, commercial operation, and collection of cash flows. Deloitte's analysis hinges on Mesa Power's assumed entitlement to the rights and privileges conveyed by the GEIA. Deloitte asserts that had the Mesa Power Projects received the appropriate "facilitation commitments of the province" they would have been comparable to late stage projects<sup>81</sup> for which the only remaining hurdles were construction and financial close.<sup>82</sup>
- 76 Our experience and analysis indicate that this is misleading and inaccurate. Even had they received FIT Contracts on July 4, 2011, the Mesa Power Projects were only at the middle of the wind project development process and still faced material completion risks and development activity. These risks have had a material impact on other FIT projects and we have seen no evidence suggesting that Mesa Power would have been an exception.

<sup>77</sup> Memorial, para. 14, p. 3.

<sup>78</sup> Deloitte Report, para. 1.21, pp. 10-11.

<sup>79</sup> Deloitte Report, para. 4.15, pp. 26-27.

<sup>80</sup> C-0143, Ontario Power Authority, Feed-In Tariff Program, FIT Rules, Version 1.2, November 19, 2009, p. 15.

<sup>81</sup> A Later Stage project is characterized as a project that has completed all development phases but Construction and Testing as depicted in Attachment X.

<sup>82</sup> Deloitte Report, paras. 4.70 – 4.71, p. 44.

### Typical Wind Project Development Timeline and Application in Ontario

- 77 With or without the FIT Contracts, the Mesa Power Projects had substantial development and financing activity to complete before they could initiate operations, generate cash flow, and provide financial returns to Mesa Power for the investment. In Attachment X, we provide a typical wind project development timeline and evaluate the various phases of development for wind power projects.
- 78 Our analysis indicates that even if OPA had awarded FIT Contracts to the Mesa Power Projects, they would have confronted at least another 18-24 months of development and financing tasks, assuming a typical project development timeline without significant project opposition or delay.
- 79 The final stages for project development, permitting, financing, and construction can involve material risks of project delay or failure, and there are no grounds to assume that the Mesa Power Projects were immune from them. Nevertheless, we cannot find any statements in the Deloitte Report or any aspect of Deloitte’s analysis suggesting that Deloitte considered or analyzed these risks with respect to the harm and damages allegedly suffered by Mesa Power. Nevertheless, it is commonly understood in the wind industry that early and mid-stage projects without permits and pre-construction have more risk and less value than advanced stage projects.<sup>83</sup>

### FIT Projects Status and Risks

- 80 Typical wind industry risks were also evident in Ontario, as any reasonable investor would expect. To illustrate how these risks materialized for the FIT projects that did receive FIT Contracts, we analyzed those projects’ status as of January 2014.<sup>84</sup> Our analysis is presented in Attachment XI.
- 81 We found that of the 70 wind projects that have received FIT Contracts, more than half, representing more than 43 percent of the wind capacity, have been delayed or terminated. We also found that for the same 70 projects there was an even higher share of total capacity that has not yet achieved final approvals in the Renewable Energy Approval (“REA”) process. The remaining projects are either operating or on schedule.

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<sup>83</sup> BRG-037, Deloitte, “Valuing wind farm developers”, August, 2011, p. 9.

[https://www.deloitte.com/assets/Dcom-Sweden/Local%20Assets/Documents/se\\_deloitte\\_wind\\_energy\\_analyse\\_aug2011.pdf](https://www.deloitte.com/assets/Dcom-Sweden/Local%20Assets/Documents/se_deloitte_wind_energy_analyse_aug2011.pdf) (Accessed February 24, 2014)

<sup>84</sup> BRG-073, “Letter from the OPA to BRG, February 28, 2014.” We have also collected publicly available data from OPA on FIT Contract awards and conducted independent research on projects that have received an FIT Contract. For complete list of sources please see Technical Annex 11.

### 3.6 The GE Turbine Agreement and Mesa Power Projects

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- 82 The Memorial argues that for Mesa Power to comply with Domestic Content Requirements imposed by the FIT Program, it was required to restructure a sales contract for commercial wind turbines with GE.<sup>85</sup> However, Deloitte’s damages analysis does not attribute the alleged harm caused by the GE deposit forfeiture to the alleged Domestic Content Requirement violations, but instead attributes it to damages under NAFTA articles 1102, 1103, and 1105.<sup>86</sup>
- 83 The Deloitte Report assumes that the GE deposit made in May 2008 represented a sunk cost for Mesa Power’s investment in the Ontario-based Projects.<sup>87</sup> It also calculates future losses based on the assumed availability and favorable cost of GE’s larger 2.5XL turbines.
- 84 Deloitte assumes that the sunk cost from the GE Turbine agreement was caused solely by Ontario’s allegedly wrongful actions. To evaluate this assumption, we analyzed the original GE MTSA, amendments to it, and Mesa Power’s wind development activities in the U.S. and Canada. We reviewed information presented in the Deloitte Report and the project progress reports presented by Leader Resources. We also conducted independent research on the GE MTSA and each of the Projects.
- 85 As presented in Attachments VI and VIII, our research and analysis indicate that Ontario did not cause Mesa Power to originally make or ultimately forfeit the GE turbine deposit. Specifically, our analysis indicates that:
- a. The GE MTSA and deposit were originally made to supply a large Pampa Wind Farm project in Texas. This occurred before Mesa Power invested in Ontario.
  - b. After the Pampa project failed, Mesa Power sought to deploy the GE turbines by developing wind projects in the U.S. (Texas and Minnesota) and in Canada (Ontario).<sup>88</sup> Mesa Power’s three wind farms in the U.S. have had significant delays

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<sup>85</sup> Memorial, para. 507, p. 133.

<sup>86</sup> Deloitte Report, para. 4.1(b), p. 23. As Deloitte states: “... the claim related to Article 1106 relates to the Domestic Content Requirements imposed by Canada thereby increasing the capital and operating costs of the Projects, which we understand to be included in the claim for Articles 1102 and 1103, as discussed above. Such costs were considered to be incremental Economic Losses and were quantified based on the assumption that Mesa Power was not obligated to comply with the Domestic Content Requirements in the FIT program. Further, additional production was attainable using the 2.5XL turbine, thereby increasing revenue potential. We have also calculated the Economic Losses related to Article 1106 for the Base Case, Economic Development Adder and the Capacity Expansion separately.”

<sup>87</sup> Deloitte Report, para. 4.1 iv, p. 22.

<sup>88</sup> Two news press articles quote Mr. Mark Ward stating Mesa Power had two additional wind projects in development in Michigan and Missouri. However, we did not find any other information on the projects. See

and setbacks due to transmission problems, changing market fundamentals, and local opposition.

- c. After Mesa Power failed to obtain FIT Contracts on July 4, 2011, Mesa Power continued efforts to deploy the GE turbines at a project in Texas.
- d. The GE turbine deposit was forfeited over a year after Mesa Power failed to obtain FIT Contracts. The timing was not tied to the alleged violations in Ontario.

86 We do not find any evidence that Deloitte has evaluated these factors in its analysis of the damages to Mesa Power from the GE contract sunk costs (the forfeited deposit). Nevertheless, Deloitte assumes these damages were allegedly caused solely by the actions of Ontario and the OPA.

### GE 2.5XL Turbine Availability and Costs

87 The price and availability of the GE 2.5XL wind turbines under the First Amended MTSA (“Amended GE MTSA”) are important assumptions in the Deloitte analysis of future losses from the Domestic Content Requirements. The Deloitte analysis assumes that the GE 2.5XL turbine model was available,<sup>89</sup> but does not cite evidence that Mesa Power could, as a matter of fact, have substituted 2.5XL turbines for 1.6xle turbines and generated incremental value.

88 The Amended GE MTSA did not confirm the availability or pricing of the of 2.5XL wind turbines, and it specifically noted that the actual terms of sale were [REDACTED].” There is no basis to assume that the 2.5XL turbines were available at prices that would enable Mesa Power to generate additional value from the Projects. As presented in Attachment VII, our analysis indicates that:

- a. The Amended GE MTSA [REDACTED] states [REDACTED] [REDACTED] and that substitution of 2.5XL turbines for 1.6xle turbines will be [REDACTED].<sup>90</sup> Thus, the language of the Amended GE MTSA indicates that GE did not have 2.5XL turbines available in 2009 (the time the MTSA was signed) and merely “expected” to have them available in 2011. We have not seen any evidence of actual turbine availability or pricing offered to Mesa Power.

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BRG-022, Anderson Mark, “T. Boone Pickens' new Minnesota wind project hits resistance”, WindPower Monthly, April 16, 2010. <http://www.windpowermonthly.com/article/997272/t-boone-pickens-new-minnesota-wind-project-hits-resistance> (accessed December 16, 2013).

<sup>89</sup> Deloitte Report, paras. 4.15, 4.27, 4.62- 4.63, pp. 26, 42 and 43.

<sup>90</sup> C-0379, Amended GE MTSA [REDACTED], Attachment 1, Section 1A (d). The contract also states:

- b. Further, despite the stated “expectation” of 2.5XL turbine availability in 2011, the Second Amended MTSA (“Second Amended GE MTSA”) signed on [REDACTED] also did not guarantee availability of the larger turbines. In fact, the Second Amended GE MTSA has similar wording to the Amended GE MTSA, stating only that [REDACTED]  
[REDACTED]  
[REDACTED]
- c. We note that the Second Amended GE MTSA was signed over a year after the July 4, 2011 FIT Contract awards made clear that the Mesa Power Projects would not receive FIT Contracts,<sup>92</sup> which was chronologically the latest date of harm alleged by Mesa Power. We also know that in the second half of 2012, Mesa Power announced it would use the 1.6xle turbines to develop the Stephen-Bors wind farm in Texas.<sup>93</sup> Mesa Power chose to deploy the smaller turbines even in the Texas markets where Ontario’s Domestic Content rules did not apply. This suggests that the preferred larger turbines were either not available and/or not as economically beneficial as Deloitte assumes in its damages calculations.
- d. Finally, if it were true that the larger 2.5XL turbines had been available or more profitable to deploy than the smaller 1.6xle turbines, then there is no apparent reason why Mesa Power, as a profit-maximizing business, would not have instead sought to deploy the larger turbines at Stephen-Bors wind farm in Texas.

89 Deloitte did not reference any document in which GE committed to delivering a single 2.5XL turbine to Mesa Power at a specified price. [REDACTED]

[REDACTED]<sup>94</sup>

90 Deloitte’s turbine cost estimates are based on assertions by Mesa Power,<sup>95</sup> and have not been validated. The Engineering, Procurement and Construction (“EPC”) costs are based on questionable interpretations of Mortenson’s cost estimates<sup>96</sup> combined with speculative assumptions on the part of Deloitte (both as outlined in Attachment VII).<sup>97</sup>

91 To investigate this issue further we researched the utilization of GE 2.5XL turbines in North America during the time span in which Mesa Power pursued wind development activities in Ontario. We found that there were only two projects in North America that deployed these turbines before the end of 2012 and they both appear to have had project costs per

<sup>91</sup> C-0380, Letter from Carson Harkrader (GE Energy) to Mark Ward (Mesa), February 8, 2011, p. 8.

<sup>92</sup> C-0186, Letter from Mark Ward (Mesa) to Colin Andersen (OPA), July 4, 2011.

<sup>93</sup> 002110, Letter from Gary Elieff (GE) to Mark Ward (Mesa), October 18, 2012.

<sup>94</sup> C-0379, Amended MTSA, [REDACTED] Second Amended and Restated Master Turbine Sale Agreement between General Electric Company and Mesa Power Pampa, LLC, [REDACTED].

<sup>95</sup> C-0075, Letter from Lee A. Cole Robertson (Mesa) to Deloitte LLP, dated November 15, 2013

<sup>96</sup> C-0206, Mortenson Construction re Leader Resources Services Corp., Ontario Project Cost Summary for DC Impact, November 12, 2013.

<sup>97</sup> Deloitte Report, para. 4.15(b), p. 27.



kilowatt (“kW”) that were well above the Deloitte’s assumptions for the Mesa Power Projects. Our findings are presented in Attachment VII.

## 4 DELOITTE'S DAMAGES ANALYSIS

- 92 This chapter of the report presents our analysis of the damages methodology and calculations provided in the Deloitte Report. The Deloitte analysis makes several critical assumptions that are not identified, explained, or justified. The analysis conflates many assumptions and causal factors in a manner that prevents a clear understanding of the alleged causes of harm to Mesa Power that underpin Deloitte's damages analysis. To rectify this, we evaluate each assumption and cause of harm in isolation from other factors, prior to analyzing them in combination.
- 93 Building upon the analysis provided in Chapter 3, we evaluate the following aspects of the Deloitte Report:
- a. Overview: Deloitte's conceptual approach and results.
  - b. Causation: Assumptions about how the violations cause harm and damages.
  - c. Discount Rate: Assumptions about capital structure, cost of debt, cost of equity, and project risks.
  - d. Assumptions: Various industry-related and financial assumptions.
  - e. Conclusions: Primary conclusions regarding the Deloitte calculations and how they should be fixed.

### 4.1 Overview of Deloitte's Analysis and Results

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- 94 Deloitte was instructed to evaluate the damages associated with the alleged violation of various investment protection provisions of NAFTA.<sup>98</sup> Deloitte organized its analysis by the relevant NAFTA Chapter 11 articles pertaining to Canada's alleged liability for the alleged violations by Ontario. The Deloitte Report organizes damages calculations under two groupings of NAFTA Articles 1102, 1103, 1105, and 1106, each of which relates to a different type of alleged liability for violations of NAFTA provisions.
- a. The Article 1102, 1103, and 1105 damages analysis relate to the allegedly unfair and unequal treatment of Mesa Power Projects relative to other parties -- namely treatment under the GEIA and during the Bruce to Milton transmission line capacity allocation -- that is, the Connection Point Change Window process (relative to Boulevard Associates).<sup>99</sup>

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<sup>98</sup> Deloitte Report, para. 4.1, p. 23: "[T]here are several claims being made by Mesa Power under Articles 1102, 1103, 1105 and 1106 of the NAFTA. We have outlined the methodology and performed the calculations for each of the Articles"

<sup>99</sup> Deloitte Report, paras. 1.14- 1.27, pp. 8-12.

- b. The Article 1106 damages relate to the alleged additional capital and operating costs and lower revenue that would have been realized in the future as a result of the FIT Program's Domestic Content Requirements.<sup>100</sup> Deloitte's understanding was that the Article 1106 damages are included in the claims for Articles 1102/1103/1105.<sup>101</sup>
- 95 Confusingly, in Deloitte's analysis, the alleged Article 1102, 1103 and 1105 violations include damages allegedly caused by all three violations as a group, including:
- a. The GEIA Economic Development Adder and a so-called Capacity Expansion Option,
  - b. The Connection Point Change Window, and
  - c. The Domestic Content Requirements under Article 1106.<sup>102</sup>
- 96 To clarify Deloitte's approach, we present a breakdown of Deloitte's results in Figure 4, followed by a description of how Deloitte developed each of the line item results.
- 97 Deloitte's analysis of the future losses to Mesa Power is based on a DCF analysis<sup>103</sup> of a Base Case Scenario.<sup>104</sup> Deloitte adds alleged sunk costs, including past development costs<sup>105</sup> and the GE turbine deposit forfeiture,<sup>106</sup> to the damages estimated from the DCF for the future losses.
- 98 In calculating 100 percent of damages for the Mesa Power Projects, Deloitte implicitly assumes that the Projects were completely impaired (i.e., worth nothing) because they did not receive FIT Contracts.

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<sup>100</sup> Deloitte Report, para. 4.62, p. 42.

<sup>101</sup> Deloitte Report, para. 4.1, p. 23.

<sup>102</sup> Deloitte Report, para. 1.16, pp. 8-9.

<sup>103</sup> DCF analysis involves the evaluation of discounted, expected free cash flows available each year over an assumed operating time horizon.

<sup>104</sup> Deloitte Report, para. 4.4, p. 24.

<sup>105</sup> Deloitte Report, para. 4.1, p. 23. Deloitte refers to Past Costs as "the Economic Losses relating to all development costs incurred by Mesa Power in relation to preparing the Projects for commercial operation."

<sup>106</sup> Deloitte Report, para. 4.12, p. 26.

Figure 4: Deloitte Summary Damages<sup>107</sup>

CAD 000s Low High			
NAFTA 1102/1103/1105	Low	High	Midpoint
Base Case	303,000	345,000	324,000
Economic Development Adder	20,000	22,000	21,000
Capacity Expansion	33,000	38,000	35,500
Economic Development Adder applicable to Capacity Expansion	2,000	2,000	2,000
Past costs incurred	8,100	8,100	8,100
General Electric deposit forfeited	156,833	156,833	156,833
NAFTA 1106 (below)	101,200	111,300	106,250
<b>Total NAFTA 1102/1103/1105</b>	<b>624,133</b>	<b>683,233</b>	<b>653,683</b>
NAFTA 1106			
Base Case	91,000	100,000	95,500
Economic Development Adder	1,000	1,000	1,000
Capacity Expansion	9,000	10,000	9,500
Economic Development Adder applicable to Capacity Expansion	200	300	250
<b>Total NAFTA 1106</b>	<b>101,200</b>	<b>111,300</b>	<b>106,250</b>

- 99 Deloitte divides the damages for Articles 1102/1103/1105 into several components:
- a. **Base Case:** Damages equal future losses for all four Mesa Power Projects assuming standard FIT Contract terms and utilization of the 1.6xle turbines. The Base Case also assumes the four Mesa Power Projects would have received the prioritization given to the KC under the GEIA. That prioritization is reflected in lower discount rates<sup>108</sup> and priority transmission access and FIT Contracts for all Projects, including North Bruce and Summerhill despite their low FIT rankings.<sup>109</sup>
  - b. **Economic Development Adder:** Damages equal the incremental future losses (above the Base Case) allegedly caused because the Mesa Power Projects did not receive the Economic Development Adder of 0.27 cents per kWh provided to the KC under the terms of the GEIA.<sup>110</sup> The rest of the assumptions are consistent with the Base Case, including lower discount rates, priority transmission and FIT Contracts, and the 1.6xle turbines for all four of the Projects.
  - c. **Capacity Expansion Option:** Damages equal the incremental future losses (above the Base Case) allegedly caused because the Mesa Power Projects could have been 10 percent larger than originally planned, as supposedly provided to the KC under

<sup>107</sup> Deloitte Report, p. 13. Midpoint damages from Schedule 1A.

<sup>108</sup> Deloitte Report, para. 4.54, p. 40.

<sup>109</sup> Deloitte Report, para. 4.6, p. 25.

<sup>110</sup> Deloitte Report, para. 4.1, p. 22.

the GEIA,<sup>111</sup> (even though it appears that Deloitte has misinterpreted what this option actually provided under the GEIA).<sup>112</sup> The so-called Capacity Expansion option was represented by increasing Mesa Power Projects' capacity by 10 percent and proportionally scaling their revenues, operating costs, capital costs and financing costs<sup>113</sup> (even though this appears to be based on an incorrect understanding of how the GEIA option worked). The rest of the assumptions are consistent with the Base Case, including lower discount rates, priority transmission and FIT Contracts, and the 1.6xle turbines for all four of the Projects.

- d. **Economic Development Adder Applicable to the Capacity Expansion Option:** Damages equal the future losses from the Mesa Power Projects not receiving the 0.27 cents per kWh economic development adder on the so-called Capacity Expansion Option, as supposedly would be allowed under the terms of the GEIA.<sup>114</sup> The rest of the assumptions are consistent with the Base Case, including lower discount rates, priority transmission and FIT Contracts, and the 1.6xle turbines for all four of the Projects.
- e. **Past Costs Incurred:** Damages equal all development costs actually incurred by Mesa Power to develop the Projects.<sup>115</sup>
- f. **General Electric Deposit Forfeited:** Damages equal the entire GE turbine deposit.<sup>116</sup>
- g. **NAFTA 1106:** The Article 1106 damages equal the incremental future losses that would result from using 2.5XL turbines (instead of the 1.6xle turbines). Deloitte understood that Mesa Power would have preferred to use 2.5XL turbines, but that GE could not guarantee they would meet the Domestic Content Requirements of the FIT Program.<sup>117</sup> The rest of the assumptions are consistent with the Base Case, but also include Economic Development Adder, the so-called Capacity Expansion Option, and the Economic Development Adder on the so-called Capacity Expansion Option.<sup>118</sup>

100 Deloitte also presents damages for Article 1106 in a separate section of the table for alleged violations of Article 1102/1103/1105. This section of the table breaks down the components of the Article 1106 damages that correspond to the Base Case assumptions

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<sup>111</sup> Deloitte Report, para. 4.1, p. 22.

<sup>112</sup> C- 0322, Green Energy Investment Agreement (GEIA) between Ontario, KEPCO and Samsung C&T, January 21, 2010, art. 3.4.

<sup>113</sup> Deloitte Report, paras. 4.13 – 4.14, p. 26.

<sup>114</sup> Deloitte Report, para. 4.1, p. 22.

<sup>115</sup> Deloitte Report, para. 4.1, p. 22.

<sup>116</sup> Deloitte Report, para. 4.1, p. 22.

<sup>117</sup> Deloitte Report, para. 4.15, p. 27.

<sup>118</sup> Deloitte provides a further subdivision of the NAFTA 1106 damages as they relate to the individual terms of the standard FIT Contract and GEIA.

and incremental damages for the Economic Development Adder, the so-called Capacity Expansion Option, and the Economic Development Adder on the so-called Capacity Expansion Option.

- 101 Combined with Deloitte’s statement that “we have separately quantified the Economic Losses related to Article 1106,”<sup>119</sup> the separate presentation of Article 1106 damages could suggest that they can be considered on a standalone basis and are not contingent on any other alleged violations. However, that is not the case because they are in fact contingent on assumptions about the appropriate treatment of the Mesa Power Projects that have nothing to do with the Domestic Content Requirements. Deloitte’s calculation of Article 1106 damages assumes that all four Mesa Power Projects should all have received the priority transmission access, FIT Contracts, and other favorable terms provided to the KC by the GEIA. Therefore, Deloitte’s Article 1106 damages cannot be considered on a standalone basis.

#### 4.2 Inaccurate Causation

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- 102 The Deloitte Report’s organization by NAFTA Article and form of liability clouds the relationship between Canada’s alleged liability, the ways in which Ontario allegedly caused harm to Mesa Power, and ultimately the applicable damages for each form of harm caused. In the Deloitte Report, it is not clear how Deloitte thinks each alleged violation caused harm to Mesa Power and, therefore, how damages should be calculated. Deloitte’s analysis tends to conflate the alleged violations with sweeping assumptions about how the violations impacted the Mesa Power Projects as a group.<sup>120</sup>
- 103 As a result, Deloitte’s approach prohibits analysis of damages under different scenarios for Canada’s liability for the alleged violations of NAFTA. Depending on the conclusions reached on liability by the Tribunal, Deloitte’s all-or-nothing approach to evaluating causation is potentially unhelpful to assigning damages.
- 104 In this section, we evaluate Deloitte’s approach to causation. This forms important background for our analysis of applicable damages in Chapter 5.

#### The GEIA Terms are the Primary Cause of Harm for All Scenarios

- 105 In the Base Case and all future loss scenarios Deloitte’s damage calculations assume that the Mesa Power Projects were entitled to receive terms and conditions for wind power transmission and sales that were similar to those provided to the KC under the GEIA,<sup>121</sup>

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<sup>119</sup> Deloitte Report, para. 1.23, p. 11.

<sup>120</sup> Deloitte Report, para. 1.17, 1.21, 4.6, pp. 9, 10,11 and 25.

<sup>121</sup> Deloitte Report, para. 4.18 (a), p. 28

thereby rendering all of the Mesa Power Projects as late-stage pipeline projects.<sup>122</sup> Therefore, Deloitte assumes the Projects should have received FIT Contracts with online dates as specified in their FIT applications.<sup>123</sup>

***Base Case Assumptions***

106 Deloitte makes a variety of assumptions regarding Mesa Power's alleged entitlement to features of the GEIA transaction. These include:

- a. All Mesa Power Projects would have received FIT Contracts because all the Mesa Power Projects were entitled to same priority treatment terms provided to the KC in the Amended GEIA.<sup>124</sup>
- b. Therefore, the CODs assumed for the Mesa Power Projects would mirror the CODs set for the KC's projects.<sup>125</sup> For TTD and Arran, Deloitte assumes the CODs for the KC's phase 1 projects. For Summerhill and North Bruce, Deloitte assumes the CODs for the KC's phase 2 projects. The two phases of the KC projects were specified in the Amended GEIA.<sup>126</sup>
- c. All Domestic Content Requirements of the FIT Contract are assumed to be satisfied.<sup>127</sup> Deloitte's Base Case Scenario assumes the use of the GE 1.6xle turbines, which in Deloitte's view, is the only way that Mesa Power could have complied with the Domestic Content Requirements.<sup>128</sup> (Presented separately, Deloitte's analysis of damages from Domestic Content Requirements presumes that Mesa Power would have used the GE 2.5XL turbines but for the Domestic Content Requirements of the FIT Program.)<sup>129</sup>

107 These assumptions are not consistent with the notion of a Base Case foundation for all damages analysis because they are built on the application of key terms of the GEIA to Mesa Power. If the GEIA is not found to be a violation of NAFTA, then Deloitte's Base Case and all scenarios would be rendered irrelevant.

108 Further, assuming and quantifying Mesa Power's entitlement to the GEIA terms is not appropriate as an approach to damages. The approach to damages evaluation should not be to extend the violation to Mesa Power, but rather to correct the harm caused to Mesa Power.

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<sup>122</sup> Deloitte Report, para. 4.71, p. 44.

<sup>123</sup> Deloitte Report, para. 4.1(a)(iv), p. 22.

<sup>124</sup> Deloitte Report, para. 4.18 (a), p. 25.

<sup>125</sup> Deloitte Report, paras. 4.18 (d), 4.21 – 4.23, pp. 28-30.

<sup>126</sup> Deloitte Report, para. 4.21, p. 30.

<sup>127</sup> Deloitte Report, para. 4.1, p. 22.

<sup>128</sup> Deloitte Report, para. 4.15, pp. 26-27.

<sup>129</sup> Deloitte Report, para. 4.62, p. 42.

- 109 If the terms of the GEIA are determined to be a violation of NAFTA, the harm caused to Mesa Power, if any, came from the priority allocation of 500 MW of transmission capacity to the KC. As we concluded Attachment III, the relevant impacts, if any, were that:
- a. For TTD and Arran, their favorable position in the queue for transmission capacity was jeopardized and, therefore, they lost the opportunity to obtain FIT Contracts, complete development, and potentially earn returns.
  - b. For the Summerhill and North Bruce Projects, they were not in position to receive FIT Contracts and, therefore, there was no harm caused to them. (The Deloitte Report wrongly assumed that if the GEIA were considered a violation of NAFTA, then Mesa Power should have received the same treatment as the KC and would have received FIT Contracts).<sup>130</sup>
- 110 Finally, Deloitte's assumption that Mesa Power was entitled to the GEIA terms overlooks two critical points:
- a. First, Deloitte's analysis attributes to Mesa Power all of the GEIA economic benefits, but Deloitte does not recognize or calculate any costs related to the GEIA's obligations for investing in manufacturing facilities, and contributing to economic development (as discussed in Section 3.4). We could not identify any section in the Deloitte Report or damages calculation spreadsheets where Deloitte assumes that Mesa Power should also have assumed obligations similar to those borne by the KC under the GEIA. This oversight leads to unsound reasoning that lacks commercial foundation. In the real world of energy transactions and trade, such one-sided deals are rarely available.
  - b. Second, Deloitte does not consider that if Mesa Power were entitled to all of the foregoing GEIA economic benefits for wind power investments, then it follows that all FIT Program applicants, and not only Mesa Power, should have also enjoyed these same benefits. Ontario's ability to pay development adders and provide priority transmission resources are finite and could not be provided to all Program applicants. If all wind project FIT applicants were provided priority transmission access and the Economic Development Adder, that would imply FIT Contracts for 8,700 MW of wind throughout the province, with estimated FIT payments of \$3.7 billion per year.<sup>131</sup> All 8,700 MW of FIT wind capacity could not physically or economically be provided with priority access to the Ontario transmission grid.<sup>132</sup>

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<sup>130</sup> Deloitte Report, para. 4.6, p. 25.

<sup>131</sup> 8,700 MW of wind, applying for FIT Contracts, is sourced from [1]: C-0400, Ontario Power Authority, FIT Contracts Offered by Legal Applicant Name, April 8, 2010. [2]: BRG-033, Ontario Power Authority, Feed-in Tariff Program, FIT Contract Offered February 24 – Applicant Legal Name Order, February 24, 2011. Available online at: [http://fit.powerauthority.on.ca/Storage/11216\\_FIT\\_Contract\\_Awards\\_-\\_Final\\_List\\_-\\_February\\_24,\\_2011.pdf](http://fit.powerauthority.on.ca/Storage/11216_FIT_Contract_Awards_-_Final_List_-_February_24,_2011.pdf)



### *The Assumed GEIA Adders*

- 111 To the Base Case Scenario, Deloitte adds additional scenario results to reflect additional provisions of the GEIA transaction to which Mesa Power was allegedly entitled, namely:
- a. The Economic Development Adder,
  - b. The so-called Capacity Expansion Option,<sup>133</sup> and
  - c. The Economic Development Adder applicable to the so-called Capacity Expansion Option (i.e., the application of these two aspects of the GEIA deal applied to Mesa Power in combination).<sup>134</sup>
- 112 For the same reasons noted above, it is inappropriate to quantify damages for the Economic Development Adder and/ or so-called Capacity Expansion Option provided to the KC under the GEIA. An appropriate damages evaluation should not extend the alleged violation to Mesa Power, but rather correct the harm it caused if any. These adders themselves did not harm Mesa Power. Only the transmission allocation could have impacted Mesa Power.

### **Unclear If and How the Connection Change Point Window Caused Harm**

- 113 In addition to assuming that all of the Mesa Power Projects should have received all the wind power generation and transmission terms offered in the GEIA, the Deloitte Report also assumes that the June 3, 2011 Ministerial Direction with respect to the Connection Point Change Window -- the “New Rules” as the Deloitte Report calls them – play a central role causing harm to Mesa Power.<sup>135</sup>
- 114 Deloitte’s summary of the FIT Program implies that the Bruce to Milton transmission line capacity allocation (which included the Connection Point Change Window) caused harm

[3]: C-0233, FIT CAR Priority Ranking by Region, February 24, 2011.

The cost estimate is: 8,700 MW \* 8,760 hours per year \* 30 percent capacity factor \* \$162 per MWh FIT price = \$3.7 B per year. The FIT price includes \$27 per MWh for the Economic Development Adder.

<sup>132</sup> We focus on the wind farms for the illustrative capacity and FIT payment numbers. Including other renewable technologies, this would imply about 12,000 MW of capacity and higher FIT payments. We do not include this calculation because it is more difficult to estimate the capacity factors of biopower and hydropower projects.

<sup>133</sup> On this point, we note that the so-called Capacity Expansion Option is valuable because of its inherent flexibility and that simply calculating the increase in value associated with a 10 percent larger value is not the correct approach. For example, if there are gains in construction efficiency and therefore installed costs are reduced, there may be considerable value in the so-called Capacity Expansion Option. Alternative market conditions might reduce or negate this value. Simplistically assuming that every project in the FIT Program ought to be 10 percent larger is flatly illogical and an incorrect application of valuation principles.

<sup>134</sup> Deloitte Report, para. 4.64, p. 43.

<sup>135</sup> Deloitte Report, paras. 1.2 – 1.4, pp. 5-6.

and led to the forfeiture of the GE turbine deposit,<sup>136</sup> but Deloitte does not clearly establish the linkage for sunk costs or future losses. As far as we can tell, Deloitte does not offer a clear explanation for how the Connection Point Change Window harmed Mesa Power.

115 Therefore, it is not clear what Deloitte's damages analysis would be if only the Connection Point Change Window were considered to be in violation of NAFTA. Deloitte would presumably have to adjust its damages analysis to remove the benefits of the GEIA assumed for all damages.

116 As addressed in Section 3.4 and Attachment IV to this Report, the June 3, 2011 Ministerial Direction could have only caused harm to TTD and Arran and rendered no impact on the Summerhill and North Bruce Projects. Unlike TTD and Arran, Summerhill and North Bruce would not have received FIT Contracts even if the Connection Point Change Window had not occurred. Therefore, these Projects were not harmed and are not eligible for damages due to the Connection Point Change Window.

#### Unclear If and How the Domestic Content Requirements Caused Harm

117 The Deloitte Report does not clearly identify whether Deloitte thinks Ontario's Domestic Content Requirements caused harm on their own, or only in conjunction with other violations, and is rather confusing on this point.<sup>137</sup> The Deloitte analysis of damages caused by the Domestic Content Requirements assumes that the Mesa Power Projects would have also been harmed by the other violations and should have received the GEIA economic development adder, the so-called Capacity Expansion Option, the economic development adder on the so-called Capacity Expansion Option, and priority transmission access.<sup>138</sup>

118 Therefore, it is not clear what Deloitte's damages analysis would be if only the Domestic Content Requirements were considered to be in violation of NAFTA. Deloitte would presumably have to adjust its damages analysis to remove the benefits of the GEIA assumed for all damages.

119 Further, it is not clear that Ontario's Domestic Content Requirements actually caused any harm to Mesa Power. As discussed in Section 3.6 and Attachment VII, Deloitte assumes that Mesa Power would have been able to obtain the 2.5XL turbines under the GE MTSA.<sup>139</sup> Deloitte states that the only reason these turbines could not be used in Ontario was due to the Domestic Content Requirements.<sup>140</sup> However, neither Mesa Power nor Deloitte have produced evidence that Mesa Power could have actually obtained and substituted the

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<sup>136</sup> Deloitte Report, paras. 1.2 – 1.6, pp. 5-6.

<sup>137</sup> Deloitte Report, para. 4.1 b, p. 23.

<sup>138</sup> Deloitte Report, para. 4.15 (d) and (e) and 4.64, pp. 27, 43.

<sup>139</sup> Deloitte Report, para. 2.21, 4.15, pp. 20, 26-27

<sup>140</sup> Deloitte Report, para. 4.62, p. 42

2.5XL turbines for the 1.6xle turbines it had agreed to purchase under the Amended GE MTSA.

- 120 Even if Mesa Power could have purchased the 2.5XL turbines, it is not clear that utilization of those turbines would have been available at a cost, or with the level of energy production, that would have allowed Mesa Power to increase the value of the Mesa Power Projects. For reasons explained in Section 3.6 and Attachment VII, Deloitte does not have reliable estimates for the costs associated with the 2.5 XL turbines.
- 121 In the absence of more reliable information on the availability, installed cost, and performance of the GE 2.5XL turbines, it would be speculative to conclude that the Domestic Content Requirements would have caused incremental economic harm to Mesa Power, or to attempt to quantify the applicable damages.
- 122 Nevertheless, Deloitte does just that. Its damages analysis estimated the incremental cash flows associated with using 2.5XL GE turbines instead of the 1.6xle GE turbines based on a series of speculative assumptions (as discussed below in Section 4.4 ) in addition to those discussed above.
- 123 To test the sensitivity of Deloitte’s analysis to critical assumptions, we performed an alternative analysis with various risk scenarios for the installed cost of turbines. As presented in Attachment VII, our research and analysis indicate that the availability and/or cost of the 2.5XL turbines may have prevented Mesa Power from capturing additional value from their utilization.

### Deloitte Conflates the Alleged Violations and their Impacts

- 124 The Deloitte Report does not establish the relationship between each alleged violation, the harm caused to Mesa Power, and the calculation of damages to reflect that harm. Instead, Deloitte’s damages analysis conflates the primary causes of harm and how they impacted Mesa Power. Deloitte evaluates both the violations and their impacts on the Projects only in the aggregate. Deloitte assumes that due to the combined impact of the alleged violations, all of the Mesa Power Projects should have received FIT Contracts.<sup>141</sup>
- 125 For the alleged violations, the Deloitte Report does not clearly evaluate or explain:
- a. If and how as a group they caused harm and led to damages suffered by Mesa Power,
  - b. If and how each individually caused harm if the others are not considered violations of Canada’s NAFTA treaty obligations, and

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<sup>141</sup> Deloitte Report, para. 4.6, p. 25.

- 126 Rather than analyzing how each project was harmed individually, Deloitte assumes they were all impacted equally and treats them as a group. Specifically, Deloitte states the assumption that “[a]lthough Summerhill and North Bruce were ranked below the 750MW available capacity for the Bruce Region, had the aforementioned Projects been given the same treatment as the KC, they would have also been provided FIT Contracts.”<sup>142</sup>
- 127 To provide a clear analysis of how each alleged violation could have caused harm to Mesa Power, we evaluate the impact of each cause of harm on each one of the Mesa Power Projects. Our analysis is detailed in Attachment IV and yields the following conclusions:
- a. If the GEIA and/or the Connection Point Change Window are considered violations of Canada’s NAFTA treaty obligations, then the alleged violations could have harmed Mesa Power by preventing the TTD and Arran from being awarded FIT Contracts they would have otherwise received.
  - b. Under no scenario for individual or combined violations of NAFTA would there have been any impact or harm caused to Mesa Power’s Summerhill and North Bruce Projects. Without the alleged violations – individually or in any combination – Summerhill and North Bruce would not have received FIT Contracts.
  - c. Considered alone, the Domestic Content Requirements did not cause any harm because, unless another violation is assumed, none of the Mesa Power Projects would have received FIT Contracts but for the single violation.
  - d. In combination with the other alleged violations, the Domestic Content Requirements could have harmed Mesa Power by potentially increasing future losses for TTD and Arran (only). However, this would only be true to the extent that the Domestic Content Requirements violation caused wind farm design and turbine selection choices with higher capital costs, higher operating costs, and/or lower energy output. There is no evidence that this was, in fact, the case.

### **Inaccurate Causation for GE Turbine Deposit**

- 128 Deloitte assumes that the alleged violations by Ontario and the OPA were solely responsible for the Claimant’s loss of a deposit for the GE turbines<sup>143</sup> because the Mesa Power Projects should have allegedly received the GEIA terms and FIT Contracts.<sup>144</sup> Deloitte concludes that the Claimant is entitled to damages for the entirety of the GE turbine deposit.
- 129 This is unrealistic. As discussed in Section 3.6, the GE turbines were originally purchased for Mesa Power’s Pampa wind farm in Texas and, over time, were intended to supply other

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<sup>142</sup> Deloitte Report, para. 4.6, p. 25.

<sup>143</sup> Deloitte Report, para. 4.12, p. 26.

<sup>144</sup> Deloitte Report, paras. 1.17, 4.18, pp. 9, 28.

projects in Minnesota, Texas, and Ontario. As analyzed in Section 3.6 and covered at length in Attachment VI, Mesa Power entered the GE agreement and paid the GE deposit prior to becoming engaged in Ontario, the turbines were originally intended for use in wind farms outside of Ontario, and the turbines were allocated to U.S. projects after Mesa Power failed to get FIT Contracts in Ontario.

- 130 Therefore, it is inappropriate for Deloitte to allocate to Mesa Power 100 percent of the sunk costs for the turbine deposit. Deloitte has not explained why it does so.

### 4.3 Optimistic Discount Rate

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- 131 The Deloitte damages analysis is based on a very optimistic, unrealistic discount rate that doesn't properly reflect the true risks involved in developing and financing the Mesa Power Projects.

### Capital Structure and Cost of Debt Assumptions

- 132 The Deloitte Report assumes a capital structure for the Mesa Power Projects consisting of 80 percent debt and 20 percent equity.<sup>145</sup> This is a reasonable assumption that would be consistent with industry expectations.<sup>146</sup> The debt principal is amortized over a period of 18 years.<sup>147</sup> We also consider this assumption to be a maximum reasonable figure. Debt to equity ratios and loan tenors are frequently below these assumptions.

- 133 Deloitte assumes Mesa Power's costs are capitalized by the following three sources:
- a. A term loan covers [REDACTED] of construction costs. Deloitte assumes the interest rate would be [REDACTED].<sup>148</sup>
  - b. A loan from the U.S. Ex-Im Bank covers [REDACTED] of construction costs. Deloitte assumes the interest rate would be [REDACTED].
  - c. Equity from Mesa Power covers [REDACTED] of construction costs and [REDACTED].  
[REDACTED] Deloitte assumes the initial cost of equity is between [REDACTED].

- 134 The interest rate assumed for the term loan appears to be reasonably consistent with industry estimates at the time.<sup>151</sup>

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<sup>145</sup> Deloitte Report, para. 4.41(a), p. 37.

<sup>146</sup> BRG-006, Scotia Capital, « Alternative & Renewable Energy Crunching the Numbers on Ontario's Proposed Feed-In Tariff Program », Scotia Equity Research Industry Report, April 2009.

<sup>147</sup> Deloitte Report, para. 4.41 (c), p. 37.

<sup>148</sup> Deloitte Report, para. 4.41 (c), p. 37.

<sup>149</sup> Deloitte Report, para. 4.41 (b), p. 37.

<sup>150</sup> Deloitte Report, para. 4.55, p. 41.

- 135 Deloitte’s assumption that Mesa Power could have obtained U.S. Ex-Im Bank financing is speculative, however. The assumption is based on “a letter of intent indicating they [Ex-Im Bank] were interested in financing Mesa Power’s Projects.”<sup>152</sup> The letter indicated the annual interest rate on the loan would be 3.66 percent, but Deloitte “increased the interest rate to 4.75% to reflect the risk of obtaining the interest rate the Ex-Im Bank quoted.”<sup>153</sup>
- 136 However, the only document Deloitte cites to support this assumption is a letter from the Ex-Im Bank expressing a potential interest in TTD (only).<sup>154</sup> Therefore, the Deloitte statement above that the letter indicated interest in the Mesa Power Projects is misleading. It may also be at odds with the facts because we have not been able to find any evidence that any Mesa Power Project other than TTD was a candidate for an U.S. Ex-Im Bank loan.
- 137 Further, even TTD did not have a guarantee of financing from the U.S. Ex-Im Bank. The letter explicitly states that “this Letter of Interest does not, in and of itself, constitute a commitment.”<sup>155</sup>
- 138 We further analyze the U.S. Ex-Im bank financing assumptions in Attachment IX. Our analysis indicates that the letter from the U.S. Ex-Im Bank does not comport with Deloitte’s project cost assumptions in two principal respects:
- a. U.S. Ex-Im Bank had requirements for a minimum level of U.S. content to be financed that seem to be inconsistent with the Ontario rules for Domestic Content.
  - b. Deloitte’s estimate of construction costs for TTD is 15 percent, or \$52 million, lower than the costs indicated in the U.S. Ex-Im Bank letter,<sup>156</sup> casting doubts on one or both of Deloitte’s capital cost assumptions and the seriousness of the U.S. Ex-Im Bank financing discussion.
- 139 The discrepancies between Deloitte’s assumptions and U.S. Ex-Im Bank statements and requirements cast doubt on Deloitte’s assumed cost of debt. It is not clear that TTD could actually have obtained U.S. Ex-Im Bank financing and there is no basis to assume the other Projects were in line for U.S. Ex-Im financing. Therefore, Deloitte’s capital structure and cost of debt analysis is speculative and probably too optimistic.

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<sup>151</sup> BRG-006, Scotia Capital, “Alternative & Renewable Energy Crunching the Numbers on Ontario’s Proposed Feed-In Tariff Program,” Scotia Equity Research Industry Report, April 2009.

<sup>152</sup> Deloitte Report, para. 4.41, p. 37.

<sup>153</sup> Deloitte Report, para. 4.41, p. 37.

<sup>154</sup> C-0377, Letter from Barbara A. O’Boyle (Export-Import Bank of the United States) to Steven W. Howlett (GE Capital Markets Corporate), September 23, 2010 .

<sup>155</sup> C-0377, Letter from Barbara A. O’Boyle (Export-Import Bank of the United States) to Steven W. Howlett (GE Capital Markets Corporate), September 23, 2010 .

<sup>156</sup> Deloitte Report, Appendix C, para. C.13: “The exchange rate is expected to average C\$0.99: US\$1.00 from 2011 to 2015.”

### Cost of Equity Capital Assumptions and Adjustments

- 140 The Deloitte Report overlooks accounting for the development and completion risks faced by the Mesa Power Projects. The Mesa Power Projects were not going concerns in a low-risk environment, but rather relatively high risk, mid-stage development projects in a dynamic industry environment. Furthermore, as covered in Attachment VIII, they were led by a small company with a poor track record with wind project development in the U.S. There are no grounds to moderate the risks involved in these ventures. Deloitte's estimate of Mesa Power's cost of equity capital is based on a traditional Capital Asset Pricing Model ("CAPM") analysis, modified to reflect company, country, and company size specific risks.<sup>157</sup> CAPM analysis is a correct starting point for estimating cost of equity capital, but we question certain aspects of Deloitte's methodology.
- 141 Under the CAPM, comparable, publicly traded companies are analyzed to arrive at an estimate of a company's systemic risk. This measure of risk is known as Beta. All things being equal, higher Beta values translate into higher costs of equity reflecting the fact that investors must be compensated for incurring greater investment risk. The higher cost of equity, in turn, results in a lower project valuation.
- 142 Deloitte did not disclose or describe its methodology for picking the comparable companies on which it based its CAPM analysis. The Deloitte Report only states that Deloitte "selected publicly-traded companies in the same or similar business as that of the Company."<sup>158</sup> The list of companies provided is very short (only 6 companies) and these are skewed heavily towards European companies.<sup>159</sup> There is only one North American company (Innergex Renewable Energy Inc.), although two of the foreign companies (PNE Wind AG and Infigen Energy) operate in North America. The remaining three companies (Energiekontor AG, Arise AB, and THEOLIA S.A.) do not appear to operate in North America at all.
- 143 It is unusual to weight a list of comparable companies so heavily towards firms that operate in a different geography (in this case, another continent) than the firm being valued, and it is well-known in the wind industry that geographic variables can have a material impact on valuation.<sup>160</sup>
- 144 Deloitte makes three adjustments to the cost of equity included in its CAPM analysis that are speculative and/or based on a combination of weak evidence and erroneous calculations. They can be described as very optimistic in light of Mesa Power's specific

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<sup>157</sup> Deloitte Report, paras. 4.44-4.46, p.38.

<sup>158</sup> Deloitte Report, para. 4.54, p. 40.

<sup>159</sup> Deloitte Report, para. 4.72, p. 45

<sup>160</sup> BRG-037, Deloitte, "Valuing wind farm developers", August, 2011, p. 14.

[https://www.deloitte.com/assets/Dcom-Sweden/Local%20Assets/Documents/se\\_deloitte\\_wind\\_energy\\_analyse\\_aug2011.pdf](https://www.deloitte.com/assets/Dcom-Sweden/Local%20Assets/Documents/se_deloitte_wind_energy_analyse_aug2011.pdf) (Accessed February 24, 2014)

operations and unproven track record. These are outlined below, and we offer corrections in our damages analysis in Section 5.5.

- a. **Size Risk Premium:** The first adjustment is to add a size premium. The size premium reflects the fact that small companies yield “returns in excess of that which is appropriate for their systemic risk.”<sup>161</sup> In plain English, this means the CAPM systematically overvalues small companies and, therefore, an adjustment must be made to account for this shortcoming. Deloitte uses “a size premium of 1.85% based on the Ibbotson & Associates Risk Premium report – 2010 Yearbook, Low-Cap (6-8).”<sup>162</sup> As explained in greater detail in Section 5.5, Mesa Power falls into the smallest category of Micro-Cap (9-10) companies, and should actually have a size premium of at least 4.91 percent and as high as 12.06 percent.
- b. **Company Specific Risk Premium:** Deloitte’s second adjustment was to reduce the cost of equity by a substantial 3.0 percent. There is no basis for this optimistic assumption. Deloitte offers no evidence or analysis for this adjustment, but rather offers only a qualitative explanation of the relative security of the GEIA and FIT Program Contracts. Deloitte then modestly increases the cost of equity for North Bruce and Summerhill by 0.25 percent to reflect production uncertainty for those two farms.<sup>163</sup> These adjustments have the net impact of increasing the valuation of each Mesa Power Project.
- c. **Country Risk Premium:** Finally, Deloitte made a “country risk adjustment of approximately negative 0.8 percent based on Ibbotson & Associates International Cost of Capital (2010).”<sup>164</sup> This adjustment results in a lower discount rate and a higher valuation for the Mesa Power Projects. However, as discussed in Chapter 5 this is a very speculative assumption. Several methodologies suggested by authoritative sources suggest that Canada’s country risk adjustment should be neutral or even positive, which would decrease damages.

145 With respect to the size premium and FIT Program security adjustments, Deloitte’s analysis is premised on a series of speculative and highly optimistic assumptions. These assumptions are unrealistic about the lack of risk involved with a small, untested company completing the development, financing, construction, and successful operation of the Mesa Power Projects.

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<sup>161</sup> BRG-012, Ibbotson, S. B. B. I. "Valuation Yearbook." Market Results for Stocks, Bonds, Bills, and Inflation 2010 (1926), p. 91.

<sup>162</sup> Deloitte Report, para. 4.54, p. 40.

<sup>163</sup> Deloitte Report, para. 4.54, p. 40.

<sup>164</sup> Deloitte Report, para. 4.54, p. 40.



### Cost of Equity Capital Risks for Development Projects

- 146 Deloitte casts the Projects as late-stage development projects with a high degree of revenue certainty.<sup>165</sup>
- 147 We do not agree with Deloitte's conclusion that the Mesa Power Projects were late-stage projects with little risk to revenue. The main risks would be encountered before the start of commercial operation. Even if they had received FIT Contracts, all four of the Mesa Power Projects confronted significant development and operational risks that are not addressed in Deloitte's analysis of the cost of capital and discount rate for DCF analysis. As summarized below (and further outlined in Section 3.5 and Attachment VIII), the projects were at a middle stage of development and still had significant risks. This is an important distinction for valuation because the valuation of projects that have permits and/or construction pending is very low compared to late-stage projects.<sup>166</sup>
- 148 We do agree with Deloitte that the revenue outlook for TTD and Arran would be relatively reliable after the start of commercial operation:
- a. Had these projects obtained FIT Contracts, they would not have faced significant long-term price risks due to the stable nature of the FIT Contracts. However, regulatory and commercial risks related to power sales are also common in the wind industry and renewable energy contracts with high prices have been subject to regulatory change throughout North America and Europe.
  - b. Aside from curtailments, other risks to sales quantities would have been tied to the inherently meteorological and statistical nature of wind energy production. Wind farm output can vary substantially on a seasonal basis, moderately from year to year, and is relatively predictable on a 10-year average basis. Nonetheless, long-term energy output can be more or less than expected.

### Development and Financing Risks

- 149 All four of the Mesa Power Projects faced significant development and financing hurdles prior to commercial operations, as addressed below. The largest component of risk resided in the REA process due to evidence of significant local community opposition,<sup>167</sup> but there were also important financing and construction risks on the horizon.

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<sup>165</sup> Deloitte Report, para. 4.71, p. 44.

<sup>166</sup> BRG-037, Deloitte, "Valuing wind farm developers", August, 2011, p. 9.  
[https://www.deloitte.com/assets/Dcom-Sweden/Local%20Assets/Documents/se\\_deloitte\\_wind\\_energy\\_analyse\\_aug2011.pdf](https://www.deloitte.com/assets/Dcom-Sweden/Local%20Assets/Documents/se_deloitte_wind_energy_analyse_aug2011.pdf) (Accessed February 24, 2014)

<sup>167</sup> BRG-054, The Peterborough Examiner, Asphodel-Norwood wind turbines cancelled, April, 2013,  
<http://www.thepeterboroughexaminer.com/2013/04/02/asphodel-norwood-wind-turbines-cancelled>,

150 TTD was the Project most advanced toward commencement of commercial operations at the time of harm. Arran was not as far along, having more of the requisite REA components standing incomplete. Summerhill and North Bruce were substantially less far along in the development process than TTD and Arran.<sup>168</sup> Despite TTD and Arran's relative progress, even these Projects faced significant hurdles prior to beginning commercial operations. Deloitte's Cost of Capital assumptions are far too sanguine about risk and are at odds with the actual risks involved (as outlined Section 3.5 and Attachments VIII and XI). Deloitte assumes that:

- a. Environmental and other associated approvals would have been obtained under the REA process, and therefore a notice to proceed would be obtained for all Projects.<sup>169</sup> However, the REA had not been submitted for either project.<sup>170</sup> Environmental approvals such as REA approval are a major challenge to the completion of wind projects throughout North America, including Ontario.
- b. Financing would have been secured based on preliminary discussions with lenders,<sup>171</sup> but there was no guaranteed financing in place for TTD or Arran.
- c. Mesa Power could have raised the equity capital needed to achieve commercial operation,<sup>172</sup> but no basis was provided beyond a letter from Mesa Power dated November 15, 2013.<sup>173</sup>

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BRG-063, Orangeville.com, Dufferin Wind unable to meet FIT start-up date, October 2013,

<http://www.orangeville.com/news-story/4135814-dufferin-wind-unable-to-meet-fit-start-up-date/>, Accessed January 14th, 2014

BRG-065, Mondaq, ERT's Bornish Wind Farm Decision Requires Sufficient Evidence Of Serious and Irreversible Harm, December 2013,

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<sup>168</sup> Deloitte Report, para. 2.17, pp. 18-19.

<sup>169</sup> Deloitte Report, para. 4.18(b), p. 28.

<sup>170</sup> C-0373, Leader Resources Services Corp., Twenty-Two Degree Energy Project summary, June 21, 2011, C-0370, Leader Resources Services Corp., Arran Wind Energy Project summary, June 21, 2011

<sup>171</sup> Deloitte Report, para. 4.18(c), p. 28.

<sup>172</sup> Deloitte Report, para. 4.18(d), p. 28.

d. The Mesa Power Projects could have achieved the KC construction timelines<sup>174</sup> and timely commercial operation without delay. However, wind projects face construction risks related to delay and/or cost overrun, which can delay positive cash flow and thus reduce project returns.

- 151 In short, all of the Mesa Power Projects faced significant completion risks. The most substantial completion risk resided in the REA process. The Deloitte Report includes a misleading table regarding REA-required reports. Deloitte counts a report as a “yes” if the reports had been completed or were in the draft stage. In other words, a “yes” in the Deloitte table can indicate draft status.<sup>175</sup> This could be misleading if read to mean that a given REA-required report is complete when, in fact, it might be only in the draft stage.<sup>176</sup> To get to the bottom of this, it would be necessary to review each of the source reports that were produced by Leader Resources to determine which of the REA related reports and studies were classified as “drafts.”<sup>177</sup>
- 152 Once operational, all wind projects face energy production risks related to wind resource and turbine performance over time. The main operational risks that the Mesa Power Projects would have faced relate to energy production and operation and maintenance costs. As discussed below, wind energy production is inherently based on meteorological conditions that can be estimated by complex statistical analysis. Depending upon the quality and accuracy of analysis utilized for DCF analysis, the actual project revenue could be higher or lower than estimated.
- 153 Other major operational risks include operation and maintenance costs and availability. These costs reflect the interplay of multiple factors, such as technology design, turbine failures, and severe weather events.
- 154 Considered as a group, Deloitte’s risk analysis assumptions are tenuous and do not comport with typical development and financing risks and those specific to the FIT Program and Mesa Power. As discussed in Section 3.5 and Attachment X, typical wind power development and financing practices and the historical experience of Ontario’s FIT projects indicates that significant REA related permitting and approval risks lie ahead of the Mesa Power Projects as well as typical financing and construction risks.

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<sup>173</sup> C-0075, Letter from Mesa Power Group to Deloitte LLP, dated November 15, 2013, para. 13.

<sup>174</sup> Deloitte Report, paras. 4.18 (e), pp. 28.

<sup>175</sup> Deloitte Report, para. 2.17, pp. 18-19.

<sup>176</sup> Deloitte Report, para. 2.17, pp. 18-19.

<sup>177</sup> C-0373, Leader Resources Services Corp., Twenty-Two Degree Energy Project summary, June 21, 2011, C-0370, Leader Resources Services Corp., Arran Wind Energy Project summary, June 21, 2011

#### 4.4 Unrealistic, Speculative Assumptions

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155 This section evaluates the specific technical assumptions included in Deloitte’s Base Case Scenario, the GEIA adders, and the Domestic Content Requirements analysis below. We focus on the assumptions used for TTD and Arran as Summerhill and North Bruce had no prospect of receiving FIT Contracts (in any scenario for alleged violations) and were inappropriately included in the damages analysis. Even for TTD and Arran only, Deloitte’s assumptions for future losses are too speculative to be reliable and some of them are not possible to correct.

##### *Assumptions for Future Losses*

156 We conducted a review of the technical assumptions in the Deloitte Report for future losses from TTD and Arran. This included assessment of the following factors: commercial online dates, energy production, development costs, installed capital costs, and operation and maintenance costs. Our review raised several concerns regarding assumptions that are not well founded and unduly optimistic or speculative in nature.

157 For the Base Case damages for the GEIA and Connection Change Point Window damages, we found that:

- a. The commercial online dates for the Mesa Power Projects are accelerated, increasing the damages valuation. Deloitte bases the commercial online dates on the KC phase 1 projects for TTD and Arran (and the KC phase 2 projects for Summerhill and North Bruce).<sup>178</sup> For TTD and Arran, Deloitte’s commercial online date of [REDACTED] is based on the flawed assumption that the timeline “would be achievable had Mesa Power received the same treatment as the Korean Consortium.”<sup>179</sup> Basing the commercial online dates for TTD and Arran on the KC transaction dates is incorrect because the Projects would not have received the same treatment as the KC in any but for scenario. It is also unrealistic. As mentioned in Section 3.5 and Attachment XI, many projects that received FIT Contracts are still not under construction as of early 2014.
- b. The installed costs of wind turbines for the Mesa Power Projects range from [REDACTED] to [REDACTED].<sup>180</sup> In comparison to other major public data sources, these figures could be about [REDACTED] percent below market at the time of harm,<sup>181</sup>

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<sup>178</sup> Deloitte Report, paras. 4.18 (e), 4.22, pp. 28, 30.

<sup>179</sup> Deloitte Report, para. 4.21, p. 29.

<sup>180</sup> Deloitte Report, para. 4.34, p. 34. We note that \$/kW is a statement of the specific installed cost of a generation technology. It states the dollars per kilowatt of capacity installed.

<sup>181</sup> BRG-027, Energy Information Administration, “Updated Capital Cost Estimates for Electricity Generation Plants”, Office of Energy Analysis, November 2010, p. 7; BRG-055, Energy Information Administration, “Annual

but such estimates are inherently uncertain and site-specific. The supporting documentation provided by the Claimant is thorough for TTD and Arran using the GE 1.6xle turbines.<sup>182</sup> Deloitte's assumptions about EPC costs rely on analysis<sup>183</sup> performed by Mesa Power's EPC contractor,<sup>184</sup> Mortenson Construction ("Mortenson"). Mortenson provided reasonable estimates for TTD and Arran. (Supporting documentation and EPC costs for Summerhill and North Bruce were not provided.)

- c. The energy production numbers are well established for TTD and Arran by detailed wind resource analysis that is based on detailed anemometry measurements and engineering studies of energy production.<sup>185</sup> Deloitte Report uses the 10-year average P50 energy production values and we agree with this approach for estimating expected cash flows in a DCF analysis. This means that the energy output of TTD and Arran could be more or less than estimated in those Projects' wind energy production studies.<sup>186</sup> In the absence of more reliable information on these less developed Projects, we find that the approximations may be reasonable for the 1.6xle turbines.
- d. The energy production figures for Summerhill and North Bruce are irrelevant to our analysis because those projects would not have received FIT Contracts. They are also speculative because the production was assumed or estimated based on the farms' geographic proximity to TTD and Arran, respectively. There were no

Energy Outlook 2013, Table 1: Updated Estimates of Power Plant Capital and Operating Costs", April 12, 2013. <http://www.eia.gov/forecasts/capitalcost/> (accessed January 15, 2014) ; BRG-046, Wiser, Ryan, Bolinger, Mark, "2011 Wind Technologies Market Report", United States Department of Energy, Figure 24, p. 38, BRG Analysis based on data from Ventyx. .

<sup>182</sup> Deloitte's estimations are based on C-0375, Mortenson, Open Book Summary, Arran Wind - Port Elgin, Ontario, GE 1.6xle, 85.5m Rotor 80m HH, March 26, 2010; C-0376, Mortenson, Open Book Summary, Twenty-Two Degrees Wind - Goderich, Ontario, GE 1.6xle, 85.5m Rotor 80m HH, March 26, 2010; and C-0380, Letter from Carson Harkrader (GE Energy) to Mark Ward (Mesa), [REDACTED] containing External Change Order Proposal No. 3, [REDACTED]

<sup>183</sup> Deloitte Report, para. 4.32b, p. 33.

<sup>184</sup> Deloitte Report, para. 4.15b, p. 27

<sup>185</sup> C-0374, Garrad Hassan Canada Inc., Assessment of the Energy Production of the Proposed Arran Wind Energy Project, June 25, 2010, C-0378, Garrad Hassan Canada Inc., Assessment of the Energy Production of the Proposed Twenty-Two Degree Wind Energy Project, November 9, 2010. The Garrad Hassan wind energy production studies for TTD and Arran combine multiple years of on-site wind measurements with long-term data from nearby meteorological stations.

<sup>186</sup> C-0374, Garrad Hassan Canada Inc., Assessment of the Energy Production of the Proposed Arran Wind Energy Project, June 25, 2010, p. 1. The study for Arran provides an illustration of the long-term uncertainty in energy production and revenue. [REDACTED]

engineering studies of energy production conducted for these Projects.<sup>187</sup> For this reason and due to some unusual calculations (as evaluated in Attachment XII), the uncertainty of Deloitte's projected cash flows is substantially higher for these Projects than for TTD and Arran.

- e. Deloitte's estimates of operations and maintenance costs for wind farms constructed with the GE 1.6xle turbines appear to be reasonable and appropriate for cash flow estimation, however, these costs could be higher (or lower) than assumed. Nevertheless, our experience and analysis of publicly available information<sup>188</sup> suggests that the values Deloitte assumed are reasonable, mid-range estimates.
- f. With respect to availability, the Garrad Hassan reports assume [REDACTED].<sup>189</sup> We concur that this is a reasonable assumption.

158 In relation to Deloitte's damages analysis for Domestic Content Requirements, we find that:

- a. Deloitte assumes that only the 1.6xle turbines would comply with the Domestic Content Requirements. This appears to be based on Deloitte's discussion with Mesa Power's management and a letter dated November 15, 2013.<sup>190</sup> Deloitte does not independently verify this assumption. We have not been able to verify this assumption.
- b. Mortenson provided a comparative analysis of EPC costs for the 1.6xle and 2.5XL turbines. However, this is a hypothetical analysis for a 100 MW wind farm using 2 MW wind turbines. As such, it does not specifically relate to the Mesa Power Projects. The date on the letter describing the analysis is November 12, 2013,<sup>191</sup> long after Mesa Power allegedly suffered harm due to the actions of Ontario and the OPA.
- c. Energy production improvements from higher capacity factors associated with the 2.5XL turbines<sup>192</sup> are not reliable due to the limited operating history of these

<sup>187</sup> Deloitte Report, para. 4.27, p. 31.

<sup>188</sup> BRG-027, Energy Information Administration, "Updated Capital Cost Estimates for Electricity Generation Plants", Office of Energy Analysis, November 2010, p. 7; BRG-055, Energy Information Administration, "Annual Energy Outlook 2013, Table 1: Updated Estimates of Power Plant Capital and Operating Costs". <http://www.eia.gov/forecasts/capitalcost/> (accessed January 15, 2014); BRG-046, Wiser, Ryan, Bolinger, Mark, "2011 Wind Technologies Market Report", United States Department of Energy, Figure 24, p. 38.

<sup>189</sup> See for example, C-0374, Garrad Hassan Canada Inc., Assessment of the Energy Production of the Proposed Arran Wind Energy Project, June 25, 2010, p. 19.

<sup>190</sup> Deloitte Report, para. 4.15a, pp. 26-27.

<sup>191</sup> C-0206, Mortenson Construction re Leader Resources Services Corp., Ontario Project Cost Summary for DC Impact, November 12, 2013.

<sup>192</sup> Deloitte Report, para. 4.27, p. 31.

turbines. We have reviewed the wind studies used to estimate the annual energy output at [REDACTED].<sup>193</sup> While these studies are relatively thorough for TTD and Arran, there are no wind studies for Summerhill and North Bruce<sup>194</sup> (which is indicative of the early stage character of those Projects). Deloitte solves this by extrapolating the results of the TTD and Arran studies to the other Projects, but does so in a questionable manner. This is evaluated in Attachment XII. For North Bruce in particular, this improvement is unreasonably large, creating a major source of value embedded in Deloitte's damages.

- d. Deloitte assumes lower operating costs for the 2.5XL turbines (per unit of energy output).<sup>195</sup> While deploying fewer, larger turbines at a wind farm would generally imply lower operating costs per unit of energy output, the Deloitte assumptions involve substantial uncertainty because the 2.5XL GE turbines had little, if any, operational performance history in North America prior to the late 2012.

### *Assumptions for Sunk Costs*

- 159 Deloitte's analysis assumes that Mesa Power suffered 100 percent impairment of its past development costs.<sup>196</sup>
- 160 However, Mesa Power's development costs were not lost because Mesa Power still owns the Projects and the development rights for the Projects. If Ontario's actions are determined to be in violation of NAFTA, then we would agree that the development costs were partially, but not wholly, impaired. For example, after July 4, 2011, several regulatory developments regarding long-term large scale renewable energy planning and purchasing programs enhanced prospects that the Mesa Power Projects would retain value.<sup>197</sup>

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<sup>193</sup> C-0374, Garrad Hassan Canada Inc., Assessment of the Energy Production of the Proposed Arran Wind Energy Project, June 25, 2010, C-0378, Garrad Hassan Canada Inc., Assessment of the Energy Production of the Proposed Twenty-Two Degree Wind Energy Project, November 9, 2010 .

<sup>194</sup> Deloitte Report, para. 4.27, p. 31

<sup>195</sup> Deloitte Report, para. 4.15 (c), p. 27.

<sup>196</sup> Deloitte Report, para. 4.19, p. 29.

<sup>197</sup> BRG-056, Ministry of Energy, "Ontario Working With Communities to Secure Clean Energy Future Province Increasing Local Control in Renewable Energy Development", Press Release dated May 30, 2013. <http://news.ontario.ca/mei/en/2013/05/ontario-working-with-communities-to-secure-clean-energy-future.html> (accessed February 23, 2014). The press release notes Ontario's government announcement that working with the OPA and the municipalities, the province would develop a competitive procurement process for renewable energy generation projects over 500 kW.

C-0248, Letter from Bob Chiarelli (Minister of Energy) to Colin Andersen (OPA), Direction to the OPA, June 12, 2013. The Direction ended procurement of large projects (>500 kW) under the FIT Program and mandated the development of a new competitive procurement process.

C-0342, Ontario Power Authority, "Development of a New Large Renewable Procurement Process: Initial Engagement Feedback and Interim Recommendations", Report for the Minister of Energy August 30 2013.

- 161 However, we are not currently in a position to analyze and subtract from the total cost the current residual value of the past investment costs incurred by Mesa Power. To do so, we would require further information on the offers received by Mesa Power to acquire its Projects.<sup>198</sup>
- 162 For the alleged Domestic Content Requirements violation, Deloitte implicitly assumes no damages for the costs already incurred and the GE turbine deposit. We agree with this because on its own, the alleged violation had no impact on Mesa Power's decision to place a deposit on wind turbines, or to incur early stage project development costs. For example, the GE MTSA was signed in 2008 (see Section 3.6), over one year before the FIT Program was announced in September 2009 (see Attachment III).

### Combination of Sunk Costs with Future Losses

- 163 The Deloitte Report adds the development costs and the forfeited GE deposit to the future losses damages. Deloitte says this is justified because the sunk costs were deducted in the determination of the future losses (i.e., in the DCF analysis), were incurred by Mesa Power, and therefore cannot be avoided.<sup>199</sup> In other words, the amortization of these sunk costs was deducted from the value in the DCF analysis and therefore needs to be added back.
- 164 We concur with this reasoning, but note that a more common approach would be to exclude sunk costs from the DCF (increasing the valuation of the project) because sunk costs were already incurred and thus unavoidable. Because Deloitte did not exclude sunk costs from the DCF calculations, adding them back to the NPV damages appropriate, but only to the extent that the value of the prior investments was actually impaired by the alleged violations.

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BRG-064, Ministry of Energy, "Achieving Balance: Ontario's Long-Term Energy Plan", December, 2013. <http://www.energy.gov.on.ca/en/ltep/> (accessed February 23, 2014). The plan outlines large renewable procurement (LRP) principles, technology targets and rollout timelines.

BRG-067, Letter from Bob Chiarelli (Minister of Energy) to Colin Andersen (OPA), Direction to the OPA, December 16, 2013. <http://www.powerauthority.on.ca/sites/default/files/news/December-16-2013-Directive-Renewable-Energy.pdf> (accessed February 23, 2014). The Minister's directs OPA to design and develop the competitive procurement process for large renewable energy projects based on the principles articulated in Achieving Balance and report back to the Minister with a proposed design for the procurement process by March 1, 2014 and, subject to a further direction, plan to post the draft Request for Qualifications before the end of first quarter of 2014 for comment.

BRG-072, Ontario Power, Authority, "Large Renewable Procurement Roll Out Timeline, 2014", January 28, 2014. <http://www.powerauthority.on.ca/sites/default/files/planning/LRP-Rollout-Timeline-v12014-01-28.pdf> (accessed February 23, 2014). The Request for Quotes ("RFQ") process will be used to qualify applicants who wish to participate in the LRP and submit a proposal in response to the subsequent Request for Proposals (RFP) phase. The RFQ will be focused primarily on the applicant and evidence of early community engagement.

<sup>198</sup> C-0038, Email from George Hardie (Pattern Energy) to Cole Robertson (Mesa), July 11, 2011.

<sup>199</sup> Deloitte Report, para. 4.15, p. 23.



### Incorrect, Inconsistent Valuation Dates

- 165 Deloitte assesses damages for future losses on three different Valuation Dates for the alleged date of harm to Mesa Power. Each of the dates chosen is inaccurate, and they are incorrectly applied in combination:
- a. Deloitte uses a Valuation Date of November 25, 2009 for TTD and Arran's future losses related to the Domestic Content Requirements.<sup>200</sup> This is the date the FIT applications for TTD and Arran were filed. Using this date wrongly suggests that Mesa Power's act of applying for a FIT Contract caused the harm. Further, the Domestic Content Requirements themselves did not cause harm to Mesa Power, except potentially in conjunction with another alleged violation. Therefore, the appropriate Valuation Date would be when the other alleged violation caused harm.
  - b. Deloitte uses a Valuation Date of January 21, 2010 for all other future losses at TTD and Arran.<sup>201</sup> This is the date the KC signed the GEIA. However, the GEIA itself did not affect Mesa Power. The Projects were not impacted until July 4, 2011 (when it became clear Mesa Power would not receive FIT Contracts).
  - c. Deloitte uses a Valuation Date of May 29, 2010 for all of North Bruce and Summerhill's future losses, including future losses related to the Domestic Content Requirements.<sup>202</sup> This is the date the FIT applications for North Bruce and Summerhill were filed. This Valuation Date is inappropriate because none of the alleged violations caused any harm to Summerhill or North Bruce.
- 166 There is no explicitly stated Valuation Date for sunk costs including the GE turbine deposit
- 167 To arrive at its final damages numbers, Deloitte adds damages from these dates together without making any adjustment to account for the different timing of the valuations<sup>203</sup> and the time value of money between those different dates. Because Deloitte did not make any adjustments for pre- or post-judgment interest,<sup>204</sup> it should have presented damages from different Valuation Dates separately. This will be important for any calculations of pre-award interest on the damages.

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<sup>200</sup> Deloitte Report, para. 1.22, p. 11.

<sup>201</sup> Deloitte Report, para. 1.18, p. 9.

<sup>202</sup> Deloitte Report, para. 1.18, p. 10.

<sup>203</sup> Deloitte Report, para. 4.3, pp. 23-24.

<sup>204</sup> Deloitte Report, p. 3.

#### 4.5 Conclusions Regarding Deloitte's Calculations

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- 168 Deloitte estimates two broad categories of potential damages for sunk costs (including what it refers to as “past costs” and the GE deposit) and future losses.<sup>205</sup> Of these, only the “past costs” can be considered reliable and tangible.
- 169 If the tribunal determines Ontario’s actions violated Canada’s NAFTA obligations, then the sunk costs are the most tangible form of harm suffered by Mesa Power and the most appropriate damages to award. There are two components of sunk costs:
- a. The documentation supporting the past development costs is limited to Schedule 1B in the Deloitte Report which does not provide sources for any of the categories of “past costs.”<sup>206</sup> Mesa Power provided some accounting information for the Mesa Power Projects, but there is no explanation from the Claimant or Deloitte as to how those documents may or may not support Deloitte’s assumptions about Mesa Power’s “past costs.” For example considerable alleged costs are related to “start-up project development expenses,” with no description or break down of what these expenses might have been. Without a breakdown of the components of Deloitte’s assumed “past costs” for the Mesa Power Projects, we cannot verify whether these costs are accurate. If sunk cost damages are awarded to Mesa Power, these costs should be properly documented and audited, and they should be for TTD and Arran only.
  - b. The other component of sunk cost is the GE turbine deposit, which is not valid for the reasons described above.
- 170 By comparison to sunk costs, the estimation of future losses involves judgments about project completion likelihood, expected energy production, installed costs, operations and maintenance costs, and the appropriate rate at which to discount future cash flows. DCF analysis for future losses is typically based on expected cash flows that are appropriately discounted to reflect a risk-adjusted cost of capital.<sup>207</sup> Forecasting cash flows and estimating discount rates can be unduly speculative if not performed with rigor and discipline.

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<sup>205</sup> In DCF analysis, value is only created in present value terms when returns are in excess of the project’s cost of capital. If they are not, the NPV would be zero or negative. A positive NPV indicates the creation of excess value by the project. BRG-041, Investment Valuation: Tools and Techniques for Determining the Value of Any Asset, 3<sup>rd</sup> Edition, Aswath Damodaran, p.17, “[I]t is not earnings per se that create value, but earnings in excess of a required return.”

<sup>206</sup> Deloitte Report, Schedule 1B.

<sup>207</sup> BRG-013, Ibbotson, S. B. I. "Valuation Yearbook." Market Results for Stocks, Bonds, Bills, and Inflation 2010 (1926), p. 13: “One of the most common approaches to valuation is the income approach. Under the income approach, the analyst must first identify future cash flows to be generated by the asset being valued. Second is the identification of the appropriate rate to use in discounting the cash flows to present value. The discount rate, or cost of capital, should reflect the level of risk inherent in the cash flows being valued.”

## 5 CORRECTION OF APPLICABLE DAMAGES

171 This chapter presents our independent analysis of the appropriate damages to Mesa Power for each alleged NAFTA violation by Ontario. We first set out our general approach to analyzing potential damages. We then adjusted Deloitte’s damages calculations for the flawed causation and unrealistic assumptions described in Chapter 4, and other computational errors and omissions described below.

### 5.1 Our Approach

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172 Like Deloitte, we analyzed the potential damages to Mesa Power in separate categories for sunk costs and future loss. Potential damages are the sum of both:

- a. **Sunk Cost** damages relate to expenses actually incurred by Mesa Power. There are two categories of Sunk Costs:
  - **Past Costs** represent all of the costs actually incurred by Mesa Power to develop TTD and Arran, excluding the GE turbine deposit.
  - **GE Turbine Deposit** represents the portion of the GE turbine deposit that relates to TTD and Arran.
- b. **Future Loss** damages represent the net cash flows the Mesa Power Projects’ could have earned in excess of a reasonable, risk-adjusted rate of return but for the alleged violations.

173 Also, like Deloitte, our analysis conservatively assumed the Projects would have no residual value after failing to obtain FIT Contracts on July 4, 2011. As noted in Section 4.4, however, this is not correct because the Projects did still have value and could have been sold<sup>208</sup> or further developed to provide future power sales at a later date. Therefore, any final determination of sunk cost damages should be reduced by the residual value the Projects as of the date of harm. To estimate that residual value, we would require additional information.<sup>209</sup>

174 However, our analytic approach differs from Deloitte in a few critical respects:

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<sup>208</sup> Memorial, para. 530, p. 139. In this paragraph, the Claimant asserts that “The Korean Consortium and its partners also sought to purchase wind power projects from Mesa, which further indicates the extent to which they were in competition and in like circumstances. [These attempts took place in 2010 and 2011.]” After July 4, 2011, according to the FIT application process steps, Mesa Power Projects were placed in the FIT reserve awaiting ETC. Until the release of the FIT Rules version 2 in August, 2012, the ETC and allocation of transmission capacity was the last required procedure before consideration for FIT contract awards for the projects on FIT reserve. The REA process, financing, and construction were all pending.

<sup>209</sup> Such as details of Pattern Energy’s offer to purchase the Projects, and/or any other offers to purchase the Projects, and details of the Projects physical and commercial assets on the date of harm.

- a. We focus on the economic position of Mesa Power but for the alleged violations of NAFTA by Canada. By contrast, Deloitte analyzed the economic position of Mesa Power had it received a FIT Contract with terms similar to the GEIA.<sup>210</sup> This is a critical difference of approach and underlying assumptions.
- b. Whereas Deloitte analyzed damages by NAFTA provision and by category of future loss (i.e., the Base Case Scenario, Economic Development Adder, so-called Capacity Expansion Option, and Domestic Content Requirements);<sup>211</sup> we have analyzed damages according to each underlying each alleged violation and cause of harm, as well as scenarios for their possible combinations.

## 5.2 Correction of Applicable Damages

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175 In Figure 5 below, we present our overall quantitative results and compare them to Deloitte's results.

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<sup>210</sup> Deloitte Report, para. 1.17, p. 9.

<sup>211</sup> Deloitte Report, para. 4.1, pp. 22-23.

Figure 5: Corrections of Deloitte Damages Analysis<sup>212</sup>

(\$000s)	Sunk Costs			Future Losses		Total
	Past Costs - TTD & Arran	Past Costs - SH & NB*	GE Deposit	TTD & Arran	SH & NB*	
<b>Deloitte Damages</b>	\$6,420	\$1,680	\$156,833	\$232,322	\$255,747	\$653,002
Inaccurate Causation	\$0	(\$1,680)	(\$156,833)	(\$71,795)	(\$255,747)	(\$486,055)
<b>Damages Without Inaccurate Causation</b>	\$6,420	\$0	\$0	\$160,527	\$0	\$166,947
<b>Adjustments to Deloitte Base Case (TTD and Arran Only)</b>						
Optimistic Discount Rate	\$0	\$0	\$0	(\$112,529)	\$0	(\$112,529)
Unrealistic Assumptions and Erroneous Calculations	\$0	\$0	\$0	(\$32,354)	\$0	(\$32,354)
Valuation Date	\$0	\$0	\$0	(\$3,506)	\$0	(\$3,506)
<b>BRG Damages (TTD and Arran Only)</b>	\$6,420	\$0	\$0	\$6,909	\$0	\$13,329

\*"SH" stands for Summerhill. "NB" stands for North Bruce

- 176 We calculate \$6,420,000 of damages related to past losses incurred by Mesa Power and \$6,909,000,<sup>213</sup> of damages related to future losses. Total potential damages are therefore \$13,329,000.
- 177 The differences between our analysis and Deloitte's results from five categories of corrections and adjustments. These are summarized below and analyzed in the remaining sections of this Chapter:
- Inaccurate Causation – These are adjustments are based on our correction of the flawed causation in the Deloitte Report for all Projects.
  - Optimistic Discount Rate – These are adjustments correct optimistic assumptions and risk analysis made in Deloitte's estimate of the cost of debt and equity for TTD and Arran only.
  - Unrealistic Assumptions and Erroneous Calculations – These adjustments correct speculative, inaccurate assumptions and calculation mistakes made in Deloitte's analysis for TTD and Arran only.
  - Valuation Date – This adjusts for the inappropriate and inconsistent dates of harm assumed in Deloitte's analysis for TTD and Arran only.

<sup>212</sup> Deloitte mid-point damages of \$653,002 reported here are slightly different than Deloitte's damages of \$653,683 reported in Schedule 1A of their report. We believe the difference is due to rounding assumptions made by Deloitte when aggregating categories of damages. Our numbers for Deloitte's Sunk Cost Damage are taken from Schedule 1A of their report. Numbers for future losses come from Schedules 2A, 3A, 4A, and 5A of their report. Those schedules report future losses by Mesa Project.

<sup>213</sup> BRG Revised Damages Analysis, Technical Annexes 2M and 3M.

### 5.3 Correction of Inaccurate Causation for All Damages

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- 178 We analyzed damages under different scenarios for the harm suffered by Mesa Power due to each of the alleged violations of Canada’s NAFTA that may have caused harm to Mesa Power. As analyzed in Chapters 3, these include:
- a. The signing of the GEIA with the KC, and
  - b. The Connection Point Change Window that allowed West of London projects to request interconnection in the Bruce region,
  - c. The Domestic Content Requirements of the FIT Program.
- 179 We analyzed each possible counterfactual “but for” scenario to establish appropriate damages if each individual violation, or combination of violations, is considered a violation of NAFTA. As evaluated in Chapter 4 and discussed below, our analysis indicates that several areas of Deloitte’s damages are not appropriate because they are based on flawed assumptions about causation. Our analysis yielded very straightforward conclusions. These are listed below:
- a. There was no harm to Summerhill and North Bruce in any scenario for individual or combined violations, and the damages for sunk costs and future losses are inappropriate;
  - b. The GEIA and Connection Point Change Window, alone or in combination, were sufficient to result in Mesa Power not receiving FIT Contracts for TTD and Arran. Therefore, damages are the same for the alleged GEIA violation, the alleged Connection Point Change Window violation, and the combination of both of these.
  - c. The harm caused by the GEIA did not entitle Mesa Power to the Economic Development Adder or so-called Capacity Expansion Option and these damages are not appropriate;
  - d. On their own, the Domestic Content Requirements did not cause any harm to Mesa Power on their own because Mesa Power did not receive a FIT Contract and would not have but for the violation. In combination with other violations, it is not clear that harm was caused and the damages analysis is too speculative. We have no basis to provide a reliable analysis at this time. If additional, reliable data is provided, we could revise our analysis and conclusion regarding the harm and damages that may have been caused by the Domestic Content Requirements in conjunction with other alleged violations.
  - e. The GE turbine deposit damages are not applicable because the turbines and turbine deposit were not originally intended for the FIT Program and the alleged violations did not cause Mesa Power to forfeit the deposit.

180 The quantitative results of our causation analysis are presented in Figure 6 and analyzed in the sections below.

**Figure 6: Correction of Inaccurate Causation**

Inaccurate Causation (\$000s)	Remaining Potential Damages After Adjustment	Deloitte Potential Damages Disqualified
<b>Deloitte Potential Damages</b>	<b>\$653,002</b>	
Summerhill and North Bruce Future Losses	\$397,255	(\$255,747)
Summerhill and North Bruce Past Costs	\$651,322	(\$1,680)
GEIA EDA* and Capacity Expansion (TTD and Arran Only)	\$623,843	(\$29,159)
Domestic Content Requirements (TTD and Arran Only)	\$610,366	(\$42,636)
GE Turbine Deposit	\$496,169	(\$156,833)
<b>Impact of All Inaccurate Causation</b>	<b>\$166,947</b>	<b>(\$486,055)</b>

\*"EDA" stands for Economic Development Adder

181 We note that the exclusion of damages for Domestic Content Requirements is subject to potential adjustment based upon additional information regarding the availability, cost, and performance of the GE 2.5XL turbines, as further discussed below.

#### GEIA Economic Development Adder and so-called Capacity Expansion Option

182 In addition to the Base Case, Deloitte provides scenarios for additional value that Deloitte says would have been captured by Mesa Power under the terms of the GEIA that Ontario allegedly should have provided. For these scenarios, Deloitte's future loss analysis assumed the Mesa Power Projects would receive the Economic Development Adder and/or the so-called Capacity Expansion Option terms of the GEIA<sup>214</sup> (as outlined in Section 4.2).

183 As discussed above, we dismiss these scenarios because Mesa would not have received the same terms offered to the KC under the GEIA even if the alleged violation had not occurred, and because the appropriate *but for* counterfactual analysis is not to extend to Mesa Power the allegedly wrongful terms of the GEIA, but rather to correct for the harm caused to Mesa Power by the GEIA.

#### Domestic Content Requirements

184 Deloitte also prepared a scenario for additional damages for future losses caused by Domestic Content Requirements in addition to the Base Case.<sup>215</sup> Like the Deloitte Base Case, the analysis for additional damages for Domestic Content Requirements appears to

<sup>214</sup> Deloitte Report, paras. 4.13-4.14, p. 26

<sup>215</sup> Deloitte Report, para. 4.15, pp. 16-17.

assume a compound violation scenario including the GEIA and Connection Point Change Window. Deloitte estimates that Domestic Content Requirements damages are \$106,250,000.<sup>216</sup>

185 As discussed above in Section 5.1, we look at this cause of harm two ways: (a) individually in isolation of other alleged violations, and (b) combined with the other violations. We concluded that:

- a. If the Domestic Content Requirements of the FIT are considered Ontario's only violation of NAFTA, then damages would be \$0. On their own, the Domestic Content Requirements did not cause any harm to Mesa Power because none of the Mesa Power Projects would have received FIT Contracts.
- b. If the Domestic Content Requirements are considered only one of Ontario's several violations of NAFTA, then it is possible that these provisions caused incremental harm to Mesa Power. However, the analysis of this harm requires highly speculative assumptions and additional discovery and analysis would be necessary to develop a reliable estimation of damages.

186 Damages would only be appropriate if the following two statements are both true:

- a. Mesa Power could have obtained 2.5XL turbines from GE in a timely fashion, as needed for profitable operation of the Projects; and
- b. The cost of the 2.5XL turbines would have been low enough to result in higher returns for each project than available from operating with the 1.6xl turbines.

187 However, both of these conditions are uncertain because Mesa Power has not provided sufficient data to verify them. As explained in Chapter 4, Deloitte's damages for the Domestic Content Requirements rest on speculative grounds.

188 Given the lack of reliable evidence regarding turbine availability and costs, we do not believe damages can be estimated reliably at this time. The Deloitte results are based on highly speculative assumptions. Moderate turbine cost adjustments to reflect limited comparable project information have the effect of eliminating damages. It is therefore unclear that Mesa Power suffered harm or damages.

### GE Turbine Deposit

189 As noted above in Section 4.4, Deloitte includes the GE turbine deposit in sunk costs and concludes that damages should be equal to the full amount of Mesa Power's USD \$153,592,670 deposit. According to Deloitte, the deposit was made as a [REDACTED] down

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<sup>216</sup> Deloitte Report, para. 4.74, p. 46.



payment on Mesa Power's purchase from GE of 667 1.5xle turbines<sup>217</sup> (although under the original GE MTSA, the turbines were stated as 1.5sle).<sup>218</sup> Deloitte's analysis presumes that, had all of the Mesa Power Projects in Ontario received FIT Contracts, Mesa would not have lost any portion of the GE turbine deposit. Taking into account the prevailing exchange rate in 2008, Deloitte estimates the value of this loss to be \$156,833,000.<sup>219</sup>

190 For the reasons addressed in Chapter 4, Deloitte's assumptions and conclusions are not appropriate because the deposit forfeiture was not directly caused by Ontario's alleged violations. Mesa Power did not make the turbine deposit in relation to its projects in Ontario and the alleged violations of NAFTA by Ontario did not cause Mesa Power to forfeit the deposit. Therefore, damages related to the GE turbine deposit should be \$0 and we have not included them in our final assessment.

191 Nevertheless, we recognize that the alleged violations of NAFTA could be said to have contributed in some way to the ultimate forfeiture. Therefore, we offer two alternative scenarios for alternative ways to attribute to the violations a portion of responsibility for the GE turbine deposit.

- a. **Proportional allocation counterfactual:** First, after Mesa Power signed the First Amended MTSA it attempted to develop the 52 turbine Goodhue wind farm in Minnesota<sup>220</sup> and the 233 turbine Stephen Bors Lynn wind farm in Texas<sup>221</sup> in addition to the Mesa Power Projects in Ontario. Since these projects all shared in the value of First Amended GE MTSA, including the continued turbine deposit maintained by GE, the forfeiture of the GE deposit should be shared among all these projects as well. TTD and Arran, the only Projects affected by the alleged NAFTA violations, account for approximately 25 percent of the total capacity Mesa Power attempted to develop during this period. Therefore, damages under this scenario would be 25 percent of the total deposit value or \$39,705,000.
- b. **Full allocation counterfactual:** Second, even assuming full responsibility by Ontario without any proportional allocation of harm, at most, Mesa Power would have only taken delivery of 90 turbines for TTD and 70 turbines for Arran. However, the First Amended GE MTSA signed in November 2009 required Mesa Power to take delivery

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<sup>217</sup> Deloitte Report, paras 2.19, 4.1 (iv), pp. 20 and 22.

<sup>218</sup> 004085-A- Master Turbine Sale Agreement For The Sale Of Power Generation Equipment and Related Services between General Electric Company and Mesa Power LP, [REDACTED]

<sup>219</sup> Deloitte Report, para. 1.6, page 6, footnote 10.

<sup>220</sup> BRG-022, Anderson Mark, "T. Boone Pickens' new Minnesota wind project hits resistance", WindPower Monthly, April 16, 2010. <http://www.windpowermonthly.com/article/997272/t-boone-pickens-new-minnesota-wind-project-hits-resistance> (accessed December 16, 2013).

<sup>221</sup> BRG-045, Mesa Power Press Release, "Mesa Power Group to Partner with Wind Tex Energy on Stephens Bor-Lynn Wind Project South of Lubbock", PR Newswire, April 4 2012.

of [REDACTED].<sup>222</sup> Thus, Mesa Power would still have forfeited the portion of the GE turbine deposit associated with the remaining [REDACTED] had none of the alleged violations occurred. Using the GE turbines at TTD and Arran would have fulfilled approximately [REDACTED] of the payments required by the First Amended GE MTSA. This would have allowed Mesa Power to retain a proportionate amount [REDACTED] of its original deposit. Therefore, the maximum damages would be [REDACTED]

#### 5.4 Correction of Deloitte Base Case DCF for TTD and Arran

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- 192 In the Base Case Scenario, Deloitte analyzed the future losses for all four Mesa Power Projects' assuming Mesa Power "obtained FIT Contracts for the Projects and would have developed the wind farms in accordance with the Domestic Content Requirements."<sup>223</sup> Deloitte calculated Base Case Scenario damages for Mesa Power of \$324 million. Of that, TTD and Arran accounted for \$160.5 million, while North Bruce and Summerhill accounted for \$163.2 million.<sup>224</sup>
- 193 Because the Summerhill and North Bruce damages and the GE turbine damages were all excluded due to inaccurate causation, our analysis focuses only on the sunk cost and future loss damages for TTD and Arran.
- 194 We used Deloitte's Base Case Scenario analysis as the starting point for our own DCF analysis. We then made adjustments to correct for Deloitte's:
- a. Optimistic discount rate,
  - b. Unrealistic assumptions and erroneous calculations, an
  - c. Inappropriate Valuation Date.
- 195 The detailed results of our adjustments to the Deloitte Base Case Scenario for TTD and Arran are presented in **Figure 7** below. The table presents the damages result and impact on Deloitte's damages figures of each individual correction on a standalone basis, without any other corrections. It also presents the compound results and impacts for the various groups of adjustments and all of the adjustments combined.

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<sup>222</sup> C-0379, Amended and Restated Master Turbine Sale Agreement For The Sale Of Power Generation Equipment and Related Services between General Electric Company and Mesa Power Pampa LLC [REDACTED]

<sup>223</sup> Deloitte Report, para. 4.1, p. 22.

<sup>224</sup> Deloitte Report, Schedule 1A.

Figure 7: Corrections to Deloitte's Base Case for TTD and Arran<sup>225</sup>

	Remaining Potential Damages After Adjustment	Deloitte Potential Damages Disqualified
<b>Optimistic Discount Rate (\$000s)</b>		
Adjustment for Size Risk	\$109,971	(\$50,556)
Adjustment for Company Risk	\$110,025	(\$50,502)
Adjustment for Country Risk	\$141,826	(\$18,701)
TTD Obtains Export-Import Bank Financing	\$146,161	(\$14,366)
Arran Obtains Export-Import Bank Financing	\$146,866	(\$13,662)
Unlevered Cost of Capital	\$154,623	(\$5,904)
<b>Impact of All Optimistic Discount Rate Assumptions</b>	<b>\$47,999</b>	<b>(\$112,529)</b>
<b>Unrealistic Assumptions and Erroneous Calculations (\$000s)</b>		
Terms of GE Agreements	\$149,262	(\$11,266)
Omission of Post Valuation Date Development Costs	\$137,011	(\$23,517)
Failure to Capitalize Interest During Construction	\$162,824	\$2,297
Spreadsheet Errors	\$160,679	\$152
<b>Impact of All Unrealistic Assumptions and Erroneous Calculations</b>	<b>\$128,174</b>	<b>(\$32,354)</b>
<b>Valuation Date (Date of Harm) (\$000s)</b>		
Valuation Date as of July 4, 2011	\$157,021	(\$3,506)
<b>Summary of BRG Adjustments (\$000s)</b>		
Optimistic Discount Rate	\$47,999	(\$112,529)
Unrealistic Assumptions and Erroneous Calculations	\$128,174	(\$32,354)
Valuation Date	\$157,021	(\$3,506)
<b>Impact of All BRG Corrections</b>	<b>\$6,909</b>	<b>(\$153,618)</b>

196 Each of the categories of corrections and individual adjustments presented above is described and discussed in the sections below. Detailed supporting materials and calculations are presented in the Technical Annexes to this Report.<sup>226</sup>

197 We note that these results are subject to adjustment for two reasons:

- a. First, we have not been presented with sufficient information to audit and verify the "past costs" for TTD and Arran and this verification should be performed for any final determination of damages.

<sup>225</sup> Our adjustments to damages are not strictly additive because of interactions between the individual adjustments. For example, the Cost of Capital Adjustments reduce the impact of the adjustments made for Errors & Omissions and Inappropriate Assumptions.

<sup>226</sup> BRG Revised Damages Analysis, Technical Annexes 2A-2M for TTD and 3A-3M for Arran.

- b. Second, as noted, although we do not currently have adequate information to analyze the residual value of TTD and Arran after they failed to obtain FIT contracts, this analysis should be included in any final determination of damages. If Mesa Power is awarded damages for “past costs” for TTD and Arran, the damages should be reduced by the residual value of the Projects as of the Valuation Date. Doing so would require additional information purchase offers received and assets for the Projects.

### 5.5 Correction of Optimistic Discount Rate for TTD and Arran

- 198 As summarize above in Section 4.3, we found three problems with Deloitte’s cost of equity adjustments: the adjustment for company size risk;<sup>227</sup> the adjustment for company risk;<sup>228</sup> and adjustment for the unlevered cost of capital. These are outlined below.

#### Adjustment for Size Risk

- 199 In calculating the cost of capital, it is important to make an adjustment for the size of the firm because it is a widely observed phenomenon that firm size impacts valuation in a way not captured by the CAPM. Deloitte increased the cost of equity to reflect the Ibbotson SBBI 2010 Valuation Yearbook’s 1.85 percent size premium for low-cap stocks,<sup>229</sup> but this is not adequate to accurately reflect risk. Deloitte’s assumption artificially decreased the Mesa Power Projects’ cost of equity capital and increased their valuations.
- 200 The Ibbotson table cited by Deloitte suggests the size adder for Mesa Power should be at least 4.91 percent and perhaps as high as 12.06 percent. A more detailed explanation of BRG’s choice of size premium is provided below:
- a. Deloitte’s assumed size premium of 1.85 percent is the size premium Ibbotson lists for low-cap stocks that have a market capitalization of between USD \$432,175,000 and USD \$1,600,169,000.<sup>230</sup>
  - b. However, the balance sheet provided in Mesa Power’s FIT applications for TTD and Arran both list capital for Mesa Power of only [REDACTED]<sup>31</sup> According to the

<sup>227</sup> Company size risk refers to the risk premium which accounts for the company size. In general, smaller company size is associated with higher investment risks.

<sup>228</sup> Company specific risk refers to the risk premium which accounts for the unique attributes of the business itself such as size, management depth, customer concentration etc.

<sup>229</sup> Deloitte Report, para. 4.54, p. 40.

<sup>230</sup> BRG-014, Ibbotson, S. B. I. "Valuation Yearbook." Market Results for Stocks, Bonds, Bills, and Inflation 2010 (1926), back page.

<sup>231</sup> C-0364, Twenty-Two Degrees Wind Project, FIT Application, November 25, 2009. Also, C-0365, Arran Wind Project, FIT Application, November 25, 2009.

Ibbotson SBBI 2010 Valuation Yearbook, the size premium for companies of that size is 12.06 percent.<sup>232</sup>

- c. Even if one were to treat all [REDACTED] of all of Mesa Power's book assets as equity, the Ibbotson size premium would be 4.91 percent.<sup>233</sup>

201 To be conservative, we corrected this assumption by using the 4.91 percent adjustment. Doing so reduced the damages by \$50,556,000.<sup>234</sup>

### Adjustment for Company Specific Risk

202 Deloitte speculates the Mesa Power Projects should have a company-specific risk adjustment of negative 3.00 percent,<sup>235</sup> based on the terms of the GEIA and FIT.<sup>236</sup> This adjustment results in a lower cost of equity capital and a higher valuation for the Mesa Power Projects.

203 In our analysis, we have eliminated the adjustment for the following reasons.

- a. Deloitte provides no factual or theoretical basis to suggest this adjustment is appropriate and offers no analytical backup for the size of this adjustment.
- b. Deloitte incorrectly assumes low company risk based on the one-sided terms in the GEIA, even though these terms were not actually available and would be inappropriate to assume for purposes of calculating damages (see Section 3.4 above).
- c. Does not account for the risks associated with a small firm that had only attempted to develop one other sizeable wind project (the Pampa project in Texas) which had recently failed.

204 In eliminating this assumption, we reduced the damages by \$50,502,000.<sup>237</sup>

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<sup>232</sup> Companies with Market Capitalizations between USD \$1.007 million and USD \$76.052 have a size premium of 4.91 percent, see BRG-014, Ibbotson, S. B. I. "Valuation Yearbook." Market Results for Stocks, Bonds, Bills, and Inflation 2010 (1926), back page.

<sup>233</sup> Companies with Market Capitalizations between USD \$123.536 million and USD \$169.497 million have a size premium of 4.91 percent, see BRG-014, Ibbotson, S. B. I. "Valuation Yearbook." Market Results for Stocks, Bonds, Bills, and Inflation 2010 (1926), back page.

<sup>234</sup> BRG Revised Damages Analysis, Technical Annexes 2A and 3A.

<sup>235</sup> Deloitte Report, para. 4.54, p. 40.

<sup>236</sup> Deloitte Report, para. 4.54, p. 40.

<sup>237</sup> BRG Revised Damages Analysis, Technical Annexes 2B and 3B.

### Adjustment for Country Risk

- 205 Deloitte made a “country risk adjustment of approximately -0.8 percent [i.e., negative 0.8 percent] based on Ibbotson & Associates International Cost of Capital (2010).”<sup>238</sup> Schedules 6A and 6B of the report cite a slightly different source, “The 2010 Ibbotson & Associates International Cost of Capital Report.”<sup>239</sup> Deloitte neither provided this report nor explained the methodology it uses to make the adjustment. This adjustment results in a lower cost of equity capital and a higher valuation for the Mesa Power Projects. We eliminated this adjustment.
- 206 Adjusting the CAPM for international risk is challenging. The Ibbotson SBBI 2010 Valuation Yearbook notes that,
- “Calculating the cost of capital for a domestic enterprise can be a difficult proposition because of limited data. . . [a]pplying cost of capital principles to international markets is even more challenging due to additional data limitations and the lack of integrated markets.”<sup>240</sup>
- 207 The Ibbotson SBBI 2010 Valuation Yearbook further observes that the statistical quality of international betas is so low that it “calls into question the usefulness of the standard CAPM in the international arena”.<sup>241</sup>
- 208 The Ibbotson SBBI 2010 Valuation Yearbook offers several different approaches to adjusting risk for international cost of capital. The results presented for Canada’s risk relative to the U.S. are conflicting.
- a. According to Ibbotson, the Country Risk Rating Model suggests that Canada should have slightly lower expected returns than the U.S. (8.8 percent versus 9.6 percent) based on its credit worthiness.<sup>242</sup> This would imply that a negative risk adjustment should be made for Canada, thus decreasing the discount rate and increasing damages.
  - b. However, Ibbotson also presents multiple other analyses that show Canada having a significantly higher Beta than the U.S.<sup>243</sup> This would imply that a positive risk adjustment should be made for Canada, which would increase the discount rate and

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<sup>238</sup> Deloitte Report, para. 4.54, p. 40. Country risk refers to the risk premium which accounts for investing in an international company rather than the domestic market.

<sup>239</sup> Deloitte Report, Schedule 6A and Schedule 6B.

<sup>240</sup> BRG-015, Ibbotson, S. B. B. I. "Valuation Yearbook." Market Results for Stocks, Bonds, Bills, and Inflation 2010 (1926), p. 115.

<sup>241</sup> BRG-015, Ibbotson, S. B. B. I. "Valuation Yearbook." Market Results for Stocks, Bonds, Bills, and Inflation 2010 (1926), p. 117.

<sup>242</sup> BRG-015, Ibbotson, S. B. B. I. "Valuation Yearbook." Market Results for Stocks, Bonds, Bills, and Inflation 2010 (1926), p. 119, Table 9-4.

<sup>243</sup> BRG-015, Ibbotson, S. B. B. I. "Valuation Yearbook." Market Results for Stocks, Bonds, Bills, and Inflation 2010 (1926), p. 117, Table 9-2, p. 118, Table 9-3..

decrease damages. While we know Deloitte relied on the Ibbotson SBBI 2010 Valuation Yearbook, it is not clear why the Deloitte Report did not mention this analysis in its cost of capital analysis.

- c. Ibbotson also analyses Canadian risk using the Relative Standard Deviation Model. According to this model Canada should have an equity risk premium of 8.23 percent versus 6.47 percent for the U.S..<sup>244</sup> This analysis suggests that a positive risk adjustment should be made for Canada, which would increase the discount rate and decrease damages.

209 Other sources we researched and consulted, suggest no adjustment should be made for Canada relative to the U.S. For example, Professor of Finance at the Stern School of Business at New York University Aswath Damodaran estimates country specific risk based on Moody's ratings for government bonds. Using this measure, he finds no difference in the country specific risk across the U.S. and Canada.<sup>245</sup>

210 Based on these sources, and the lack of backup material provided by Deloitte, we feel that making a country risk adjustment for Canada is extremely speculative. While some analytical methods suggest Canada could be less risky than the U.S., other methods suggest Canada is riskier than the U.S., and others still suggest the countries have similar risk profiles. For these reasons, we have eliminated the adjustment for country specific risk.

211 In correcting this assumption, we decreased the damages by \$18,701,000.<sup>246</sup>

#### TTD and Arran Export Import Bank Financing

212 Based upon instructions from Mesa Power, Deloitte assumed that all the Mesa Power Projects would have received U.S. Ex-Im Bank financing.<sup>247</sup> However, as explained above in Section 4.4 and Attachment IX, this assumption is unsubstantiated and speculative. Therefore, it is inappropriate to speculate about the availability of U.S. Ex-Im financing and the cost of debt assumed by Deloitte is too low.

213 If the U.S. Ex-Im Bank financing is removed, then Mesa Power should be assumed to have obtained financing at [REDACTED] (Deloitte's assumption for the Mesa Power term loans), rather than being [REDACTED] and [REDACTED]

<sup>244</sup> BRG-015, Ibbotson, S. B. I. "Valuation Yearbook." Market Results for Stocks, Bonds, Bills, and Inflation 2010 (1926), p. 119, p. 120 Table 9-6.

<sup>245</sup> BRG-032, Aswath Damadoran, "Country Default Spreads and Risk Premiums", Updated January 2011. [http://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/datafile/ctryprem.html](http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html). (Accessed February 18, 2014).

<sup>246</sup> BRG Revised Damages Analysis, Technical Annexes 2C and 3C.

<sup>247</sup> Deloitte Report, para. 4.41, p.37.

(Deloitte's assumption for the U.S. Ex-Im Bank loans).<sup>248</sup> This would change Deloitte's pre-tax weighted average cost of debt to [REDACTED]

- 214 In combination, by correcting these assumptions we reduced the damages for TTD by \$14,366,000 and for Arran by \$13,662,000.<sup>249</sup>

### Adjustment for Unlevered Cost of Capital

- 215 As the Projects pay down debt balances, Deloitte assumed their cost of equity capital approached their original weighted average costs of capital. In fact, such de-leveraging should result in the cost of equity capital approaching the unlevered cost of equity capital. This error had the effect of lowering the Mesa Power Projects' cost of equity capital, increasing their valuations, and thus increasing damages.
- 216 In correcting this assumption, we reduced the damages by \$5,904,000.<sup>250</sup>

### 5.6 Correction of Unrealistic Assumptions and Erroneous Calculations for TTD and Arran

- 217 We also found several additional areas where Deloitte made unrealistic assumptions and calculation errors. Our corrections are described below.

### Post Valuation Date Development Costs

- 218 Deloitte mistakenly eliminated \$13.8 million in capital expenditures at TTD and \$10.8 million in capital expenditure at Arran. Deloitte's model treats these costs as debt financed when calculating equity costs, and as equity financed when calculating debt costs. As a result, the expenses simply disappear and artificially inflate Deloitte's DCF valuations of TTD and Arran. The Deloitte valuation spreadsheets are complex and the incorrect treatment of development costs appears to be a simple oversight.
- 219 Deloitte's analysis of development costs claims to be based on assumptions provided by Mesa Power management, but does not correctly apply the stated assumptions. The Deloitte Report states that for TTD and Arran:

[REDACTED]

[REDACTED]

[REDACTED].<sup>251</sup>

<sup>248</sup> Deloitte Report, para. 4.41, p. 37.

<sup>249</sup> BRG Revised Damages Analysis, Technical Annexes 2D and 3D.

<sup>250</sup> BRG Revised Damages Analysis, Technical Annexes 2E and 3E.

<sup>251</sup> Deloitte Report, Schedule 2J, note F6 and Schedule 3J, note F6.



- 220 However, Deloitte appears to have misapplied these instructions. Deloitte assumed that TTD and Arran's development costs would be [REDACTED] debt financed (instead of zero percent) from January 21, 2010 through the end of the development period in 2013.<sup>252</sup> However, when calculating Mesa Power's total debt principal, these development costs were treated as equity expenses, as instructed, but that meant there were no associated additions to the debt principal.<sup>253</sup>
- 221 In effect, Deloitte eliminated these development costs from its analysis entirely, artificially increasing the value of TTD and Arran. These development costs are not included as equity capital expenditures for Mesa Power, and they are also not included in the Mesa Power Projects' debt principal. As a result, Deloitte's analysis inflates the value of the two Projects by failing to account for these development costs at TTD and Arran. We have corrected this error reducing the damages by \$23,517,000.<sup>254</sup>

### Terms of GE Agreements

- 222 Deloitte's assumptions regarding the timing of Mesa Power's payments for the GE turbines appear to be fabricated without any apparent factual basis. Deloitte's DCF analysis assumes that all construction costs would not occur until 2013 and 2014 – including the cost of purchasing turbines, but there is no explanation as to why that is an appropriate assumption.
- 223 We think the GE MTSA regarding payments provide a good factual basis for the timing of payments. Deloitte relies on the agreements for other assumptions in its DCF analysis. For example, Deloitte relied on "the change order dated [REDACTED] to obtain the 1.6xle turbine pricing."<sup>255</sup> We agree that the prices specified in this change order provide a reasonable foundation for the price of Mesa Power's 1.6xle turbines.
- 224 The change order also provides a reasonable foundation for the timing of delivery for the turbines and the timing of payments to GE. Based on the delivery schedule and payment terms specified in the change order, Mesa Power [REDACTED] [REDACTED] [REDACTED]<sup>256</sup> not 2013 and 2014 as Deloitte assumes. Deloitte's assumptions

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<sup>252</sup> Deloitte Report, Schedules 2J and 3J; 004407, Project Arran - Financial Model to the Expert Witness Report of Richard Taylor and Robert Low, dated November 18, 2J Constr Costs 1.6XLE; 004407, Project Arran - Financial Model to the Expert Witness Report of Richard Taylor and Robert Low, dated November 18, 3J Constr Costs 1.6XLE.

<sup>253</sup> 004407, Project Arran - Financial Model to the Expert Witness Report of Richard Taylor and Robert Low, dated November 18, Inputs 1.6XLE; 004410, Project TTD - Financial Model to the Expert Witness Report of Richard Taylor and Robert Low, dated November 18, 2013, Inputs 1.6XLE.

<sup>254</sup> BRG Revised Damages Analysis, Technical Annexes 2H and 3H.

<sup>255</sup> Deloitte Report, para. 4.32, p. 32.

<sup>256</sup> Based on pricing terms from C-0380, Letter from Carson Harkrader (GE Energy) to Mark Ward (Mesa), [REDACTED] including External Change Order Proposal No. 3 dated [REDACTED]

appear to lack foundation and artificially inflate the valuation of the Mesa Power Projects and thus increase damages.

- 225 Deloitte also makes an inappropriate assumption regarding maintenance expenses that is inconsistent with the GE agreements. Deloitte assumed that “[b]ased on the MTSA between GE and Mesa Power, GE provides a warranty term of at most [REDACTED] years on the wind turbines purchased. Thus, there are no unplanned maintenance costs forecast in the Project’s [REDACTED] years of operations.”<sup>257</sup> However, upon careful review it is clear that the warranty does not cover the first two years of operations, but only covers the turbines for three years after delivery.<sup>258</sup> Based on the terms in Change Order 3, the turbines would have been delivered between [REDACTED] and [REDACTED].<sup>259</sup> As a result, the warranty would have expired before the completion of the second year of operation.
- 226 Deloitte’s inappropriate assumption on the timing of warranty expiration has the effect of artificially increasing the valuations of the Projects.
- 227 In correcting these assumptions, we decreased the damages for TTD and Arran by \$11,266,000.<sup>260</sup>

### Interest During Construction

- 228 Deloitte’s analysis underestimated damages because Deloitte did not capitalize the financing costs incurred during the construction period. Capitalized interest costs can be depreciated for tax purposes, reducing the Projects’ tax burden<sup>261</sup> and thereby increasing the Projects’ cash flows. The tax savings typically occur in earlier years of operation and therefore can have a material impact on valuation.
- 229 Deloitte’s calculations artificially inflated the Projects’ tax burden. Had these costs been capitalized, they would have increased the Project’s NPV and damages by \$2,297,000. We have included this correction in our analysis.<sup>262</sup>

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<sup>257</sup> Deloitte Report, para. 4.36, p. 35.

<sup>258</sup> C-0379, Amended and Restated Master Turbine Sale Agreement For the Sale of Power Generation Equipment and Related Services [REDACTED].

<sup>259</sup> C-0380, Letter from Carson Harkrader (GE Energy) to Mark Ward (Mesa), [REDACTED] including External Change Order Proposal No. 3 dated [REDACTED].

<sup>260</sup> BRG Revised Damages Analysis, Technical Annexes 2G and 3G.

<sup>261</sup> BRG-071, Canada Revenue Agency, “Ontario’s FIT/microFIT Programs, Frequently Asked Questions about FIT/microFIT Programs”, website extract, undated. <http://www.cra-arc.gc.ca/tx/bsnss/thrtpcs/nt-ft/q1-eng.html#a5> (accessed February 24, 2014): “Generally, amounts paid for legal, engineering, installation, and other fees that relate to the acquisition of the renewable energy property, would be included as part of the capital cost of the property.”

<sup>262</sup> BRG Revised Damages Analysis, Technical Annexes 2I and 3I.

### Additional Spreadsheet Errors

- 230 Deloitte also made four additional spreadsheet errors that had the net result of artificially depressing the value of the TTD and Arran Projects by \$152,000. These are outlined below:

TTD's Class 17 assets were depreciated on a declining balance basis at a rate of 6 percent instead of the correct rate of 8 percent.<sup>263</sup> This mistake increased TTD's taxes and reduced its valuation.

TTD's cash flows are increased by in 2032, 2033 and 2034.<sup>264</sup> These increases are included in a spreadsheet row that is labelled "Less: Capital expenditures." The row is not explained but the spreadsheet adds it to the Levered Cash Flows that are the basis of Deloitte's DCF analysis. This mistake increased TTD's cash flows and increased its valuation.

TTD and Arran's cash flows in 2034 were incorrectly discounted assuming that the wind farms would remain in operation through the end of the year. In fact, given the Projects' assumed COD of March 31, 2014, the Projects would only remain in operation, or more specifically be eligible for the FIT Contract terms, through March of that year. As a result, Deloitte overstated the discount rate by assuming that cash flows would occur throughout the whole year and not just the first three months. Thus, the discounted cash flows were understated, decreasing the Projects' valuations.

Finally, Arran's past development costs were incorrectly inflated to the middle of 2010 rather than to January 21, 2010. As a result, Deloitte overstates Arran's capital expenditures and understates value and damages.

- 231 In combination, when we corrected these errors damages were increased by \$152,000.<sup>265</sup>

### 5.7 Correction of Valuation Date for TTD and Arran

- 232 In Section 4.4 above, we assessed the problems with Deloitte's chosen Valuation Dates. With respect to Valuation Dates, we calculated damages as follows:

- a. We calculated damages as of July 4, 2011. This was the date that the OPA announced that none of the Mesa Power Projects had received a FIT Contract and the date on which the harm caused by the alleged violations was crystallized in a way that could have impacted the value of the Mesa Power Projects.

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<sup>263</sup> 004410, Project TTD - Financial Model to the Expert Witness Report of Richard Taylor and Robert Low, dated November 18, 2013, 2B DCF 1.6XLE, Row 121.

<sup>264</sup> 004410, Project TTD - Financial Model to the Expert Witness Report of Richard Taylor and Robert Low, dated November 18, 2013, 2B DCF 1.6XLE, Row 38.

<sup>265</sup> BRG Revised Damages Analysis, Technical Annexes 2J and 3J.

- b. We chose this date rather than January 21, 2010, the date of harm utilized by Deloitte because that was the date the GEIA was signed. We don't think any harm was caused by the agreement itself and the implications were not apparent until much later. Nevertheless, had we used a Valuation Date of January 21, 2010 in our analysis, then our damages would have been \$8,149,000 higher.<sup>266</sup>

233 To summarize, if the Domestic Content Requirements of the FIT Program are considered the only violation, then there are no damages. If the GEIA and/or the Connection Point Change Window are violations, potentially combined with the Domestic Content Requirements, then July 4, 2011 is the appropriate Valuation Date because this was the date when the FIT Contracts were first awarded to projects located in the Bruce Region.

### 5.8 Conclusions Regarding Applicable Damages

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- 234 In conclusion, we find that several categories of damages should be disqualified:
- a. None of the alleged violations of NAFTA impacted Summerhill or North Bruce. Therefore, there are no sunk cost or future loss damages from with those projects.
  - b. Even but for the alleged violations, TTD and Arran would not have received the treatment offered to the KC under the terms of the GEIA. Therefore, there are no damages from with the Economic Development Adder or the so-called Capacity Expansion Option.
  - c. Mesa Power did not make the turbine deposit in for its projects in Ontario and the alleged violations did not cause Mesa Power to forfeit its deposit. Therefore, there are no damages from with the GE turbine deposit.
  - d. It is not clear that the Domestic Content Requirements actually cause any harm to Mesa Power, and even if it did that the harm was economically quantifiable without using speculative, unverified assumptions. Therefore, we do not quantify any damages associated due to Domestic Content Requirements.
- 235 We find damages are limited to TTD and Arran sunk costs of \$6,420,000 and future losses of \$6,909,000,<sup>267</sup> of which the sunk costs are more tangible, but subject to verification and audit. The future losses are based upon speculative assumptions, but less so than the other Projects. If both categories are considered, total potential damages would be \$13,329,000.

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<sup>266</sup> BRG Revised Damages Analysis, Technical Annexes 2M and 3M show the estimated damages as of July 4, 2011. Technical Annexes 2N and 3N provide the estimated damages as of January 21, 2010.

<sup>267</sup> BRG Revised Damages Analysis, Technical Annexes 2M and 3M.

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I confirm that the foregoing report and the opinions and conclusions stated herein are accurate in my independent judgment based on the information available to me as of the date of this report.

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Christopher Goncalves  
February 28, 2014