ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Sch.B, as amended;

AND IN THE MATTER OF an Application by Union Gas Limited for an Order or Orders approving the clearance and disposition of certain deferral and variance accounts, and approving the sharing of earnings pursuant to a Board-approved earnings sharing mechanism.

NON-CONFIDENTIAL REDACTED FINAL ARGUMENT ON BEHALF OF THE SCHOOL ENERGY COALITION

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1 INTRODUCTION AND SUMMARY

1.1 *Introduction*

1.1.1 On May 9, 2012 Union Gas Limited filed an Application to clear its deferral and variance accounts for 2012, including the calculation of its earnings sharing, and the true-up of certain of its 2011 DSM accounts. The process included extensive interrogatories and an unsuccessful ADR. Certain issues were not disputed by the intervenors or Board Staff. The remaining issues were considered in a three-day hearing.

1.1.2 This is the Final Argument of the School Energy Coalition.

1.1.3 The ratepayer groups who intervened in this proceeding have followed their normal practice of working together throughout the hearing to avoid duplication, including discussing issues and exchanging drafts or partial drafts of their final arguments. We have been assisted in preparing this Final Argument by that co-operation amongst parties. However, due to the confidentiality claim by the Applicant with respect to much of the CPSV evidence, SEC has not been able to share drafts of this full Final Argument with any other parties. Only a limited version, excluding key parts of Section 3, could be shared.

1.1.4 SEC's primary concern in this proceeding is with respect to the claims for clearance of the DSM accounts, and it is in that area that we focus most of our submissions. For the other important issues that remain in this proceeding, we have largely relied on others. Silence with respect to any issue should not be interpreted as agreement with the Applicant's position on any issue.

1.2 *Summary of Submissions*

1.2.1 This Final Argument contains an analysis of the issues in this proceeding. The following is a summary of that analysis.

1.2.2 ***Nature of the DSM-Related Relief Sought***. The DSM claims of the Applicant can be divided into two parts:

(a) true-up of certain of the 2011 claims, which have already been cleared provisionally in EB-2012-0087; and

(b) provisional and/or final clearance of the 2012 amounts in the DSM accounts.

1.2.3 ***Basic Problem***. SEC's substantive submissions focus on the 2011 custom projects: specifically, the assumptions used by the Applicant and by its verification contractors, and apparently accepted by the Auditor, to calculate the results achieved for those

projects. In 2011 those results were measured using the total resource cost test (TRC).

1.2.4 Fundamentally, Union appears to be expanding the concept of "free ridership" to remove most of the need for a causal connection between the Union Gas DSM Programs and the conservation measures implemented by customers. It appears thjat, in the Applicant's view, Union Gas should get credit for savings, even if Union's programs did not cause the savings, and even if in some cases the savings did not actually happen. The blanket 54% free ridership rate applied to all custom projects means – on Union's theory of free ridership - that causal relationships between programs and results are no longer relevant.

1.2.5 This is seen in the Application in two different ways.

1.2.6 First, Union appears to believe that they should get credit for all conservation activities by industrial and commercial customers, even if Union Gas knew or ought to have known that the conservation activities would have happened anyway.

1.2.7 Second, Union appears to take the position that calculation of the savings that actually take place as a result of Union's DSM Programs should not consider what the customer would otherwise have done, but should be limited to reviewing the maximum technically possible savings arising out of the measures implemented by the customer. Their reason for this is that any other impacts on the calculation of the savings should be considered to be part of free ridership.

1.2.8 ***Known Free Ridership.*** The first problem is one of "known free ridership". There are numerous examples in the evidence of projects where any reasonable person – including Union - would believe that Union Gas had no actual impact on the actions of the customer. Examples include customer-initiated steam leak repair programs already in place, programs that were essentially identical in previous and subsequent years. The payment of incentives makes no difference to what the customer does, but Union claims large shareholder incentives.

1.2.9 Union Gas believes that situations such as this are covered by the 54% overall free ridership rate. SEC disagrees. The free ridership rate is intended to capture situations in which Union pays incentives in good faith, thinking they are facilitating conservation activities, but in fact the customer is taking advantage of the program and receiving their incentive for something they would have done anyway. It is not intended to allow Union to focus their efforts on paying ratepayer money to customers with foreknowledge that they are not achieving any incremental efficiency benefit.

1.2.10 ***Baselines, Effective Useful Life, and Persistence.*** The second problem is one of calculation of savings. The basic principle should be that the gas usage with the Union-induced conservation measures in place is compared to the gas usage had the Union program not been there. In SEC's submission, Union and its verification

contractors are supposed to answer the question: "How do the results compare to what otherwise would have happened?" Instead, they answer the question: "How much technical savings arise from the conservation measures relative to the existing status quo?" Union claims that any other aspects of the calculation are subsumed in the concept of free ridership. SEC disagrees.

1.2.11 By way of example only, if Union Gas convinces an industrial customer to implement new, efficient equipment (with a 20 year life) in 2011, instead of waiting until they would normally have done so, in 2017, SEC believes that the savings from the program last for 6 years. Union believes that the savings last for the life of the equipment, and the last 14 years are accounted for in the free ridership rate.

1.2.12 SEC submits that the Board's DSM Guidelines are intended to incent Union Gas for savings they actually cause to happen. The review and audit system are designed to measure actual savings, not fictional savings. In this example, an advancement of a measure only generates savings for the period of the advancement, and that's all that should be incented. The same principle applies in other cases where the baseline or base case is not realistic. There are many examples in the Union custom projects.

1.2.13 ***DSM Issues - Conclusion.*** SEC submits that the Board should respond to the Applicant's requests for clearance of the DSM deferral and variance accounts as follows:

(a) ***Account 179-115 – 2011 SSMVA***. Reduce the amount of the SSM from $9,243,367 to an estimated $5,558,270, a net reduction of $3,685,097[1], representing the impact of reducing the large industrial component of the claim by 50% It is submitted that the evidence shows an overstatement of this claim that is at least this large.

(b) ***Account 179-75 – 2011 LRAMVA.*** Direct the Applicant to recalculate the 2011 LRAM by removing 50% of the large industrial volumes, consistent with the proposed SSM treatment. This will result in a further refund to ratepayers, estimated to be approximately $58,400.

(c) ***Account 179-111 – 2011 DSMVA.*** Direct the Applicant to recalculate the 2011 DSMVA on the basis that half of the large industrial volumes were not achieved. This may result in all or part of the 2011 overspending no longer qualifying for DSMVA treatment. Therefore, recovery of that overspending from ratepayers may not be allowed.

(d) ***2012 DSM Accounts.*** Deny recovery of these amounts at this time, as the Applicant has not complied with the current DSM Guidelines relative to the

[1] As proposed in Section 3.6.7, this is an estimate by SEC, and should be calculated with correct data by Union in preparing its draft rate order.

evidence required to support clearance of these accounts. The Applicant would not be precluded from filing a subsequent application for these amounts with a proper evidentiary base.

1.2.14 ***Optimization Activities.*** SEC believes that all of the gas supply optimization activities discussed in this proceeding were, in essence, for account of the gas supply and transportation customers. Those are the customers that pay for all of the costs associated with the gas supply plan, and any savings that arise through its optimization should go to ameliorate their costs.

1.2.15 ***Audited Regulatory Statements.*** SEC agrees with LPMA and others that it is appropriate for the Board to relieve Union of this obligation. The statement preparation would require financial auditors to make judgments outside their area of expertise, i.e. relating to regulatory issues and principles. The value would therefore be negligible, but the cost would be substantial.

1.2.16 ***Deferral Clearing Variance Account.*** In our view, the Board should only consider adjusting the terms of an IRM plan after the fact only if the result of the IRM is manifestly unfair, and the proposed adjustment is more consistent with the spirit and intent of the IRM plan than the result that would arise without the adjustment. In this case, the proposal to remove volume risk from the utility relating to deferral and variance account clearances is obviously inconsistent with the intent of the IRM plan, in which Union has both the risk and reward associated with volume variances.

2 DSM PRINCIPLES AND CONCEPTS

2.1 ***General***

2.1.1 The problems that have surfaced in this proceeding relate to five interrelated DSM concepts or principles: free ridership, baseline or base case, effective useful life, persistence, and advancement.

2.1.2 Before looking at the specific evidence in this proceeding, it is useful to consider what these concepts mean, and how they are related each to the other.

2.2 ***Free Ridership***

2.2.1 Free ridership is the first of these concepts.

2.2.2 The Board says, in the DSM Guidelines:

> *"A free rider is a "program participant who would have installed a measure on his or her own initiative even without the program.""*[2]

2.2.3 In the most basic terms, some customers will accept an incentive payment or other valuable assistance from the utility, even though they would have done what is being incented without the incentive.

2.2.4 There are actually, though, two types of free ridership. The first type, which we can call "conventional free ridership", is the one with which we are all familiar. The customer applies for the incentive, and doesn't tell the utility that the measure was already in their plans, or that their behaviour was not affected by the utility program.

2.2.5 Utilities regularly do studies to assess what percentage of program participants would have implemented the efficiency measures in the program anyway. These are normally done by way of survey. Surveys of this nature are designed to identify clues that program participants who nominally appear to have been influenced by the program were actually free riders.

2.2.6 There is a second type of free rider, however, which could be called "known free riders". Depending on how the utility rolls out a program, in the most extreme case it could simply identify those who have placed an order for an energy efficient product – perhaps through getting a list from manufacturers or distributors - and pay them an incentive amount even though it is having no impact on their behaviour. The incentive amount comes from the ratepayers, but by bringing these free riders into the program,

[2] Report of the Board EB-2008-0346, *DSM Guidelines for Natural Gas Utilities*, June 30, 2011 ("DSM Guidelines"), p. 22, quoting Dan Violette from a 1995 report for the International Energy Agency.

the utility qualifies for a shareholder incentive as well, which is incremental funding from the ratepayers direct to the shareholder.

2.2.7 It would be an unusual case in which a utility deliberately targets known free riders in this crass a manner. On the other hand, with large industrial customers utilities can develop a working relationship with those customers in which the utility identifies activities already planned by the customer that qualify for customer incentives. In the simplest case, the customer says "We plan to do A, B and C this year", and the utility representative says "Let me know when you do B, because we can give you a $40,000 incentive for that".

2.2.8 Another example might be the utility representative saying "Do you have a program to repair your steam leaks?", the customer saying "Yes, we typically repair about 250 per year under our normal program", and the utility representative saying "Let's see what kind of customer incentive we can give you for that".

2.2.9 Known free riders are quite different from conventional free riders. In the case of conventional free riders, the utility – using funds collected from the ratepayers – is honestly trying to influence the behaviour of customers to increase energy efficiency. Because it is not always easy to change customer behaviour, even with incentives, a utility that is successful in doing so is given a shareholder incentive as a reward for that success. The purpose of the customer incentive is to promote the public interest in energy efficiency, and the fact that there will be some free riders is an unintended but predictable consequence of that program. The actions of the utility are still directed at the public interest, and the existence and number of free riders is not within their control.

2.2.10 The situation is different with known free riders. Where a utility knows, or ought to know, that giving the customer an incentive is not causing any incremental efficiency to take place, the purpose of paying the customer is not energy efficiency, nor is it in the public interest. The payment of funds collected from the ratepayers in those circumstances is for only one purpose: generating an incentive for the shareholder by gaming the DSM system. If in that case the customer is given $50,000, and the shareholder "earns" an incentive of $500,000, the ratepayers spend $550,000 for nothing. No benefit is achieved, except for the shareholder.

2.2.11 In our submission, if a utility knows, or ought to know, that a customer would proceed with an energy efficiency measure without a utility incentive, it is inappropriate for the utility either to pay a customer incentive to the customer, or to claim credit for savings from the measure and seek an incentive. This would no longer be an unintended consequence of a program that is otherwise intended to generate efficiency. Once the utility knows in advance that the money is being wasted, it should not be doing so.

2.2.12 To the best of our knowledge, this is the first time that the issue of known free riders

has come up with respect to the Ontario gas distributors. SEC always believed that the two gas utilities declined, as a matter of internal policy, from allowing customers to participate in their DSM programs if the utility knew that they would be free riders on the program. The literature on conservation and energy efficiency programming is replete with references to program design and other choices that will reduce the likelihood of program participation by customers who are probably or certainly free riders[3]. It is common for utilities to refuse to allow known free riders to participate.

2.2.13 On the other hand, if in their program design and implementation, the Ontario gas distributors believe that promoting DSM incentives to known or highly likely free riders is an acceptable use of ratepayer funds, this is a significant issue.

2.2.14 SEC submits that this is not an acceptable use of ratepayer funds, and the Board's DSM Frameworks – either previous or current - do not permit this approach. In our submission, the free rider percentage used to adjust program results is not intended to capture known free riders, and the Applicant cannot rely on that percentage to excuse paying ratepayer funds with no reasonable prospect of any benefit.

2.3 ***Baseline***

2.3.1 The second concept is baseline, also referred to as "base case".

2.3.2 The basic idea is that, in a bottom up approach to calculating the savings from energy efficiency programs, the results of a program have to be compared to a baseline or base case, i.e. what would have happened if the program had not been in place. The delta between the program and no-program scenarios is the savings caused by the program, and is thus the justification for the spending of funds collected from ratepayers on the program.

2.3.3 This is described in the DSM Guidelines:

> *"Estimated savings and costs of DSM programs need to be defined relative to a frame of reference or "base case" that specify what would happen in the absence of the DSM program. At a minimum, the base case technology should be equal to or more efficient than the technology benchmarks mandated in energy efficiency standards, as updated from time to time."*[4]

2.3.4 The most straightforward case would be that of a new construction project, in which the builder has to choose the heating system to be installed. The utility incents the builder to install a high efficiency system. Without the incentive, the builder would

[3] For example, it is common in many jurisdictions to exclude from programs measures that have very short paybacks, because of the high probability that they would be adopted without the need for incentives. See, e.g. Evaluation of FEECA, Univ. of Florida Public Utility Research Center, December 2012, p. 90.
[4] DSM Guidelines, p. 19.

have installed something else, typically the system required by the building code, or the system that has been adopted as the standard in the marketplace. The savings are a straight-up comparison between the efficient gear and the less efficient gear that would otherwise have been installed. Typically, the period over which the savings will occur is the same in both cases.

2.3.5 One step more complicated is a replacement of a piece of equipment at the end of its useful life. At that time, the existing (old) equipment has an efficiency of 70. The building code requires new gear to have an efficiency of 80. The efficient equipment has an efficiency of 95. The baseline is not the existing equipment, of course, because it is being replaced with at least 80 in any case. The efficiency of the existing equipment is therefore irrelevant to the calculation. The baseline is the new gear required by the building code, i.e. what would have happened but for the program. The savings are the difference between 95 and 80, i.e. the delta between efficient case and base case. Again, the period of the savings is usually the same.

2.3.6 Baseline is relatively easy to calculate when a piece of equipment must be installed in any case, and there is a simple choice between more or less efficient options. Baseline is somewhat more difficult to calculate if a) the equipment being replaced is not at the end of its useful life, or b) the measure is not a piece of equipment, but an action or behaviour, or c) the gas usage in the future will be different than the existing gas usage, so that the pattern of savings will change over time. In these situations, issues of effective useful life, persistence, and advancement arise.

2.4 ***Effective Useful Life***

2.4.1 Whether savings are measured using the TRC metric in place until 2011 (net present value of future benefits) or the volume scorecard metric in place starting in 2012 (lifetime cumulative gas savings), an important part of the calculation is the period of years over which the savings will arise for any given measure. That period is called the EUL (effective useful life) of the measure.

2.4.2 There are three related ideas that are part of this analysis.

2.4.3 First, there is the technical life of the measure. For equipment, that is the number of years until it normally must be replaced, essentially equivalent to the period over which depreciation would be calculated. For things like repairs, that is the period until the repair is likely to have to be done again.

2.4.4 Second, there is persistence. As discussed below, persistence is the period that the measure will actually be functional, whether or not it is as long as the technical life of the measure.

2.4.5 Third, there is advancement. Advancement relates to both baseline and EUL. It

describes a situation in which a measure would have been implemented in a future year, but is advanced to a current year. The life, for results measurement purposes, only continues until the time the measure would have been implemented anyway. This is often treated as a type of persistence (see below).

2.4.6 Union and its CPSV contractors have treated the useful life of custom project measures as being the technical life, and have ignored the concepts of persistence and advancement. In doing so, SEC submits that they significantly overstate the savings from many custom projects.

2.5 ***Persistence***

2.5.1 Persistence is the period a measure can reasonably be expected to produce savings relative to the base case.

2.5.2 The DSM Guidelines provide an explanation of persistence:

> *"Persistence of DSM savings can take into account how long a DSM measure is kept in place relative to its useful life, the net impact of the DSM measure relative to the base case scenario, and the impact of technical degradation. For example, if an energy efficient measure with a useful life of 15 years is removed after only two years, most of the savings expected to result from that installation will not materialize…*
>
> *Another aspect that can be considered as part of the persistence factor is whether a program participant would have implemented the DSM measure on its own in the future (e.g., in two years' time), but their implementation date was accelerated by the program offering. In this case, the savings resulting from the DSM program would only accrue for up to the period by which the adoption was accelerated (e.g., two years), instead of the entire useful life of the measure."*[5]

2.5.3 A simple example of persistence is low-flow showerheads. When these measures were first provided to customers, some customers didn't like them, and so removed them and re-installed their older, less efficient showerheads. A measure that had a technical life of 15 years actually lasted less than that on average. Throughout North America, gas utilities did studies to determine how long, on average, the low-flow showerheads continued to be used. That lesser number was the period over which savings were calculated.

2.5.4 As noted above, the Board defines persistence to include advancement. We discuss that further below.

[5] DSM Guidelines, p. 24.

2.5.5 During re-examination, Union witnesses noted[6] that the Board expects the utilities to do a persistence study for custom projects, to be applicable for future years. That study has not yet been done. This was put forth as a reason not to challenge how persistence is handled currently.

2.5.6 The study the witnesses refer to deals with a different aspect of persistence. The Board's definition of persistence includes changes in the pattern of future gas usage that affect the calculation of savings. It is that component of persistence on which the Board wants a study of custom projects persistence.

2.5.7 The Board describes this requirement in the DSM Guidelines as follows:

> *"Another important consideration in assessing the persistence of savings is the potential changes in usage pattern. For example, large custom commercial and industrial DSM projects with expected useful life of 20 years or more may not fully materialize if the business benefiting from the custom measure operates at lower levels or closes down its processes within that time period. Given the natural gas utilities' 15 years of experience delivering natural gas DSM programs in Ontario, the natural gas utilities should undertake an assessment of the historical persistence of savings of custom DSM projects and commercial and industrial DSM programs in general and provide the resulting information to and consult with their stakeholders to determine whether any persistence adjustments to the savings of those programs would be warranted going forward."*[7]

2.5.8 A study will indeed take place in the future. That has nothing to do with the issues in this case.

2.6 ***Advancement***

2.6.1 Efficiency measures are not always implemented in new construction, or at the end of the life of old equipment. Sometimes old, inefficient equipment can be repaired or replaced before the end of its life, or before it would otherwise have been repaired, to generate efficiency now rather than later. This is referred to as advancement, and as noted above is considered by the Board to be a component of persistence.

2.6.2 In the DSM Guidelines, the Board describes advancement, and how to deal with it, as follows:

> *"A third type of equipment cost is the cost of the equipment that is assigned to a project when a replacement decision is "advanced" because of a natural gas utility's DSM programming efforts. Advanced replacements*

[6] Tr. 3:142.
[7] DSM Guidelines, p.24-25.

> *occur when an older, but still working lower efficiency technology, is replaced with a more efficient piece of equipment.* ***In these cases, the natural gas utilities should adjust both the equipment life and the project cost to reflect the advancement****."*[8] *[emphasis added]*

2.6.3 If an industrial customer has an inefficient boiler, it may expect to replace it in the ordinary course with a new boiler (more efficient) in ten years. A utility incentive could help convince them to accelerate or advance the replacement to today, thus starting the efficiency earlier. In that case, the useful life, or persistence, of the measure would be ten years, even though the equipment itself might last much longer.

2.6.4 We note that this is not free ridership. The customer is not free riding the program. Rather, the customer is generating efficiency and is being incented for doing so, but it is only for the period of the advancement. The program is working. It is just not working for the entire life of the new equipment. It is only producing savings would otherwise have been implemented.

2.6.5 There is a second aspect of advancement, which shows the relationship between advancement and the concept of baseline. Sometimes the new equipment in an advancement is not only installed earlier, but is also better than what would otherwise have been installed when the installation eventually occurred. The Board describes this in the DSM Guidelines:

> *"More generally, an important consideration when assessing the persistence of savings is the fact that some energy efficient equipment have a much longer life than the base case equipment. For example, if an efficient natural gas furnace (model A) with a 25-year useful life is used to replace a homeowner's furnace (model B) with a remaining useful life of 5 years, an assumption must be made with regard to what would have happened under the base case. Would the average homeowner have opted to replace its furnace for a more efficient furnace (model C) on its own in five years from now? If so, estimated savings for the first five years should be based on the savings of model A compared to model B, but the savings over the next 20 years should be calculated by comparing model A to model C."*[9]

2.6.6 It is important to note the Board's expectation that the utility will develop a reasonable assumption of what would otherwise have happened. Continuation of the savings compared to the existing equipment for the entire life of the new equipment is not reasonable in these circumstances. **This is one of the key errors that Union and its CPSV contractors made in their custom project savings calculations.**

[8] DSM Guidelines, p. 13.
[9] DSM Guidelines, p. 24.

3 APPLICATION OF THE PRINCIPLES AND CONCEPTS

3.1 *Introduction*

3.1.1 This Section is intended to apply the principles and concepts set out in Section 2 to the evidence in this proceeding relating to 2011 DSM results. It will also consider the separate question of how to deal with the 2012 results.

3.2 *Relief Requested*

3.2.1 The Applicant is seeking clearance of three different types of amounts for each of 2011 and 2012:

(a) ***Shareholder Incentive.*** In 2011, this incentive is paid through the SSMVA, which was provisionally cleared last year, and is now being trued up. 2011 was the last year of the SSMVA. In 2012 this is done through the DSMIDA under the new DSM Guidelines.

(b) ***Lost Revenue Adjustment Mechanism***. One account, the LRAMVA, covers both 2011 and 2012. 2011 has been cleared and is being trued up. 2012 is new.

(c) ***Demand Side Management Allowed Overspending***. This single account, the DSMVA, was cleared in 2011, and may now have to be trued up. For 2012, the claim is new.

3.2.2 ***2011 True-ups***. During cross-examination on Day 3 of the hearing, SEC walked the witnesses through the various components of the claims being made at this time[10]. The claims relating to 2011 can be summarized as follows:

(a) ***2011 SSMVA.*** This is the account that recorded the shareholder incentive for DSM results under the old framework, applicable to and including 2011. In EB-2012-0087 the Applicant received approval to recover $9,243,367[11] from ratepayers on a provisional basis, as the audit of that amount had not yet been filed. In this proceeding, the Applicant is seeking approval of that amount[12], and truing up the parts of that amount recovered from different rate classes[13].

(b) ***2011 LRAMVA***. This account is made up of a number of amounts, but with

[10] Tr. 3:40-47.
[11] K3.1, p. 13, excerpt from EB-2012-0087 evidence.
[12] Tr. 3:45
[13] Tr. 3:40.

respect to 2011 programs it has two amounts. First, it has ($1,626)[14] for the true-up of the amount cleared in 2011. In 2011 the unaudited amount was $822,251[15], and after audit that is reduced to $820,625. The latter amount is being presented for approval by the Board in this proceeding. If the TRC for SSM purposes is adjusted, this figure may also be affected[16]. Second, it has $1,613,254[17], which is the impact of 2011 program results on 2012 volumes. Any adjustment to the 2011 LRAM volumes would have an impact on this number as well.

(c) ***2011 DSMVA***. This account was cleared on an unaudited basis in EB-2012-0087 in the amount of $3,081,000[18] recovered from the ratepayers. The audited figure was the same, so the Applicant submits there is no true-up required[19]. However, in the event that the adjusted TRC for 2011 is reduced significantly, the Applicant may not qualify for recovery of overspending, and this would have to be recalculated accordingly.

3.2.3 ***2012 Provisional Clearances.*** The Applicant is seeking to clear the following amounts relating to their 2012 program on a provisional basis, based on unaudited results, as it has done in the past:

(a) DSMIDA - $8,210,418[20]

(b) LRAMVA - $948,326[21].

(c) DSMVA - $368,119[22].

3.2.4 The Applicant admits that they have not filed the DSM Annual Report, the Audit Report, or the Audit Summary for 2012[23]. During the course of the oral hearing it was revealed that these documents have been completed, and could be filed[24]. However, because there would not have been an opportunity in this proceeding to test this evidence through discovery and cross-examination, the Board has determined that it

[14] A/1/A. Sch. 4, p. 2.
[15] K3.1, p. 9 and Tr. 3:42.
[16] Tr. 3:47.
[17] A/1/A, Sch. 4, p. 2, Col. F, and Tr. 3:42.
[18] K3.1, p. 12.
[19] Tr. 3:44
[20] A/1/A, Sch. 9, UPDATED This amount has been reduced by $388,000 from the amount originally claimed as a result of the audit of 2012, but the Audit Report is not filed in this proceeding.
[21] A/1/A, Sch. 4, p. 3, UPDATED This amount has been reduced by $69,000 from the amount originally claimed as a result of the audit of 2012, but the Audit Report is not filed in this proceeding. There is, in addition to this, the amount of $1,613,254 for the 2012 impact of 2011 programs (A/1/A/Sch. 4, p. 2), discussed above. This would be subject to adjustment if the 2011 LRAM volumes are adjusted.
[22] A/1/A, Sch. 5.
[23] Tr. 3:27.
[24] Tr. 3:28.

was premature to file them in this proceeding.

3.3 ***The Various Roles***

3.3.1 The review of the Applicant's DSM results from custom projects has four steps, from four different entities, before being seen by the Board. The ability of each entity to do a full review, and the independence of each review, is an underlying issue in this proceeding.

3.3.2 ***Union Gas***. The Applicant records the results from each custom project in its tracking system, and its employees review the custom project claims for reasonableness[25].

3.3.3 Union Gas employees have full access to all relevant information relating to each project. However, they are not independent. It is in the Applicant's interest to report the maximum justifiable DSM savings from each project.

3.3.4 ***CPSV Contractors.*** Starting in the fall of each year, the Applicant hires external reviewers to verify the results for a statistically valid sample of custom projects. This is not an audit[26]. The external reviewers are hired by Union, and their work is supervised by Union[27]. The results of their work are included in Union's DSM Annual Report[28].

3.3.5 The two CPSV contractors undoubtedly have significant expertise in this area[29]. Further, there is no evidence that the Applicant limited the access of the CPSV contractors to information they needed to do their work.

3.3.6 However, it is also clear that the information they used was limited by the scope of their jobs, as they perceived it. For example, it was clear that the cost of the measures as claimed by the customer was generally accepted, even when it appeared to be incorrect[30]. Similarly, it looked very much like the customer's claims related to gas usage patterns were sometimes accepted, even if inconsistent with the empirical evidence seen by the CPSV contractor[31].

3.3.7 Of more concern than either of these, though, was the assumption by the CPSV contractors that the life of the measure would be equal to the technical life of the efficient equipment or repair[32]. This appeared to be built into the scope of their work

[25] Tr. 3:30, 135.
[26] Tr. 3:62.
[27] Tr. 3:53, 63, 70.
[28] Tr. 3:56.
[29] Mr. Clarke, for example, is a leader in the field throughout North America, which he admits only reluctantly, see Tr: 3:24.
[30] Tr. 3:108.
[31] Tr. 3:122.
[32] See, e.g. Tr. 3:89, 93.

(i.e. looking at the baseline assumption critically was not part of the analysis), and so may have been a limitation on the information they considered.

3.3.8 In addition, there is an obvious question of the independence of the CPSV contractors. Although they did not appear, on the stand, to be overly deferential to the utility[33], they did not do an audit, and their work was neither tested nor supervised by the Auditor (see below).

3.3.9 In SEC's view, the sole value of the CPSV contractors in this case was to spot technical errors in the calculations by customers and by Union employees. Thus, they served to improve the *engineering accuracy* of the claimed results[34], but did not in any way help to improve, demonstrate or test the *reasonableness* of the claimed results.

3.3.10 ***The Auditor.*** Regulation of DSM activities by the Board has been dramatically improved in recent years by its ability to rely on the expertise and independence of specialized DSM auditors, supervised by a committee of the utility and stakeholders.

3.3.11 The DSM Guidelines provide assistance in understanding the role of the Auditor. Although the DSM Guidelines are applicable only starting in 2012, it is submitted that the description of the role of the Auditor therein is intended to be descriptive of the existing role and expectation, and not an expansion of that role. The description includes:

> *"At a minimum the independent third party auditor should be asked to:*
>
> - *Provide an audit opinion on the DSMVA, LRAM and incentive amounts proposed by the natural gas utilities and any amendment thereto;*
> - *Verify the financial results in the Draft Evaluation Report to the extent necessary to express an audit opinion;*
> - *Review the reasonableness of any input assumptions material to the provision of that audit opinion; and*
> - *Recommend any forward-looking evaluation work to be considered.*
>
> *The independent third party auditor is expected to take such actions by way of investigation, verification or otherwise as are necessary for the auditor to form its opinion.* ***Custom projects should be audited using the same principles as any other programs.*** *The independent third party auditor's*

[33] Although there were some times in which Mr. Clarke appears to shift into an advocacy role on behalf of Union. See e.g. Tr. 3:107.
[34] Which Union appears to have admitted. See Tr. 3:103.

> *work will culminate in its final audit report (the "Audit Report").*[35] *[emphasis added]*

3.3.12 In short, the Board should not itself have to do as significant or time-consuming an investigation into DSM claims as it did in the past, because it can rely on an independent expert opinion as to those claims. In this respect, it is much like a financial audit. The Board can rely on certain aspects of the financial results of a utility, because an independent audit firm has opined on their financial statements according to rigorous rules relating to standards and independence. If the DSM audit works as it should, the same level of reliance is possible.

3.3.13 In this case, there are two reasons to doubt whether the Board can rely on the Auditor's opinion as it relates to the Applicant's custom projects.

3.3.14 First, the Auditor was not presented as a witness. It is all well and good to present an engineer who assisted the Auditor, but the opinion on which the Board should be able to rely is not that of the engineer, it is that of the Auditor, EcoNorthwest.

3.3.15 SEC notes that we made a timely request to have the Auditor made available for cross-examination[36]. We also note that, while it is true that one of the employees of the audit firm had left the firm, the officer who was the lead on the audit was still with the firm, and there was no reason given for why that person was not presented as a witness[37].

3.3.16 In our submission, failure by Union to make the Auditor available for cross-examination means that Union cannot legally rely on the opinion given by the Auditor. The Board should, in SEC's view, give no weight to the claimed "fact" that the Auditor opined on the results, since that opinion has not been tested in a hearing despite a request by a party to do so.

3.3.17 Second, the Auditor did not in any case take the necessary steps to "investigate and verify" the work of the CPSV contractors. Not only did the Auditor not supervise their work, but the Auditor did not ask even the most obvious questions about the assumptions the CPSV contractors made or accepted. In fact, in cross-examination a lawyer untrained in the technical aspects of the projects was able to ask hundreds of questions about assumptions that clearly needed to be addressed[38]. The witness admitted that **none of those questions had been asked by the Auditor or its engineering advisor**[39].

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[35] DSM Guidelines, p. 41.
[36] See SEC's letter dated September 18, 2013.
[37] Tr. 3:26.
[38] And in at least one case the witness admitted that the questions were good ones – Tr. 3:116.
[39] Tr. 3:118.

3.3.18 SEC submits that the work of the CPSV contractors, which was itself neither complete nor independent, was not properly reviewed or tested by the Auditor as required by Board policy.

3.3.19 ***Audit Committee.*** The final check and balance on the process is that the work of the Auditor is supervised by a committee that includes knowledgeable intervenor representatives. In this case, the audit committee included Vince de Rose, from CME, Julie Girvan, from CCC, and Chris Neme, from GEC. All three have experience in the review of DSM results, and Mr. Neme in particular is well-recognized as one of the top experts in the field.

3.3.20 The problem is that, with respect to the custom projects results, the members of the audit committee other than Union did not have access to the CPSV reports[40], and had no knowledge of the assumptions being used by the CPSV contractors, during the course of the audit. The first time the CPSV reports were available to them was in this proceeding, and only Mr. de Rose has actually seen them even now.

3.3.21 This lead to the result that the members of the audit committee were unable to guide the Auditor in its review of this work. The many questions that were asked in the hearing could have been asked during the audit, and in our submission would likely have been asked if the audit committee members had seen the CPSV reports, and thereby had been able to properly supervise the Auditor. Even though the Auditor failed to ask the questions that needed to be asked, the experienced members of the audit committee would have asked those questions had they seen the assumptions that were being made.

3.3.22 We note that the Applicant believes the members of the audit committee could have asked questions about the custom projects, but did not[41]. In our submission, it is unreasonable to expect the members of the audit committee to assume, in the absence of having any information on the work of the CPSV contractors, that:

(a) the Applicant was providing incentives to customers that it knew or ought to have known were going to implement the efficiency measures anyway;

(b) the Applicant was claiming shareholder incentives that were ten or twenty times the size of the incentives given to customers, for projects that were already in the customers' plans; and

(c) the Applicant and its CPSV contractors were assuming baselines that did not take into account either persistence or advancement.

3.3.23 In theory, there have been many layers of review of the DSM results**.** SEC submits

[40] Tr. 3:70.
[41] Tr. 3:71, 73.

that, on the evidence before this Board, in actual fact there has not yet been an independent review of the custom project results by anyone who had access to the information necessary to carry out such a review. That, unfortunately for the Board, leaves it up to the Board to make the first independent determination as to whether these results are reasonable.

3.4 ***Known Free Ridership***

3.4.1 The largest project Union had in 2011 was, in SEC's submission, a project in which Union knew or ought to have known that the customer was a free rider.

3.4.2 The project in question is #2011-IND-0186[42]. It was more than 6% of Union's total TRC, and 10% of overall gas savings[43].

3.4.3 The project was the repair in 2010 of 707 steam leaks in the customer's industrial facility. The original claim was for a TRC of $11,788,445, but that was increased by the CPSV contractor, Mr. Clarke for Diamond Engineering, to $21,298,335[44]. The customer was paid an incentive of $[redacted], helping to defray part of their $[redacted] budget. As a result of this project, Union is claiming a shareholder incentive of $[redacted] [45].

3.4.4 The problem is, as both Mr. Clarke and Union admit[46], that the repair of 707 steam leaks was part of an ongoing program, following an internal policy and strategy, and using a formal methodology based on plume length to identify the leaks to be repaired. After the 707 steam leaks were repaired, in 2011 Union qualified this as a project[47], paid an incentive to the customer, and claimed its shareholder incentive.

3.4.5 Further, this very company had been doing steam leak repairs under the same program in prior years, and has done so in subsequent years[48]. This is an ongoing and regular activity for the customer. No evidence was offered by the Applicant that this fact was hidden from either Union or Mr. Clarke. Both knew that this was an ongoing annual program, and that 2011 was no different from other years.

3.4.6 In addition, Mr. Clarke admits that the formal protocol used by the customer to determine which steam leaks to repair was at least in part based on the severity of the leaks, and the leaks in question were quite severe[49].

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[42] See. Ex.4.2, Attach. 6, p. 12 of 66 et seq with respect to this discussion.
[43] Tr. 3:100.
[44] Ex. 4.2, Attach 10, p. 2.
[45] Tr. 3:100.
[46] Tr. 3:96, 98.
[47] Tr. 3:97.
[48] Tr. 3:96, 101.
[49] Tr. 3:98.

3.4.7 What is perhaps more surprising for this project, Mr. Clarke's verification activity resulted, not in a decrease in TRC, but in TRC being almost doubled. The reason, Mr. Clarke says, was plume length. The customer claimed that the average plume length for the steam leaks repaired was 9.9 feet, and Union's representative estimated 6.6 feet. Mr. Clarke's solution to this was to "split the difference" to $8.2 feet, increasing the TRC by about $9.5 million[50], and in the process increasing the Union shareholder incentive by about $[redacted][51] above what Union planned to claim.

3.4.8 Asked what he assumed would have happened but for the intervention of the Union DSM program, Mr. Clarke said that in his methodology, he would assume that without the $[redacted] cheque from Union Gas, this customer would not have repaired these 707 steam leaks for 20 years[52].

3.4.9 Pressed with respect to whether this work would have been done without Union's intervention, Mr. Clarke said that in order to determine causation, you would have to go back to the beginning of the relationship between Union and the customer, to see if Union had a hand in setting up the steam leak repair program[53]. There is no evidence that Union did so, and clearly Mr. Clarke made no attempt to see if that was the case. Further, Mr. Clarke admits that, for large industrial customers with big steam systems, it is "standard practice" to have a leak repair program[54].

3.4.10 It is submitted that any reasonable person looking at this customer would have concluded that they were going to repair these 707 steam leaks (and a similar number the year before and the year after), whether or not Union even talked to them. At the time the Union representative came in the front door, he or she must have, or should have, known that no incentive was required to induce these steam leaks.

3.4.11 Ms. Kulperger argued[55] that the role of the CPSV contractor is not to assess what would have happened without the program.

3.4.12 While SEC disagrees with this position (as discussed earlier), we then turned to the representative of the engineers who assisted the Auditor. They agreed that it was <u>their</u> "job to determine whether the savings were appropriate"[56], but asserted that would not include considering whether the customer would have done it anyway.

3.4.13 Challenged to explain why the utility was claiming an incentive when they had no influence on what the customer did, Ms. Lynch took the apparent position that, under

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[50] Tr. 3:99.
[51] $[redacted] at $21,298,335 TRC, increased from $[redacted] at $11,788,445 TRC.
[52] Tr. 3:101.
[53] Tr. 3:101.
[54] Tr. 3:103.
[55] Tr. 3:103.
[56] Tr. 3:104.

the rules in place for their DSM programs, they are allowed to claim TRC savings even if they know that they are having no impact on the customer's behaviour[57].

3.4.14 In SEC's submission, whether under the old DSM framework, or the new one, a gas utility is not entitled to make a claim for a shareholder incentive if they knew or ought to have known that they were not influencing the customer.

3.4.15 In the case of project #2011-IND-0186, it was obvious that these repairs would have happened anyway. The $21.3 million of TRC included in Union's claim was inappropriate.

3.4.16 We note that the same logic should apply to at least Project 2011-IND-0165[58], with a TRC claim of $2,835,583[59], Project 2011-IND-0282[60], with a TRC claim of $1,987,181[61], and Project 2011-IND-0203[62], with a TRC claim of $980,719[63]. The latter two are apparently under common ownership with Project 2011-IND-0186.

3.4.17 In dealing with the issue of known free ridership, SEC took the Board to a few examples in the Diamond Engineering report. There were also a number of places where, while the report (or the Michaels Report) does not say that the customer already had a formal repair program in place, the size of the problem (whether steam leak or otherwise) or the very short payback period, make it fairly clear that the customer did not need Union in the office to carry out the work that was done. SEC did not go through every project in the two CPSV reports, but submits that a review of both reports shows numerous examples of this additional kind of known free rider.

3.4.18 In this respect, in Florida the issue of what to do with short payback periods was addressed as follows:

> *"For example, conservation measures with relatively short payback periods could be excluded from cost-effectiveness tests based on the assumption that customers would be likely to adopt these measures even without an incentive."*[64]

3.4.19 An example of this may be Project 2011-IND-0026, Union's second largest project. While we have dealt with that project below, as an example of an unrealistic baseline, it is submitted that it could just as easily be considered one in which Union knew or ought to have known, at the outset, that the customer was a free rider relative to their

[57] Tr. 3:105-6.
[58] D4.2, Attach 6, p. 27.
[59] D.4.2, Attach 10, p. 2.
[60] D4.2, Attach 6, p. 53.
[61] D4.2 Attach 10, p. 2.
[62] D4.2, Attach 6, p. 35
[63] D4.2, Attach 10, p. 2.
[64] Evaluation of FEECA, op. cit., p. 90.

DSM program.

3.4.20 We note that, in this section (and in the following section), we have focused our discussion mainly on projects reviewed by Mr. Clarke, and have not considered as many of the projects reviewed by Michaels Engineering. This is not intended to be a statement as to the relative effectiveness of the two CPSV contractors. The impacts of the large industrial projects are much more significant, and the evidence appeared to show a more pervasive problem in the industrial projects than the commercial projects. In the interests of being practical, SEC has thus focused on the industrial projects.

3.5 ***Baseline, Effective Useful Life, and Persistence***

3.5.1 SEC considered a number of projects with questionable baselines during cross-examination. In these submissions, we will highlight three of them.

3.5.2 The first project is #2011-IND-0026[65], which was the resetting of the controls for 185 air handling units for a customer that, while classed as Industrial for this purpose, was not actually an industrial concern. Union paid the customer $40,000 as an incentive, and the customer spent $30,582 plus the time of its own staff to do the work[66]. The total calculated TRC was $20,354,344 (i.e. 1 - .54 times the total), producing a shareholder incentive of more than $[67].

3.5.3 There is considerable evidence that the customer would have done this project anyway, and didn't need Union's influence to do so. For example, Mr. Clarke admits that the customer already had building automation systems in place capable of doing what the project did, and had extensive air-flow studies relating to its buildings[68].

3.5.4 But the problem SEC is raising in this case relates to the baseline. The measure was not the upgrading of equipment, or any other change with a predictable technical life. The measure was re-setting the controls on existing equipment to operate more efficiently. While Mr. Clarke, pressed on this[69], tried to maintain that there was some new hardware component, nothing of the sort was in his report, and his answers were not credible. He admitted that in fact this was in substance a behavioural change[70].

3.5.5 SEC agrees that behavioural changes are an important aspect of DSM, and re-setting controls to operate more efficiently is a good example of that kind of DSM. Those benefits have to be measured. The problem is that identifying the base case for this category of change may be more difficult. It appears to us that neither Union nor the

[65] D4.2, Attach 6, p. 23.
[66] Tr. 3:108.
[67] Tr. 3:106.
[68] Tr. 3:106.
[69] Tr. 3:109.
[70] Tr. 3:110.

CPSV contractor put sufficient thought into how to measure the savings against base case.

3.5.6 In our submission, there were three errors here:

(a) When would these changes have taken place, but for the program?

(b) How long will the changes in settings continue in place before being altered again?

(c) How long will the building automation system last (because on its replacement the settings have to be re-done)?

3.5.7 The first error is an issue of advancement. There is evidence here that the customer was simply a known free rider, and so it would not be unreasonable simply to exclude the results. However, at the very least a customer with sophisticated building automation systems, and extensive studies of air flows, can be expected to act on that information at some point in the future. Notwithstanding that fact, Union and Mr. Clarke assumed that the customer would not implement this kind of improvement any time over the next 20 years[71]. The impact of that is that the TRC claim continues for 20 years as well, dramatically increasing the amount claimed.

3.5.8 The second error is one of persistence. The claim for this project assumes that the customer will continue with these changes for 20 years, and will not change them again in that time. Asked about this, Mr. Clarke did not have an answer, except to imply that it was somehow based on the life of the software used[72]. As he thought about it, his unusual response was that perhaps the life of the changes should be infinite[73], since they would have no reason to change the settings in the future (and presumably the customer will continue in existence for an infinite number of years). It was clear that he did not once put his mind to whether, like low-flow showerheads, air flow settings might bother users enough to have them changed back in the future. It was also clear that his 20 year assumed life had no empirical basis. It was, as he put it, a "compromise".

3.5.9 The third error is also one of persistence, but of a different kind. Mr. Clarke admitted that, if the building automation systems were replaced, the settings would have to be done again[74]. He argued "20 years is not an unusual expectation for the life of a building automation system". However, when forced to admit that these were not new, he had to say that some upgrading had been done, and so 20 years was still

[71] Tr. 3:107.
[72] Tr. 3:110.
[73] Tr. 3:110.
[74] Tr. 3:111.

reasonable[75]. In fact, as with other aspects of his evidence, it was clear that he was scrambling, and that in fact he had no idea the age or expected future life of the building automation system. It was not in his report, nor was he able to talk about it except in generalities, because he did not believe that it was part of his job to consider this sort of issue[76].

3.5.10 SEC submits that, to any reasonable person looking at the facts of this project, it is not believable that Union's $40,000 cheque caused this customer to generate over $40 million of future net benefits through spending $30,000 on something they already knew about (i.e. a payback period measured in days). Even if it is reasonable to assume that not all of the work would have been done, but for Union's intervention, or that it would have been done but at a future time, it is patently clear that the effect of Union's program was not 20 years of savings at $2 million a year.

3.5.11 In our submission, the overriding flaw in this claim is that neither Union nor the CPSV contractor attempted to estimate what would have happened but for the program. The Board's policies demand that they do so, but not only did they fail to do so; at least with respect to Mr. Clarke he did not seem to understand why that would be necessary[77].

3.5.12 The second example in this area is Project 2011-IND-0286[78], another project to repair steam leaks. We have referred to this earlier as a project that should probably be considered an example of a known free rider. However, in addition it has an issue of useful life.

3.5.13 That project, which involved a TRC claim of $2,351,571, included repair of three steam leaks with plumes of 20 feet. Asked about this, Mr. Clarke admitted "that's a very big plume"[79], but still tried to argue that it did not need to be repaired.

3.5.14 The problem here is not whether this customer was a free rider because of the severity of the leaks. The customer may have been a free rider because it already had a leak repair program in place, as discussed earlier, but even if it did not have that program, not these leaks were very severe. To assume that they would not have been repaired in 2011 as Mr. Clarke did[80], while stretching credulity, is not the same as assuming that they would not be repaired for 20 years ([redacted][81], for all that time, and thus costing in TRC terms about

[75] Interestingly, when we asked Mr. Kroll of Michaels Engineering about a building automation system, he admitted that the literature in the field applies a 15 year life to new building automation systems. See Tr. 3:128.
[76] Tr. 3:93.
[77] See Tr. 3:108.
[78] D4.2, Attach 6, p. 53.
[79] Tr. 3:117.
[80] Tr. 3:118. This is essentially the basis of the Diamond Engineering methodology, used in all projects. See Tr. 3:93.
[81] D4.2, p. 55.

$630,000). That is an obviously flawed base case. Those leaks would certainly have been repaired long before 20 years were up[82].

3.5.15 What is clear here, as elsewhere, is that neither Union nor the CPSV contractor put their minds to what the reasonable base case should be. They assumed that leak repairs last 20 years (presumably because on average they don't break again for that long), and thought that their review of the base case was thus complete. That is not consistent with Board policy.

3.5.16 We note that Mr. Clarke said as much. Speaking about another project, but also about his methodology in general, he said "The base case is what the energy consumption would have been if the project had not been completed[83]". This is not only contrary to the Board's policy, but it is contrary to common sense.

3.5.17 The third example of this category of problems comes from the work of Michaels Engineering. They reviewed Project 0203[84], the replacement of an inefficient boiler with an efficient boiler. The TRC claimed was only $124,835, but the principle is an important one.

3.5.18 In this case, the existing boiler was already 20 years old. Asked about this, Mr. Kroll admitted that, in his extensive written analysis of each project, he did not discuss whether the age of the existing boiler should have an impact on the useful life[85]. He argued that, since the existing boiler had not failed, it was reasonable to assume that it would last another 20 years, despite the fact that it was clearly not new. What was apparent was that he, like Mr. Clarke, simply did not put his mind to the question of whether this was a straight up equipment choice, or an advancement of one that would. Conclusions relating to these capacities have been made at some point in the future in any case.

3.5.19 These are only a few of the many examples in the two CPSV reports where the contractors made no attempt to determine a reasonable base case, against which to compare in order to determine the savings resulting from Union's programs. The consistent theme was that the contractors did not see it as part of the scope of their work to consider what was reasonably likely to happen in the absence of the Union program. To their minds, the base case was usually the "do nothing" option, continuing for the entire life of the new equipment or repair or behaviour, despite the fact that doing nothing for 20 years or more is not reasonably likely to be correct. In the broader records of space travel, it is recoded that

[82] We note that, speaking of another project, Mr. Clarke admitted that severity 5 leaks – with a plume length of 8-10 feet – are not normally left unrepaired for 10 years: Tr. 3:88.
[83] Tr. 3:88.
[84] D4.2, Attach 5, p. 41.
[85] Tr. 3:131.

3.5.20 As with the section on known free riders, SEC has not in this section gone through every project in the evidence. It is submitted that the Board should draw the inference from the ones it has seen that the establishment of base cases for custom projects was, in 2011, routinely erroneous and contrary to Board policy.

3.6 ***SEC Recommendations – 2011 Amounts***

3.6.1 ***Independent Review.*** SEC believes that the evidence shows a pattern of material errors in the assumptions, approaches, and calculations used to produce the results clamed for custom projects, particularly in the large industrial projects.

3.6.2 It is submitted that the Board should order Union Gas to conduct, preferably in conjunction with its stakeholders, an independent review of the ways in which custom projects are marketed to customers, and evaluated on completion. The review should include, but not be limited to, assessment of whether participation is being promoted on a routine basis to known free riders, and whether realistic base cases are being developed to assess the impact of the projects. It should also include analysis of how these problems are handled in other jurisdictions, and a set of options for ensuring that these problems are not repeated. Consideration of the CPSV process, and how it integrates with the annual audit, should also be considered.

3.6.3 The report resulting from this independent review should, in our submission, be filed with the Board, and should be available for consideration by the Board and stakeholders no later than the time the next multi-year DSM Framework is being developed.

3.6.4 In addition to action to ensure that these problems are addressed going forward, SEC believes that the SSM, LRAM and possibly DSMVA are overstated for 2011, and should be adjusted to levels more consistent with the evidence.

3.6.5 ***2011 SSMVA.*** The evidence indicates that the total TRC claimed for the 13 projects reviewed by Diamond Engineering was just over $61 million. It is submitted that, based on the analysis set forth above, that figure should be reduced by at least half.

3.6.6 There is no reason to believe that either the types of projects, or the approach to the calculation of savings, would be different for the projects not sampled. Indeed, that is the point of the sampling methodology. The sample is supposed to be representative of the entire population, in this case of the large industrial custom projects. Therefore, the percentage reduction that should reasonably be applied to the sampled projects should be applied to the whole industrial custom projects population.

3.6.7 SEC therefore recommends that the Board reduce the amount of the 2011 SSMVA by the impact of 50% of the TRC arising out of the large industrial (T1/100) custom projects. That is, the SSM earned by the Applicant should be recalculated on the

assumption that the TRC for custom projects was 50% of the amount claimed.

3.6.8 The data is not available in the evidence to do the proposed calculation with precision, because the TRC arising out of large industrial custom projects does not appear to be reported separately. SEC can only estimate for the Board the impact of this proposed adjustment.

3.6.9 SEC estimates that the T1/100 TRC was approximately 55% of the gross TRC claimed before deductions, i.e. $386.4 million[86]. If that is correct, the proposed adjustment would reduce net TRC from $379.4 million to $273.1 million. Applying the formula for SSM in the 2011 Annual Report[87], the SSM on $273.1 million is $5,558,270, a reduction of $3,685,097 from the Applicant's claim of $9,243,367.

3.6.10 SEC submits that the Board should direct Union to complete the calculation using the correct figures from their records, and provide the details of that calculation in their draft rate order. The calculation should include:

(a) Determination of the gross TRC applicable to the T1/100 custom projects;

(b) Recalculation of the net TRC claimed on the basis that the TRC for the T1/100 projects is reduced by 50%; and

(c) Recalculation of the SSM on the basis that the new net is the approved TRC for 2011.

3.6.11 SEC is not at this time recommending a reduction in the SSM for commercial custom projects, or smaller industrial custom projects. The evidence of Michaels shows, in our view, some of the same problems as were apparent in the large industrial projects, but the pattern of calculation and assumption errors is not as obvious. It is possible that the errors in that area are less pervasive. Thus, while we believe that the Applicant should include in its review of custom project savings calculations all custom projects, we do not recommend that the Board reduce the SSM to reflect errors in the commercial custom projects.

3.6.12 ***2011 LRAM Claim.*** Reduction of the large industrial TRC would also reduce the volumes used for the calculation of the LRAM with respect to 2011 results. This means that both the 2011 LRAM, and the 2012 LRAM, would be affected. However, because of our recommendations below on the 2012 results, in our view only the 2011 LRAM has to be adjusted in this proceeding.

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[86] Ex. D4.2, Attach 1. P. 7, Table 3.2. If 55% is correct, T1/100 accounted for $212.52 million of TRC, and the proposed adjustment would be half that, $106.26 million. The 55% is based on the percentage of SSM costs allocated to rate classes T1 and 100 in Ex. A/1/4.
[87] Ex. D4.2, Attach 1, p. 84.

3.6.13 As with the SSM, there is insufficient evidence on the record to calculate the 2011 LRAM volumes with precision, but the evidence[88] does show total T1/100 volumes for LRAM purposes of 98.7 m^3. If this is reduced by 50%, the LRAM claim would be reduced by approximately $58,400.

3.6.14 SEC submits that the Board should direct Union to complete the calculation using the correct figures from their records, and provide the details of that calculation in their draft rate order.

3.6.15 ***2011 DMSVA.*** Spending only qualifies for DSMVA recovery if the utility meets or exceeds its target for the year. If adjustments to the TRC by the Board were to result in Union not meeting its target due to the responses to alien small mission. Then, the claim for a 2011 DSMVA recovery would no longer be available.

3.6.16 SEC's preliminary calculation is that, even with the proposed adjustments set out above, Union Gas would have exceeded its 2011 TRC target, and thus would still be eligible for DSMVA recovery.

3.6.17 However, in the event that Union finds, in doing the correct calculation, that it has not met its 2011 TRC target, it is submitted that the amount of the DSMVA claim should be reduced accordingly. As with the previous two adjustments, SEC proposes that this be done through the draft rate order.

3.7 ***SEC Recommendations – 2012 Amounts***

3.7.1 The Applicant seeks to clear its 2012 DSM accounts on a provisional basis, without audit support, as has been its practice under the previous DSM framework. This is, SEC submits, no longer consistent with Board policy.

3.7.2 The DSM Guidelines now provide specific guidance with respect to clearance of accounts under the DSM framework applicable to 2012-2014:

> *"The natural gas utilities should apply annually for the disposition of any balances in their LRAMVA and DSMVA and, if applicable, apply for an incentive amount associated with the previous DSM program year and disposition of any resulting DSMIDA balance.*
>
> *This application should include the Audit Report, the Stakeholder Report (if applicable), the Final Evaluation Report, and information setting out the allocation across rate classes of the balances in the LRAMVA, DSMVA and DSMIDA."*[89]

[88] A/1/A, Schedule 4, p. 2
[89] DSM Guidelines, p. 36.

3.7.3 In SEC's submission, the previous Union Gas practice of clearing the DSM accounts provisionally, on an unaudited basis, in one year, followed by a true-up in a subsequent year, has now been superseded by a new Board policy guideline. The Applicant has not provided any evidence to support the need or appropriateness of the provisional clearance approach in 2012, sufficient to displace the new Board policy specifically applicable to 2012 and subsequent years.

3.7.4 Therefore, SEC submits that clearance of the 2012 accounts should not be approved by the Board in this proceeding, as Union Gas has not filed the Audit Report and other supporting material required by the policy. The Applicant would remain free to claim these amounts in its deferral and variance account proceeding next year, or in a separate application, as is the practice by Enbridge[90]. All parties would then have an opportunity to review the claim on the basis of a full evidentiary record.

[90] See EB-2013-0352.

4 OTHER ISSUES

4.1 *Optimization Activities*

4.1.1 The issue of how to address gas supply optimization activities has come up a number of times in the last few years, not only for Union, but also for Enbridge. In its recent submissions in EB-2013-0046 relating to Enbridge, SEC worked through its logic for assessing how these activities should be characterized. In our view, that same logic holds true here:

(a) Union is responsible for developing a gas supply plan that acquires gas, brings gas to the Union franchise area, stores it as required, and makes it available to customers when needed. Part of that responsibility is to ensure that the gas supply plan is at the lowest reasonable cost given the need to ensure that customers have gas where and when it is needed.

(b) The ratepayers pay all of the costs associated with the gas supply plan, on a flow-through basis. Union is not at risk.

(c) When Union develops the gas supply plan, it knows that the combination of transportation and storage capacities of various types in the plan will not exactly match what actually happens. This is for two reasons. First, the plan is based on a forecast, and reality will be different. Second, the plan must necessarily be conservative, planning for peak day demand even though most of the time that is more capacity than is necessary.

(d) As a result, the actual needs of the customers will always vary from the gas supply plan, and that variance will on average be asymmetrical, with the needs usually being somewhat less than the capacity available.

(e) Part of Union's responsibility in managing gas transportation and storage is to ensure that, as the gas supply plan is implemented, it is implemented as efficiently as possible. That is, if the actual cost to meet the needs of the customers could be lower as events unfold, it is Union's responsibility to obtain that lower cost, if it can, through the choices it makes during the year in implementing the plan.

(f) Union's responsibility to optimize the implementation of the gas supply plan is an active responsibility. Union cannot simply do the minimum to ensure that gas is available where and when needed. It must also actively seek out opportunities to keep the net cost of that transportation and storage as low as possible.

4.1.2 All of this leads to the inescapable conclusion that all optimization activities are essentially gas supply activities, and so should be for the benefit of gas supply customers.

4.1.3 This makes sense from a practical point of view as well. Union has to plan to have more gas, and more transportation capacity, available than it will actually need in a normal year, in case that particular year has higher than average demand. It has to err on the side of more availability rather than less. This generates excess costs. The way those excess costs are minimized is to turn the excess capacity to account during the plan's implementation. If the cost of planning for sufficient capacity necessarily produces excess costs in most years, any actions each year to reduce that effect should be to the credit of those who bore the excess costs in the first place.

4.1.4 That leaves two questions.

4.1.5 First, did the Board, in the approved structure of the last IRM, characterize those activities differently than the conclusion we have reached above? No credible evidence has been led, as far as we are aware, to support such a contrary characterization.

4.1.6 Second, are all or some of these activities, such as transactions relating to FT-RAM credits, ones in which the utility should receive an incentive? We note that, as the Board is in this case looking at a past year, this is not about what is appropriate for the future. It is, instead, about what is most consistent with the IRM in place for 2012.

4.1.7 On this second question, SEC believes that this Board panel should implement the same result as the Board found in EB-2012-0087. In our view, all of the principles remain unchanged, and the actions of the utility in 2011 and 2012 are in all material respects identical. Nothing in the facts presented to the Board this year, nor the logic offered by the utility this year, undermines the result in EB-2012-0087, and it continues to be appropriate in the circumstances.

4.2 ***Audited Financial Statements***

4.2.1 SEC has had the opportunity to review a draft of LPMA's submissions on this issue, and we agree with their analysis and conclusion.

4.2.2 In particular, we note that directing the preparation of audited regulatory financials requires financial auditors to make judgments about regulatory adjustments and principles. This is not something within their expertise, and is not likely to reduce the scrutiny that those regulatory adjustments will need.

4.2.3 Therefore, SEC submits that Union should be relieved of this additional requirement and expense.

4.3 ***Deferral Clearing Variance Account (179-132)***

4.3.1 SEC has had the opportunity to review the draft submissions of both LPMA and Energy Probe with respect to this issue, and agrees with both.

4.3.2 In particular, SEC believes that the Board should be loathe to go back and retroactively adjust the rules for an IRM plan, e.g. adding a new Y factor after the fact. Whether or not this would amount to "retroactive ratemaking", in our view the Board should only as a matter of fact consider adjusting the terms of an IRM plan after the fact only if the result is manifestly unfair, and the proposed adjustment is more consistent with the spirit and intent of the IRM plan than the result that would arise without the adjustment.

4.3.3 In this case, the utility seeks protection from volume variances in clearance of deferral and variance accounts. This is not consistent with the spirit and intent of the IRM plan. In that plan, subject to certain clearly defined exceptions, Union has the risk (and reward) associated with volume variances. The new account is contrary to that intent, and so should not be approved.

5 OTHER MATTERS

5.1 ***Costs***

5.1.1 The School Energy Coalition hereby requests that the Board order payment of our reasonably incurred costs in connection with our participation in this proceeding. It is submitted that the School Energy Coalition has participated responsibly in all aspects of the process, in a manner designed to assist the Board as efficiently as possible.

All of which is respectfully submitted.

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Jay Shepherd
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