EB-2008-0346

ONTARIO ENERGY BOARD

IN THE MATTER of the *Ontario Energy Board Act*, 1998, S.O. 198, c.15, Schedule B, as amended;

AND IN THE MATTER OF the review by the Board of issues relating to demand side management by gas distribution companies

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SUBMISSIONS
OF THE SCHOOL ENERGY COALITION
ON THE CONCENTRIC AND PEG REPORTS

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1 GENERAL COMMENTS

1.1 *Introduction*

1.1.1 On March 19, 2010 the Board published a report from Concentric Energy Advisors entitled "Review of Demand Side Management (DSM) Framework for Natural Gas Distributors" (the "Concentric Report") and sought input from stakeholders prior to the preparation of a Staff discussion paper outlining proposals for a revised DSM framework to replace that established in EB-2006-0021. The Concentric Report was followed by a stakeholder meeting on April 29, 2010 at which Concentric provided further information on its report and analysis, and engaged in dialogue with stakeholders.

1.1.2 On March 19, 2010 the Board also published a report from Pacific Economics Group entitled "Top-Down Estimation of DSM Program Impacts on Natural Gas Usage" (the "PEG Report") and sought input from stakeholders prior to the preparation of a Staff discussion paper as described above. The PEG Report was followed by a stakeholder webinar on May 13, 2010 at which PEG provided further information on its report and analysis, and engaged in dialogue with stakeholders.

1.1.3 These are the submissions of the School Energy Coalition (SEC) on the two reports.

1.1.4 Throughout these submissions, there are a number of places in which the Concentric Report deals with low income issues. SEC includes in these submissions no comments on the low income proposals, and our general comments should not be interpreted as applying in the same manner to low income situations. Low income DSM is a complex issue, and we wish to review the comments of others during this and subsequent processes before reaching conclusions, if any, on those issues.

1.2 *Interest of Schools*

1.2.1 The Board will be aware that schools are early and aggressive adopters of DSM (and CDM) measures. They have a number of specific advantages in this regard, including a long-term focus, a large number of similar structures with similar needs, centralized management of multiple facilities, etc. As a result, and in part as a result of strong partnerships between school boards and their gas distribution suppliers, schools have been - over the last ten years - a DSM success story.

1.2.2 But schools are also ratepayers, and acutely conscious of the increasing cost of DSM programs and incentives. The total amount paid by schools in rates for utility conservation program costs and incentive payments exceeds $1.5 million per year, an amount that has increased from less than $100,000 per year ten years ago. If programs are properly designed and implemented, this is money well spent. But schools understand that the design of the current framework is not without its flaws, with the

necessary implication that some of that substantial annual cost is not as well spent as it could be.

1.2.3 Central to this question – really one of prudence – are two issues: whether the framework currently in place incents and motivates the optimum decisions by utility management, and, underlying that, whether the current approach we take to measuring success is giving us good information.

1.2.4 Conservation spending by utilities, government and customers is likely to increase rather than decrease in both the gas and electricity sectors. Against that background, reliable measurement of results, and a framework that incents utilities to achieve those measured results, continue to be important goals. Schools expect to continue to be in the forefront of this shift to a greener Ontario, and believe it is important that utilities are as closely aligned as possible with that shift in direction. This consultation process can help the Board to improve that policy alignment.

2 THE PEG REPORT – TOP-DOWN ESTIMATION

2.1 *The Issue Being Addressed*

2.1.1 SEC and other ratepayer groups have been concerned for some time that the reported successes from DSM programs are based on bottom-up measurement that is at best suspect, and at worst a time-consuming and costly exercise to get largely unreliable information.

2.1.2 Key to this is the fact that the current system to measure DSM program results rests on so many assumptions – about actual and baseline equipment, behaviour, and costs – that it resembles a house of cards. Each of the many "DSM Input Assumptions" used in the calculation of success is an estimate or generalization, often based on conjecture or surveys rather than empirical data.

2.1.3 The myriad of assumptions are a blatant invitation to gaming. Even the most straightforward utility is being pushed by this system to support assumptions that make their conservation programs more successful.

2.1.4 It is also inherently adversarial, and that conflict continues on an ongoing basis. Since so much of the "assumptions" process is judgment, different people will have different judgments, and utilities and their stakeholders (or even stakeholders and other stakeholders) will disagree. This creates an expensive process in which stakeholders get more into the details of utility management than they do in any other part of utility operations.

2.1.5 Further, because there are so many details, at a relatively fine level of granularity, it strains the resources of the Board to be the decision-maker. Unless the parties agree on assumptions (as they have done this year, but not in previous years), the Board is faced with three choices:

(a) It can review each minute issue with the level of scrutiny necessary to get a good answer, but unjustified by the magnitude of the issue by itself. The Board has quite properly been reluctant to spend a lot of time reviewing the studies on whether using a low flow showerhead means your showers are 8% longer or 12% longer.

(b) It can review the assumptions at a more superficial level, in keeping with the importance of each individual issue, but not in keeping with the overall impact of the assumptions process.

(c) It can delegate the responsibility for assessing input assumptions to a third party, raising the risk that fair consideration of differing views on those assumptions will be denied.

In our view, none of these are really palatable options.

2.1.6 This resource-intensive, adversarial, and imprecise process of bottom-up estimation has a further, and perhaps bigger, problem. The Board is engaged, on behalf of the government, in promoting a shift to a conservation culture, and the substantial spending of ratepayer dollars on DSM and CDM programs is justified by the benefits of that shift. As the spending increases, more and more stakeholders are asking for proof of those benefits. If the current process of measuring them produces questionable results, as it does, the risk is that the overall credibility of utility conservation spending will be undermined, and a valuable and forward-thinking government policy will meet with greater public resistance.

2.1.7 Given these concerns, it has been SEC's view that the Board should, if possible, go back to the basic goal here – improved efficiency of natural gas use. The result, if successful, should be a reduction in gas use for a given level of energy functionality. That is, all other things being equal customers should be using less gas. If the energy functions supplied by gas increase, those will be additions to gas use, but aside from those changes (which are switches in our fuel choice) gas use should be lower. In principle, we have reasoned, this should be measurable**.**

2.1.8 As we understand it, the purpose of the PEG Report and the study underlying it was to determine if it is possible, on current data, to find an empirical relationship between natural gas use and DSM program activity.

2.1.9 As we note in more detail below, the conclusion of this report that current data does not show such an empirical relationship should not be the end of the Board's review of this question. The problem continues, and needs to be addressed. If this study, with its quite narrow scope, did not find an empirical measurement approach that works, it may well be that an expanded scope, focusing on all ways of solving the problem rather than confined by the limits of existing data, may be worth considering.

2.1.10 What we do not believe is that the results of this study should put an end to the goal of empirical conservation measurement**.** Eventually, in our view it will be essential that gas DSM spending be tied to rigorously provable results.

2.2 ***Findings of the Report***

2.2.1 Within the limited scope of the study, PEG took a creative approach to finding that empirical relationship. They identified three ways they might accomplish that result.

2.2.2 First, they compared time-series data for gas usage and DSM spending, correcting for weather and price impacts, to see if the remaining data would show a statistically significant correlation between gas use and DSM spending. It did not. The weather impacts and price elasticity showed expected results. No correlation between gas use and DSM spending was found at a statistically significant level.

2.2.3 Second, they looked at the existing Enbridge and Union monthly gas demand models, to see if they could insert DSM spending as an explanatory variable, with or without a lag. When the explanatory variable was added, some limited relationship between DSM spending and gas demand was found, but the problems with the models, and the weakness of the relationship, make it impractical as a measurement approach.

2.2.4 Third, they used the existing Enbridge and Union models to predict monthly gas usage on the assumption of no DSM spending, with the intention of comparing the predicted value to the actual gas usage in each year. Hypothetically, the difference would be the impact of DSM program spending. Unfortunately, actual gas usage was never below the predicted value in a statistical sense.

2.2.5 Both of the two latter approaches were limited by the fact that the models employed by Enbridge and Union are forecasting models, so they have embedded methodological issues that, while acceptable for forecasting purposes, would not be acceptable in the context of finding a robust relationship between DSM spending and gas usage.

2.3 ***Comments on Scope***

2.3.1 The PEG Report appears to us to have been limited by its scope in two key ways.

2.3.2 First, the data available for PEG's use was limited, and they did not have the scope to gather additional data. This is an important limitation, since they were not able to explore some of the avenues of review that have been considered elsewhere, e.g. comparison of before and after usage for participants and non-participants.

2.3.3 Second, and perhaps more important, the scope was limited to finding a correlation between DSM spending and gas usage. This is not a criticism. That was the whole point of the study. However, what this work appears to show is that isolating the impact of DSM program spending on gas usage is a narrow goal, and thus more difficult to achieve. As the conservation marketplace gets more and more crowded with utilities, governments, NGOs, manufacturers and others chasing conservation results, it may well be that the impact of DSM program spending is too overwhelmed by the noise of the other activities to be isolated effectively.

2.3.4 Within their limited scope, we believe that PEG did provide some useful insights through the creative approach they took to finding the solution, but we believe that a continuation of the study with a broader scope may be worth considering.

2.4 ***Comments on Implications***

2.4.1 It is tempting to say: *"PEG was charged with the responsibility to find evidence that DSM program spending is causing reduced use of natural gas. They did not find any evidence that effect is occurring."*

2.4.2 In one sense, that is entirely correct. PEG ran a number of models that, in theory, should have shown that the more DSM program spending is incurred, the less gas is used. Those models did not show that result, and in one case (the third) seemed to show that gas usage would have been the same with or without the DSM programs.

2.4.3 Schools are one category of customers that know directly the impact of gas DSM efficiency measures. Motivated by their long planning horizon, and facilitated by the replicability of measures they implement, schools have been able to reduce their average use of natural gas per square foot of building space over the last several years by significant amounts. Some of that activity, and those results, are undoubtedly the result of their active partnerships with gas distributors.

2.4.4 From the point of view of this customer group, therefore, the fact that there is no evidence that the DSM program spending is producing the results calculated under the TRC test does not mean that those programs are not causing a reduction in gas usage. The hard evidence would be nice, but in at least our case the overall conservation effort is producing results, and the involvement of the utilities must be considered to have had some impact.

2.4.5 Thus, we do not believe it is appropriate to reach the conclusion "no evidence" = "not happening". In this respect, we would agree with PEG, at the webinar, that they were not trying to prove whether or not DSM programs work. They were trying to measure the results. That is a different exercise, and the two are not consistent with each other.

2.4.6 That having been said, the results that PEG does obtain seem to be consistent with the Loughran & Kulick study described at page 22 of the PEG Report. In general, Loughran and Kulick showed that the levels of conservation that were actually caused by utility program spending were significantly lower than the levels predicted by bottom-up calculations. PEG's conclusions appear to indicate that the same result may be true for gas DSM spending in Ontario.

2.4.7 Over the course of the next couple of years there may be a push to expand the program spending of gas distributors in this area, and/or to expand the incentives paid for results based on bottom-up measures of success. The Board's role will be to assess the prudence

of those proposals, and its normal practice in doing so is to look at the evidence.

2.4.8 **In our view, in light of the state of the research, and in particular the absence of positive evidence that DSM spending is producing a reasonable bang for the buck, we believe that the Board should proceed cautiously at this time.** Our comments below on the Concentric Report echo this concern.

2.4.9 We have not softened our support for conservation. However, we don't believe continued rapid expansion of DSM program spending should be based on a weak evidentiary foundation. Instead, we believe that the Board should invite those who propose higher levels of DSM spending to demonstrate – with hard evidence, not bottom-up constructs of dubious value – that the current spending is actually producing the results claimed, and that increased spending will be a prudent use of ratepayer funds.

3 THE CONCENTRIC REPORT – REVIEW OF THE FRAMEWORK

3.1 *General Comments*

3.1.1 ***Overview.*** There is value in a literature review, and the gathering of factual information on DSM around North America. In that respect, there is value in the Concentric Report.

3.1.2 However, we do not believe that the recommendations of the consultants should be given any weight by the Board. The choice of Concentric to do the study was, in our view, not a good one, as they are not objective experts in the field, and the recommendations from the report are based on an analysis that was too superficial to be of use to the Board.

3.1.3 ***Consultants***. We found the selection of the consultants to do this report to be unfortunate, on two counts.

3.1.4 First, the firm itself is known to be one that does work solely for utilities and, to a lesser extent, regulators. Its perspective is therefore specific, and as much as the individuals working on the project may attempt to be objective, their utility point of view is to be expected.

3.1.5 Despite this problem, we understand that most consultants have a tendency to appear for utilities or ratepayers, and the former is more common. It is something the Board is used to, and it doesn't change whether the information gathered is helpful in and of itself. It still is. But that information, and in particular all judgments based on it, must be considered in light of the perspective of the authors.

3.1.6 Second, and much more important, the three individuals involved in the project do not appear to have, between them, any experience at all in gas or electricity conservation. Attachment A to the Responses to Stakeholder Questions, provided in response to SEC Question #1 [Question 16 of the Responses], contains the CVs of the three involved. Mr. Coyne is clearly a cost of capital specialist, and has recently appeared before this Board on behalf of utilities in that capacity. Mr. Trogonoski is also focused on return on equity for utilities. Mr. Cattrell, although less clear, appears to be primarily a nuclear specialist.

3.1.7 It is, of course, quite possible for intelligent people with knowledge of the overall energy sector to do certain types of research in areas outside their specific expertise. Indeed, the Concentric Report contains some useful information, and some of it might have been the result of their inexperienced and therefore perhaps fresh look at the literature.

3.1.8 But the Concentric Report also contains a number of places in which the authors express their own judgment on the issues. In our submission, the Board should not place much credence in those judgments, both the ones that favour the utilities and the ones that

favour the ratepayers. The drafters of this report simply do not qualify as experts in this field.

3.1.9 We are particularly concerned with the decision of the consultants to develop their own set of "Principles" [page 17] rather than follow principles already laid out by the Board or by the government of Ontario. They say in response to Enbridge #2 [Question 12] that they did not rely on principles from the Board, but "*we developed our own set of guiding principles which we used to arrive at our ultimate recommendations*". While individual principles adopted by Concentric are OK, some of them show a "newcomer" approach to the subject. The concern is increased when Concentric responds to Enbridge #3 [Question 13] by saying that these principles are based on "*our collective regulatory experience*".

3.1.10 For example, Concentric proposes a study of the existing capital stock in Ontario, as their fourth principle. Not only is this not a "principle" (it is a recommendation for action), but it accords the status of "premise" (i.e. assumed to be required) to a study that would be both expensive and time-consuming, and may be a poor use of funds relative to relying on information already available to the utilities.

3.1.11 But we are even more concerned about the overall recommendations. As seen by the chart on Page 19, Concentric has proposed that many, perhaps most, of the components of the current framework be changed, and in some cases dramatically. In effect, they are telling the Board that pretty much everything that has been done so far is wrong, and with their known lack of inexperience are nonetheless suggesting that this Board change everything.

3.1.12 We believe that some changes to the current DSM Framework are appropriate as well, but frankly we find it incongruous that a consultant that is new to the field would tell a regulator (and the utilities and stakeholders that appear before it) that have more experience with DSM than most other North American jurisdictions, that they are doing it all wrong.

3.1.13 Thus, throughout these comments we will agree with some of the recommendations from Concentric, and disagree with others. Throughout, we place no reliance on the fact that Concentric said "Do X" or "Don't do Y", because in our view they cannot offer expert judgment. Instead, we rely on the underlying work they have done, the facts they have gathered and the other information disclosed, and reach our own conclusions without taking the Concentric judgments into account. We believe that Staff, in preparing their report, and the Board, in making decisions on the new framework, should do the same.

3.1.14 ***Other Issues.*** We were struck by the number of times that Concentric was unable to answer questions posed by stakeholders, saying that to answer them would require additional research. For example, in CCC #4 and #5 [Questions 9 and 10], they say "Concentric did not investigate each specific finding contained in the literature review

section of our report." As a result, they were unable to describe what a particular concept they discuss actually meant. This happened several other times in the responses.

3.1.15 In part, this limitation may be just another example of their inexperience. However, it could also be evidence of either a very limited scope of review allowed by the Board, or a very restricted look at the subject from Concentric's point of view. In either case, the value of the contents of the report is compromised to a greater or lesser extent if the consultant is passing on information without a full understanding of what is being communicated.

3.1.16 We are also concerned that Concentric, in their sample group, have assumed [SEC #2 – Question 17] that the best DSM practices in the industry are revealed by the utilities that spend the most money. Whether or not this is true, that assumption will result in a report biased in favour of higher spending. The question is, clearly, begged.

3.1.17 Finally, Concentric relies [page 26] on an AGA study which concludes that spending $329 million in direct program costs on residential DSM produced 9% savings in residential gas usage per customer. What Concentric does not explain, but reveals in response to SEC #4 [Question 19], is that these good results are the opinion of those asked their views in a survey. Those asked were utility personnel.

3.2 ***Issue #1 – DSM Cost Effectiveness Test***

3.2.1 Concentric proposes a two-stage process to determine which programs a utility should implement. [See SEC #5 – Question 25].

3.2.2 First, Concentric says use the Societal Cost Test, primarily because it includes externalities. Use of this test would in effect create a menu of programs or measures that would be available to the utility. All of those programs or measures on the menu would produce a net positive benefit to society, as measured by the SCT.

3.2.3 Next, the utility has to assess which programs to actually pursue. There is a limited budget, and not all measures that pass the SCT can be implemented. Therefore, Concentric proposes using the Program Administrator Cost test as the way of choosing from the menu of options. The PAC measures the cost of the conservation resource to the program manager, not to the customer or to society at large. It is equivalent to saying, for generation, "buy the cheapest option". That is the model on which the PAC is based.

3.2.4 What we don't understand is why externalities, for example, would matter in selecting which programs or measures qualify, but then would be irrelevant in choosing which programs or measures actually get implemented. Do externalities have value in this process or not?

3.2.5 Our conclusion from a review of the area is that the SCT, which basically enhances the TRC test with externalities, will produce a broader range of programs available to the utility. Absent evidence to the contrary, of which the Concentric Report provides none, it would seem that a portfolio of programs that maximizes the net SCT benefits from an existing budget would, in general, be the most appropriate way to go.

3.2.6 It is thus not clear to us how the PAC test assists in the process. While we understand that the PAC test has a greater emphasis on what it costs the utility to achieve a given result, that is also evident in the portfolio approach that utilities use today. Whether that portfolio approach (how to get the most benefits from the budget) is measured by TRC, as currently, or by SCT, as proposed, would not change the process. A PAC test does not appear to be necessary to achieve the best result.

3.2.7 We also note that, despite the emphasis on "deep savings" in the Concentric Report, Concentric admits that "*most cost effectiveness tests encourage cream skimming*" [SEC #6 – Question 26]. We agree, and thus accept that utilities faced with a limit budget will cream skim as long as they have an incentive to maximize results. The appropriate response is not to prevent the cream skimming, but to ensure that the "results" incented are those that the regulator and the government want to see achieved. The SCT approach supports this better, in our view, than the PAC test.

3.2.8 We note that Concentric proposes [page 48] that cost effectiveness be evaluated on a program basis rather than a portfolio basis. As we have noted above, as long as utilities are incented based on the overall result of their portfolio based on a given budget, from a utility point of view cost effectiveness is always about optimizing the portfolio. Therefore, without changing the incentive structure it is not possible to produce the result recommended unless the Board engages in a program by program review and overrules the utility's decisions on prioritization. This does not seem to us like a change in direction that the Board should be considering at this time.

3.2.9 If the PAC is not used, there are still issues surrounding the SCT. Two are of particular importance.

3.2.10 First, the time and effort involved in determining which externalities should be valued, and at what values, represent an exponential increase in regulatory costs associated with DSM. This is not a welcome change.

3.2.11 Second, SCT uses a social discount rate, the impact of which Concentric admits it does not know [SEC #12 – Question 32].

3.2.12 What is clear is that the benefits under SCT are much higher than under TRC, and without data on this impact it is impossible to assess the appropriateness of the remaining components of the framework.

3.2.13 We will note later in these submissions [Section 3.15] a possible approach to externalities that may simplify the Board's role, and protect ratepayers, which still monetizing for the utilities some externalities.

3.3 ***Issue #2 – DSM Avoided Costs***

3.3.1 Concentric proposes that avoided costs be calculated by the utilities and then considered by the Board, annually in the case of avoided gas costs, and on a three year cycle in the case of all other costs.

3.3.2 In general, we feel that the cycle of review is working fairly well, although probably largely because of utility responsiveness to the collaborative process rather than the hardwired schedule itself. There will always be a need to limit the evaluation and measurement budget, meaning that not all inputs such as avoided costs can be adjusted in a completely timely manner.

3.3.3 Concentric also proposes that the Board should "*use the avoided costs associated with renewable energy resources*" [page 53], on the theory that those avoided costs would be higher. This seems to us to be unlikely, since they also propose putting a value on carbon emissions. The combination of the two should, in most cases, mean that the net avoided cost of renewable resources is less than the net avoided cost of most conventional resources.

3.3.4 The valuation of carbon emissions as an avoided cost is a critical component on this Report, and implies that the goal of gas DSM in Ontario is heavily driven by GHG reductions. That may well be true, and if so the Board should expressly recognize both the goal and its implications. This will represent a significant shift in DSM planning.

3.3.5 On the other hand, the process of valuing carbon emissions could be a difficult and costly one. Further, it would be happening in the context of a regulatory and policy regime, both federal and provincial, in which a lot of work will be done on the value and impact of carbon for various purposes.

3.3.6 In our view, it may be possible to turn that active policy environment to advantage by letting the federal and provincial governments establish the value of carbon credits through their own separate processes, or through the market. As we note in Section 3.15 below, this could result in a revised incentive mechanism that has regulatory and other benefits.

3.4 ***Issue #3 – DSM Input Assumptions/Parameters***

3.4.1 The section on input assumptions does not appear to add much that is new, so we have only two comments.

3.4.2 We do note that Concentric appears to assume [page 59] that gas savings are measured by comparison to the equipment "being replaced". This is not correct. In any test of gas savings, the comparison should be to what equipment or technology would be used, but for the program of the utility. If a customer would in any case use a condensing boiler for a particular situation, for example, a program that incents the acquisition of a condensing boiler should not produce any savings in that situation. Similarly, if a person replaces a low efficiency furnace with a high efficiency furnace, but otherwise would have installed a mid efficiency furnace, it is the savings from mid efficiency to high efficiency that are caused by the program.

3.4.3 Concentric continues the notion [Enbridge #9 – Question 52] that for incentive purposes assumptions should be locked in from budget to actual, even if in the interim they are known to be wrong. The rationale [page 60] is that changing the assumptions to reflect better information injects uncertainty into utility planning.

3.4.4 With respect, this argument is not tenable. The essence of managing any business, including a utility business, is managing uncertainty, and much of that uncertainty comes from the quality of information management has at the time decisions are made. DSM input assumptions are not nearly as uncertain as the many other uncertainties utility executives face, such as economic factors, weather, price effects, availability of resources, etc. Indeed, at least with input assumptions management can opt to be more thorough in the first place, reducing the risk that they will be wrong. They can't do that with the weather.

3.5 *Issue #4 – DSM Adjustment Factors*

3.5.1 This is the category in which Concentric considers the various causation issues that so bedevil DSM planning and implementation in most jurisdictions: free ridership, attribution, spillover, etc. Concentric also includes persistence in this category. Although there is some doubt as to whether it belongs with the others (it is not a causation issue), we will comment on it separately in this section.

3.5.2 ***Causation Problems.*** The problem of causation in DSM is going to get worse, not better. The number of players actively pursuing conservation is increasing, and the amount of money and effort in the field is also increasing. Current government policy, provincially, points in the direction of even higher levels of activity. It is simple common sense that the more people are trying to make something happen, the harder it will be to decide who gets credit when it does happen.

3.5.3 For example, there have been many past studies of free ridership, but the changing policy and program landscape may make them largely obsolete today. Consider a school board. In the past they have been active in seeking new energy-saving technologies. Now the government has given them a significant new budget for renewable energy and

conservation initiatives. They are going to spend that money. If a gas distributor comes along and suggests that they get a great new microcogen for one of their larger schools, is that gas distributor making something happen? If so, what is it they are making happen? If it is selecting a microcogen instead of solar panels, does the gas distributor get credit for the electricity savings associated with the microcogen, but treat as a cost for incentive purposes the additional gas use, and the lost electricity savings from the solar panels?

3.5.4 There is no answer to this question. In the real world of today and tomorrow, situations are usually more complicated than the free ridership studies suggest. When an individual considers PV panels for his roof to benefit from the MicroFIT program, and the contractor suggests insulating the roof at the same time, how did that happen? If the next time the contractor comes, to sign the contract, he notes that there is a Union Gas program to incent the insulation, did Union Gas cause anything to happen?

3.5.5 We could go on, but there is no point. At some stage in our view the Board will have to accept that causation questions have become harder than they once were. New approaches are necessary.

3.5.6 Some regulators have adopted new approaches, such as New York [page 66] and Washington [page 67], both of which appear to have thrown up their hands and built causation into a formula. What this does, of course, is to incent utilities to implement programs with the most free riders, and with the most dubious attribution, because they get credit for more savings with the same budget dollars. This is not in anyone's interest.

3.5.7 All of this only matters if the incentive is structured so that the utility's reward is tied to TRC or other measures "caused" by the utility's programs. Causation is a difficult concept at the best of times, as any litigation lawyer learns, and the more complex environment today makes it more difficult. We may be at the point where that is no longer the most practical approach to DSM measurement.

3.5.8 If the Board decides to rethink causation as the central principle of DSM incentives, the question that needs asking is what principle will replace it. In our view, the goal of the Board in DSM regulation may not be to ensure that programs produce results, but rather to cause natural gas to be used more efficiently in Ontario (or even to reduce GHG emissions from natural gas use). If the goal is at that higher level, then causation becomes less of a factor. It arises in program design (will this program have an impact on the end goal?), but not on what we want the utility to accomplish, or what we incent.

3.5.9 We have suggested, in section 3.15, that the Board consider a different approach to targets and incentives. If the Board pursues such a line, one result would be that for regulatory purposes some or all of the measurement of DSM programs would be based on reductions in normalized actual use per customer (NAUC), rather than bottom up calculations in which causation is a key factor.

3.5.10 ***Persistence.*** As indicated above, persistence is not in its essence a causation question, so

it is a different kind of "adjustment factor". In many cases, persistence equals measure life, an engineering type of assumption. But there are also some cases in which human behaviour results in a measure being used for less than its engineering life. People get tired of the limited water flow from a shower head, or new owners of a house don't learn how to use the programmable thermostat, so it operates like a non-programmable one, or a new employee of a business never learns to set the timer for a hot water tank, and it is heated when not required.

3.5.11 In our view persistence is just a variation on measure life. If a measure only continues to provide benefits in the real world for a limited period of time, on average, then the "life" of that measure should be calculated with that actual period of use in mind. The fact that it relates to human behaviour may make it harder to measure, but it doesn't change the nature of the task, i.e. correct measurement of the lifetime effect of a measure.

3.5.12 ***Spillover.*** Although we lump spillover in with the other causation issues, we note that if measures of free ridership and attribution are retained, spillover becomes a factor.

3.5.13 There is no basis for assuming that free ridership and spillover are even close to being the same, and that suggestion is simply lacking in any foundation.

3.5.14 But, whether or not there are ways of measuring spillover simply, in principle we still believe that it should not be included in savings subject to incentives. As long as we incent savings that the utility "delivers", we are basing the equation on a type of intentionality. Accidental benefits should not form part of that kind of equation.

3.5.15 It is well within the range of sensible options to incent, not what the utility intentionally causes to happen through its programs, but instead the overall reduction of gas usage, from whatever cause. If the Board goes in that direction, then spillover will be counted along with all other impacts not intentionally caused by the utility. However, at the same time the incentive will presumably be restructured to reflect the new level of impacts being measured.

3.5.16 We therefore believe that spillover should not be counted in a bottom-up, causation-based system, although it can be counted whether causation is no longer the basis of incentives.

3.6 *Issue #5 – DSM Program Design*

3.6.1 The Concentric Report's section on program design is characterized by two assumptions, both of which appear to us to be suspect.

3.6.2 First, Concentric proposes a shift from primarily resource acquisition to more market transformation programs, although they agree [SEC #18 – Question 78] that programs that combine market transformation and resource acquisition should be encouraged, and should be measured by a market penetration metric.

3.6.3 We have serious doubts about the shift to more market transformation. While it appears to be a good idea generally, it does not seem to be within the core competencies of the gas distributors, and their experiences with market transformation over the last couple of years have not been highly successful.

3.6.4 In our view the Board should consider slowly expanding the availability of market transformation programs, but at the same time should encourage gas distributors to contract out those programs to third parties who are in the "changing market behaviour" business, and have greater expertise in that field.

3.6.5 Second, Concentric appears to us to be assuming a larger role for the Board in reviewing the program portfolio and the individual programs within it. If that is implied by the report, we think that may be moving in the wrong direction.

3.6.6 In the past few years, the Board has sought to improve the design of the framework itself, and in particular both the measurement tools and the incentives, so that utilities will select the optimum program mix because the rules push them in that direction, and it is in their best interests to have that result. This has had mixed success, but it has helped increase the collaborative nature of the DSM programs, and that has in turn been a positive result. The goal is, after all, at least in part to reduce the Board's need to supervise the details.

3.6.7 We believe that pushing individual program design back into the formal regulatory process is of questionable value. The Board has other, more important, priorities on its plate right now, and taking on additional responsibility for the details of DSM may not be the best use of the Board's resources.

3.7 ***Issue #6 – DSM Budget Development***

3.7.1 We have commented earlier [Section 2.4 above] that, given the results of the PEG Report, continued dramatic increases in DSM budgets for the gas distributors do not appear to be justified. The Board's role in this is to test prudence, and without solid evidence that incremental dollars are producing incremental reductions in gas usage, it is hard to conclude that the additional spending is prudent.

3.7.2 Concentric, on the other hand, proposes substantial increases in budget, concluding [page 89] that Canadian utilities spend less on DSM as a percentage of revenues than US utilities.

3.7.3 It is not clear to us that an average of the biggest spending utilities in the US is in any way an identification of "best practices" for utility DSM programs.

3.7.4 Worse, however, is the fact that Table 15 of the Concentric Report is heavily weighted to the high-spending SoCalGas, which spends 5.40% of distribution margin on DSM. Without that utility in the averages, spending averages 3.04% of distribution margin for the remaining nine utilities. In 2009, Union Gas already substantially exceeded that percentage (about 3.15%), and Enbridge was at about 2.40%. The marked disparity that Concentric appears to have identified is not as obvious to us as it is to them.

3.7.5 The report also notes that a number of states have spending ratios that are around the same level as currently in Ontario. Notwithstanding that, Concentric proposes an increase in spending to a range of 4% to 6% of distribution margin. The two main gas utilities in Ontario currently have distribution margin of over $1.7 billion, which means a combined DSM budget of $68 million to $102 million, compared to about $46 million currently allowed by the Board.

3.7.6 This proposed increase of 48% to 122% in DSM budgets is, in our view, well outside the realm of reasonableness.

3.8 ***Issue #7 – DSM Metrics and Targets***

3.8.1 The formula for targets established by agreement in EB-2006-0021 is, most parties agree, flawed in its mechanics, and it produces results that are neither fair nor appropriate.

3.8.2 Concentric argues, however, for a wholesale change in how success is measured in DSM programs. While retaining all of the complexity of the TRC test, and more (the SCT test includes externalities), for measure selection and portfolio/program design purposes, and then adding the PAC test, Concentric proposes that the utilities also establish a comprehensive baseline or inventory of what equipment constitutes the current installed base in the province. Then, success should be measured in market penetration by the best available technology for any given application.

3.8.3 There are so many problems with this proposal that it is difficult to know where to start. Clearly mandating measure selection and portfolio/program design based on one set of criteria, but then incenting on another, creates issues of mixed signals. Determining appropriate market penetration metrics would also be a difficult task, and resource intensive.

3.8.4 But the biggest problem with this approach appears to us to be its utter disregard for the efficient application of utility resources. Sure, a province wide inventory would be nice. Is that how we want the utilities spending their time and money at this time? Does the Board, as regulator, want to add another task to its "To-Do" list, reviewing a comprehensive equipment inventory of the province so that DSM assessment can be on a brand new and untested foundation?

3.8.5 Similarly, this approach only works if market penetration information is comprehensive and readily available, and only works if success is measured on a program by program basis. All of this implies significantly increased regulatory activity.

3.8.6 In our view, the evidence is that a new approach to setting targets – if targets are to be used – is required. The approach proposed by Concentric is not feasible, and in any case is conceptually unsound if the combined SCT/PAC test process is used for measure selection and portfolio/program design. We believe it is not a useful line of inquiry.

3.9 *Issue #8 – Shareholder Incentive Mechanism*

3.9.1 There are many issues in the section on shareholder incentives, but in these submissions we will consider only three of them.

3.9.2 ***Incentive Only After 100% of Target Reached.*** Concentric proposes that gas utilities not be eligible for an incentive unless and until they meet 100% of their target. In this respect, Concentric misses the point of the current target and incentive approach.

3.9.3 The current approach is intended to establish a stretch target, it being expected that more than a reasonable effort will be required to meet it. The model that was used is employee performance targets, which also generally should be set to be fairly difficult to achieve.

3.9.4 On the other hand, like employee performance compensation plans the incentive starts at a level below 100% success, on the understanding that meeting, say, 80% of target is still a good thing.

3.9.5 The principle behind this approach is that people (and companies) will aim for the target you give them. If the target is higher, they will aim higher, so it is better to set higher targets rather than lower ones. On the other hand, the person (or company) should not be disadvantaged because the target is set higher, if a realistic level of performance is something below the target. The solution is to set a high target, but start performance incentives at 75% or 80% of that target.

3.9.6 There is no magic in this approach. It is commonly used in employee incentive plans because it works.

3.9.7 ***Locked In Assumptions.*** Concentric argues that incentives should be based on the same assumptions that went into the budget. The inevitable result of that is that sometimes utilities would be incented for results that they had not actually achieved. In our view, utilities should only be incented for results they achieve.

3.9.8 We note that the very same utilities that prefer the locked-in assumptions approach also have employee incentive plans, usually including a target net income. If the economy goes south (i.e. the GDP assumption turns out to be wrong), and the net income is not

achieved, the utilities don't pay the incentives to the employees anyway, on the basis that the economic downturn was unexpected. Instead, the utilities incent based on actual results. No results = no incentive. That should be the case with DSM.

3.9.9 ***Penalties.*** The Concentric Report has an interesting review of incentive structures in other jurisdictions. One thing that is striking is that in many jurisdictions failure to reach a given level (usually below the target) results in a penalty to the utility.

3.9.10 The concept of penalties was included in the incentive mechanisms in Ontario early on, and was removed by agreement with the stakeholders (including SEC). In our view, it is time to reconsider the symmetry of the incentive system, and to consider whether penalties for poor performance should be included.

3.9.11 ***Other Approaches to Incentives***. In section 3.15 we have set out a possible alternative approach that may prove to be a useful line of investigation when Staff is preparing its thoughts on these issues.

3.10 *Issue #9 – Lost Revenue Adjustment Mechanism*

3.10.1 We have provided comprehensive comments on LRAM in our submissions on Revenue Decoupling in EB-2010-0060. In our view any attempt to modify LRAM is unwise, as a shift to a more suitable revenue decoupling approach may be better.

3.11 *Issue #10 – DSM Conservation Impact Evaluation*

3.11.1 Please see our comments in section 3.13 below on the role of the EAC, and the importance of the financial audit paradigm in DSM audits.

3.11.2 Concentric proposes that the EAC be altered to be a stakeholder committee chaired by a Board Staff member. While we agree with the move to a more independent audit process, in our view the added resource requirement from Board Staff is not warranted. The likely result is that the audit process will become more adversarial, because the parties perceive that the "Board" is in the room, and they must make their case to the Board Staff person. However incorrect this is, it would be the natural tendency, and in our view not a good one.

3.11.3 Further, we believe that devoting one or two members of Board staff full time to supervising gas DSM is not an efficient use of Board resources.

3.11.4 On the other hand, Board Staff may provide a useful role in establishing and maintaining a roster of acceptable DSM auditors for utilities. Although some effort would be required to set it up, and both utilities and intervenors would have to have input into the selections for the roster, the regulation by the Board of the DSM auditors could have beneficial long

term impacts. Selection of the auditor for any utility in any year could still be made by the EAC, but from a list that the Board has already vetted. We think this is something worth considering.

3.12 *Issue #11 – Filing and Reporting Requirements*

3.12.1 No submissions.

3.13 *Issue #12 – DSM Stakeholder Input*

3.13.1 The collaborative nature of DSM by Union and Enbridge has been a positive development over the last several years. We believe that the Board should continue to encourage this.

3.13.2 One problem that has arisen is the role of the EAC in the DSM audit. The utilities appear to have accepted the concept that the auditor should provide an independent and objective opinion on the numbers in the Annual Report, in the same manner as a financial auditor. However, unlike the financial auditor paradigm there appears to be some resistance in the case of DSM to independent oversight of the audit process by stakeholders. The distributors may still prefer to be in control of the audit. This is inconsistent with the financial audit paradigm, in which the auditors, although paid by the company, report directly to the stakeholders (in that case the shareholders).

3.13.3 We believe that the Board should mandate that the DSM audit be supervised and managed by the EAC, and the auditor should ultimately report and provide their opinion to the stakeholders, of which management of the utility is only one of many.

3.14 *Issue #13 – Integration of Gas and Electric DSM*

3.14.1 As we have commented in other proceedings, we do not believe that a common set of rules, or any other integration, for gas and electricity conservation is warranted in Ontario at this time. While it may end up being a good idea, a number of things have to happen first, including LDCs gaining more experience with CDM, further consolidation of the electricity distributors, and integration of new renewable resources into distribution systems. Until these changes have evolved, we see the electricity distributors as being very different from the gas distributors in their involvement in conservation activities.

3.15 *Issue #14 – Alternative DSM Framework(s)*

3.15.1 The Concentric Report provides food for thought on a number of fronts, even if the recommendations themselves cannot be followed. We believe that the Staff paper on

these subjects can further the discussion, and allow all stakeholders to think further about the best solutions to the issues raised.

3.15.2 On a preliminary basis, and without suggesting that this is an appropriate approach, SEC would like to invite Board Staff in their review to consider the following ideas which may be worth incorporating into a new framework.

3.15.3 ***NAUC Incentive***. The two large gas distributors currently have their IRM formulae adjusted for decreases in normalized average use per customer. We believe Staff should explore whether part of the annual DSM incentive should be tied expressly to reductions in NAUC. As a trial, we suggest consideration of a specific incentive for residential DSM programs based on reductions in residential NAUC from any cause.

3.15.4 We are conscious that the implementation of a NAUC incentive flies in the face of the conclusions in the PEG Report. However, we note that PEG sought to connect conventional utility DSM programs with reductions in gas usage. Our suggestion is that utilities be told "NAUC reductions are good. If you can make NAUC go down faster, your incentive will increase." Then the issue is no longer one of measurement. The issue is whether the utilities can find creative ways of convincing their customers to reduce their average use. This aligns the incentive with the true goal.

3.15.5 We also recognize that any incentive of this type is dependent on more robust decoupling than the current LRAM. Our comments on revenue decoupling are contained in our submissions in EB-2010-0060.

3.15.6 ***GHG Emissions Credits.*** The addition of externalities to the mix, particularly carbon, represents both a problem (regulatory complexity) and an opportunity. If the Board determines that carbon reductions are an important aspect of gas DSM, then we believe the Board should consider replacing the current SSM with a sharing of the proceeds of carbon credit between utility and ratepayers.

3.15.7 The value of emissions credits from DSM program, if valued at $20/ton, may be in the range of $8-10 million a year. This is more than enough to incent utilities to succeed at DSM implementation.

3.15.8 But there would be two advantages if this kind of incentive were achievable.

3.15.9 First, a system for identifying and valuing emissions credits will be put in place by governments in any case. The Board would no longer have the responsibility to measure success for the purpose of incentives. A system established for the broader marketplace – whether certification, or a carbon trading market, or some combination – would accomplish that task at no incremental cost.

3.15.10 Second, the ratepayers would not have to bear the incremental cost of incentives directly. While in this scenario the ratepayers would still pay the program costs, the incentive

costs would be part of the larger market cost of carbon, and valued consistently with other carbon offsets in the market. Ratepayers would bear those costs, to the extent that they did, in a manner consistent with how they bear the costs of carbon reduction in the overall economy.

3.15.11 We understand that carbon offsets are in the future, but that future may not be far away. It is, we think, appropriate for Staff in their analysis to consider how carbon credits can be integrated into the new DSM framework in a constructive way, whether as we have suggested or otherwise.

3.15.12 ***Penalties.*** Ratepayers cover the cost of DSM programs because those costs are intended to produce specific benefits. If the DSM programs are unsuccessful, this implies suboptimal use of the ratepayer-funded budget by the utilities. In those circumstances, some form of penalty should be considered.

3.15.13 One possible approach to penalties for poor performance may be for the Board to provide that the percentage of the DSM budget recoverable from the ratepayers is equal to the percentage of the DSM target achieved. If the utility achieves 100% or more of target, then 100% of the budget is recoverable from ratepayers. If success is only 90%, then the ratepayers bear only 90% of the budget.

3.15.14 Another way of approaching this is to provide that the ratepayers provide a budget per unit of target. For example, if the residential target is an TRC (or SCT) of $100 million, the Board could order a budget of, say, 12 cents per $1.00 of TRC/SCT. The budget actually spent by the utility is therefore controlled by its success. If it is more successful, it can spend more. If not, it cannot. This would re-inject the downside risk into DSM planning by gas distributors.

3.15.15 We believe that this and other methods of including penalties for poor performance in the DSM framework should be considered by Staff in their paper.

3.15.16 ***Unit-Priced Budget and Incentives.*** We note that a further extension of this idea could apply to budgeting, penalties, and incentives. In the simplest world, the utility is simply authorized to spend $X per $100 of TRC (or SCT) on DSM. That $X includes their incentive. For every $100 of TRC/SCT they procure for $X-$2, they make a 2% incentive. If they can do it for $X-$5, they get a 5% profit margin. Of course, if they are unable to achieve $100 of TRC/SCT for $X or less, they will lose money, but this is the case with any business.

3.15.17 While a radical departure from existing parameters, paying a utility $X for every unit of savings they deliver, including budget and incentive, would have the effect of making the utility approach to DSM more like their other business activities.

3.15.18 We believe that exploration of ways, such as these, in which the DSM activities of utilities can be made more business-like is an area that Staff should pursue in considering the issues in this consultation.

4 OTHER MATTERS

4.1 *Process and Participation*

4.1.1 We thank the Board for inviting us to participate in this process. We hope these submissions are useful, and we would appreciate the opportunity to continue to be actively involved in all future consideration by the Board of the DSM framework for gas distributors**.**

4.2 *Costs*

4.2.1 The School Energy Coalition hereby requests that the Board order payment of our reasonably incurred costs in connection with our participation in this process. 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
Counsel for the School Energy Coalition