BEFORE THE
NOVA SCOTIA ENERGY BOARD

An Application by EfficiencyOne for	:	
Approval of a New Benefit-Cost Analysis	:	
Test for Evaluating Demand Side	:	
Management (DSM) Plans	:	Matter No. M12282
	:	
	:	
	:	

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DIRECT TESTIMONY

OF

FRANCIS WYATT

GREEN ENERGY ECONOMICS GROUP, INC.

On Behalf of

The Consumer Advocate

July 17, 2025

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I. INTRODUCTION AND SUMMARY

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.?

A. My name is Francis Wyatt, and I am a partner at Green Energy Economics Group, Inc. ("GEEG"), an energy consulting firm founded in 2005. My office address is 950 Button Hil Rd, Cuttingsville, Vermont.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. My testimony is submitted on behalf of the Consumer Advocate ("CA").

Q. PLEASE BRIEFLY DESCRIBE YOUR QUALIFICATIONS?

A. I have been involved in the review and preparation of natural gas and electric energy efficiency plans, as well as potential studies and cost-effectiveness analyses, in at least thirteen states, three Canadian Provinces, and China, since 1992. My educational background and relevant experience are set forth in my resume attached as Exhibit FEW-1 to my testimony.

Q. PLEASE DESCRIBE YOUR WORK WITH ENERGY EFFICIENCY AND CONSERVATION PLANS IN CANADA.

A. I have represented the Consumer Advocate on the Demand Side Management Advisory Group ("DSMAG") and reviewed EfficiencyOne's ("E1") DSM plans and reports since 2019. I have presented evidence before the Ontario Energy Board on Enbridge Gas' Energy Efficiency Plan (EB-2021-0002) on behalf of the Small Business Utility Alliance and served as a member of the Natural Gas Demand Side Management (DSM) Stakeholder Advisory Group as an individual.

Previously I have reviewed and analyzed a number of plans for electric and gas efficiency programs in British Columbia. I supported preparation of testimony regarding BC Hydro's 2006, 2008, and 2012 Integrated Electricity Plan and Long-Term

Acquisition Plans; demand-side management ("DSM") plans by Terasen Gas in October 2008, and, in November 2011, by its successor, Fortis Energy Utilities BC Gas. I also worked on testimony regarding FortisBC Electric's DSM Plan in March 2012.

In 2013, GEEG prepared a report benchmarking BC Hydro's 2012 efficiency investment plans based on updated industry experience and plans. I helped file evidence in two separate proceedings regarding gas and electric energy efficiency plans for 2014-15 submitted by both Fortis companies. All this work was done on behalf of the BC Sustainable Energy Association.

Q. HAVE YOU PRESENTED TESTIMONY IN PROCEEDINGS BEFORE THIS REGULATORY BOARD?

A. No, I have not.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes, I am sponsoring the following exhibit:

1. Exhibit FEW-1 –Resume of Francis Wyatt

Q. PLEASE PROVIDE A SUMMARY OF YOUR TESTIMONY AND FINDINGS.

A. I express overall support of the proposed benefit cost test as a more balanced test. The new benefit values in the proposed test should be vetted and include stakeholders in the process. I support the addition of externalized cost of carbon in the new test, but ask that the internalized cost of carbon be kept separate from the externalized cost of carbon for use with the Program Administrator Cost (PAC) test.

II. GENERAL SUPPORT FOR THE PROPOSED BENEFIT COST TEST

Q. WHAT IS YOUR ASSESSMENT OF THE PROPOSED BENEFIT COST TEST?

A. I think the proposed benefit cost test is a major step in the right direction. It provides a much better balance of the benefits and the costs. The current benefit cost test, the Total Resource Cost ("TRC") test, includes the vast majority of costs but neglects many benefits. The proposed test also better reflects the recently updated goals of the province.

Q. SHOULD ONLY THOSE BENEFITS THAT CAN BE PRECISELY QUANTIFIED BE INCLUDED IN THE NEW BENEFIT COST TEST?

A. No. If one excludes all benefits that are difficult to quantify precisely, then those values are by default assigned a value of zero. If benefits are known to exist (are greater than zero), then it is better to use a rough estimate than to assume a value of zero.

Q. HOW HAVE THE PROVINCIAL GOALS CHANGED THAT CALL FOR REVISIONS TO THE BENEFIT COST TEST?

A. The Energy Reform (2024) Act, SNS 2024, c 2 ("ERA"), adopted in April 2024, broadened the factors that the Energy Board should consider, including:

> "*support the sustainable development, sustainable prosperity, energy efficiency and greenhouse gas emissions reduction goals of the Province articulated in the Environmental Goals and Climate Change Reduction Act*." [1]

The Environmental Goals and Climate Change Reduction Act definitions were as follows:

> *"'sustainable development' means development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.*

[1] Bill No. 404, The Energy Reform (2024) Act, Chapter 2, Part XXXIX, Schedule B

> *'sustainable prosperity' means prosperity where economic growth, environmental stewardship and social responsibility are integrated and recognized as being interconnected."*[2]

These provisions focusing more specifically on sustainability, environmental stewardship and social responsibility in the ERA are not addressed in the current TRC test, but are better addressed in the proposed benefit cost test.

III. CONTINUE STAKEHOLDER PROCESS FOR DEVELOPMENT AND POSSIBLE REVISIONS TO BENEFIT VALUES

Q. WHAT IS YOUR CONCERN REGARDING THE APPLICATION OF THE NEW BENEFIT COST TEST?

A. The cost-effectiveness results of any test are only as good as the inputs into the test. While there are well established methods and processes for the efficiency-measure costs and kWh savings used in the current TRC test, the values used for the new benefits proposed for the new benefit cost test need to be vetted through a stakeholder review process and evaluations in the future. While the proposed benefit cost test methodology and factors for inclusion have been discussed in workshops involving stakeholders, very little time has been spent on discussing the values to be used for the new benefits.

Q. WHAT IS AN EXAMPLE OF A NEW BENEFIT THAT YOU RECOMMEND FURTHER EXAMINATION OF?

A. Energy Futures Group ("EFG") has proposed in its Benefit-Cost Analysis Report to apply percentage adders for weatherization measures. While this is reasonable as a starting point, E1 should consider reexamining this approach in favor of a dollar amount per household. Doing so would scale the health benefits to a per household basis rather than

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[2] Environmental Goals and Climate Change Reduction Act, c. 20, s. 2.

the avoided cost benefits, which could change in the future for reasons unrelated to health benefits. Both Massachusetts and Vermont already use this approach, though they use different values.

IV. SUPPORT FOR INCLUSION OF EXTERNALIZED COST OF CARBON

Q. DO YOU SUPPORT INCLUDING AN EXTERNALIZED COST OF CARBON INTO THE AVOIDED COSTS USED IN THE PROPOSED BENEFIT COST TEST?

A. Yes, I do. As already mentioned, the Energy Reform (2024) Act and the Environmental Goals and Climate Change Reduction Act call for greenhouse gas emissions reductions goals and for social responsibility. While some greenhouse emissions reductions are already internalized into the avoided costs, these do not account for the full impacts on society from greenhouse gas emissions. These effects from increased greenhouse gas concentrations have become very evident – be it drought, wildfires, flooding, etc. The Province has recognized this as a major concern and understands that it needs to do its part in mitigating the impacts.

V. KEEP INTERNALIZED COST OF CARBON SEPARATE FROM EXTERNALIZED COST OF CARBON

Q. IF THE EXTERNIZED COST OF CARBON IS USED IN THE NEW BENEFIT COST TEST, DOES THE INTERNALIZED COST OF CARBON STILL NEED TO BE CALCULATED?

A. Yes. Since the internalized cost of carbon is included in the overall societal cost of carbon, one needs to be careful not to double count the emissions benefits. However, it is still important to calculate the internalized cost of carbon for use in secondary cost-effectiveness tests, such as the Program Administrator Cost (“PAC”) test.

VI. CONCLUSION

Q. PLEASE SUMMARIZE YOUR KEY FINDINGS AND OBSERVATIONS

A. In summary, I respectfully recommend that the Board should:

1) Approve the proposed new benefit cost test as the primary cost-effectiveness test for Nova Scotia.
2) Call for continued stakeholder involvement in the development, evaluation and further refinement of the new benefits included in the proposed benefit cost test.
3) Include the externalized cost of carbon in the new benefit cost test for Nova Scotia.
4) Maintain calculation of the internalized cost of carbon for use in secondary cost-effectiveness tests.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.