TORONTO ATMOSPHERIC FUND

June 14, 2013
Planning and Growth Management Committee
City Hall
Toronto, ON M5H 2N2

RE: TORONTO GREEN STANDARD REVIEW AND UPDATE (ITEM 2013.PG25.10)

Dear Committee Members:

The City of Toronto took a leadership position in 2009 when it adopted the Toronto Green Standard (TGS) for new construction. The TGS helped to reverse a 30-year trend towards worsening energy performance in new buildings, and influenced energy efficiency standards across Ontario. However, due to advancements in technology as well as building code changes, the energy standard set in 2009 is now obsolete. The 2014 TGS update offers the opportunity for Toronto to take the next step in green building leadership by increasing the energy performance standards.

In preparation for this update, Toronto Atmospheric Fund and City Planning Division jointly undertook a 2-year, $60,000 research and consultation project to develop recommendations for increased performance standards. A research team was assembled in partnership with Sustainable Buildings Canada, including leading experts on energy efficiency and building code development. The research findings were unambiguous: there is significant room for improvement in Toronto's energy standards, using off-the-shelf technology and standard design practices which could be implemented at marginal cost.

The recommendations of the study were that, effective January 2014, Toronto's Tier 1 standard should be raised to 15% better than Ontario Building Code (OBC), and the Tier 2 standard (optional with DC rebate) should be raised to 25% better than OBC, for all mid-high rise residential buildings and non-residential buildings. This recommendation was vetted at a consultation session with architects, engineers, and developers, held in November 2012. In a follow-up survey of the participants, 100% of respondents said that the proposed Tier 1 standard was achievable for their firm and/or clients.

We are disappointed to see that the recommendations outlined above are *not* included in the proposed TGS update. On the contrary, ***the proposed update does not include any improvement to the energy efficiency requirements, and would actually weaken the standards*** for low-rise residential buildings. New buildings built under these outdated standards will be locked into a high-carbon, high-energy-cost pathway for the next generation and beyond. This is inconsistent with City Council's vision for a low-carbon future, and will jeopardize efforts to achieve the Council-approved target for reducing community-wide GHG emissions by 30% by 2020.

Improving Toronto's energy efficiency standards *now* would save Toronto's citizens and businesses an estimated $114M by 2025, ensure that all new residential units qualify for Green Home Mortgage Insurance Rebates from CMHC, and avoid over 750,000 tonnes of climate-damaging GHG emissions by 2025. This can be accomplished at a marginal incremental cost estimated at less than 1% of design and construction costs.

In summary, Toronto Atmospheric Fund recommends:

1. The Toronto Green Standard Minimum Energy Performance standards for Mid-to-High Rise Residential and Non Residential be revised as follows:

    a. Tier One (GHG 1.1): Design the building(s) to exceed the energy efficiency requirements of the Ontario Building Code by 15%;

    b. Tier Two (GHG 1.3): Design and construct the building(s) to achieve at least 25% energy efficiency improvement over the Ontario Building Code.

2. City Council adopt the revised Toronto Green Standard Tier 1 and Tier 2 performance measures, as amended above, to be applied to new development applications under the Planning Act commencing January 1, 2014, subject to any necessary Official Plan and City-wide Site Plan Control By-Law amendments.

3. The scope of City Planning Division Recommendation 2, which requires a report back to Council in 2014, be amended to also take into account:

    d. The Council-approved community-wide GHG reduction targets for 2020 and 2050; and

    e. Global best practices in energy efficiency standards for buildings, including the use of Energy Use Intensity-based targets.

New buildings approved today will be part of our City for the next century. Building them efficiently is far more cost effective than retrofitting them down the road. While the adoption of the original Toronto Green Standard in 2009 was an important step forward, the minimum energy performance target established at that time is now obsolete. In order to restore Toronto's leadership position, and protect the interests of future building owners and residents, I urge you to consider adopting the above recommendations.

Sincerely,

Julia Langer
Chief Executive Officer
Toronto Atmospheric Fund

APPENDIX: RAISING THE BAR

Updating the Energy Efficiency requirements in Toronto's Green Standard for New Construction

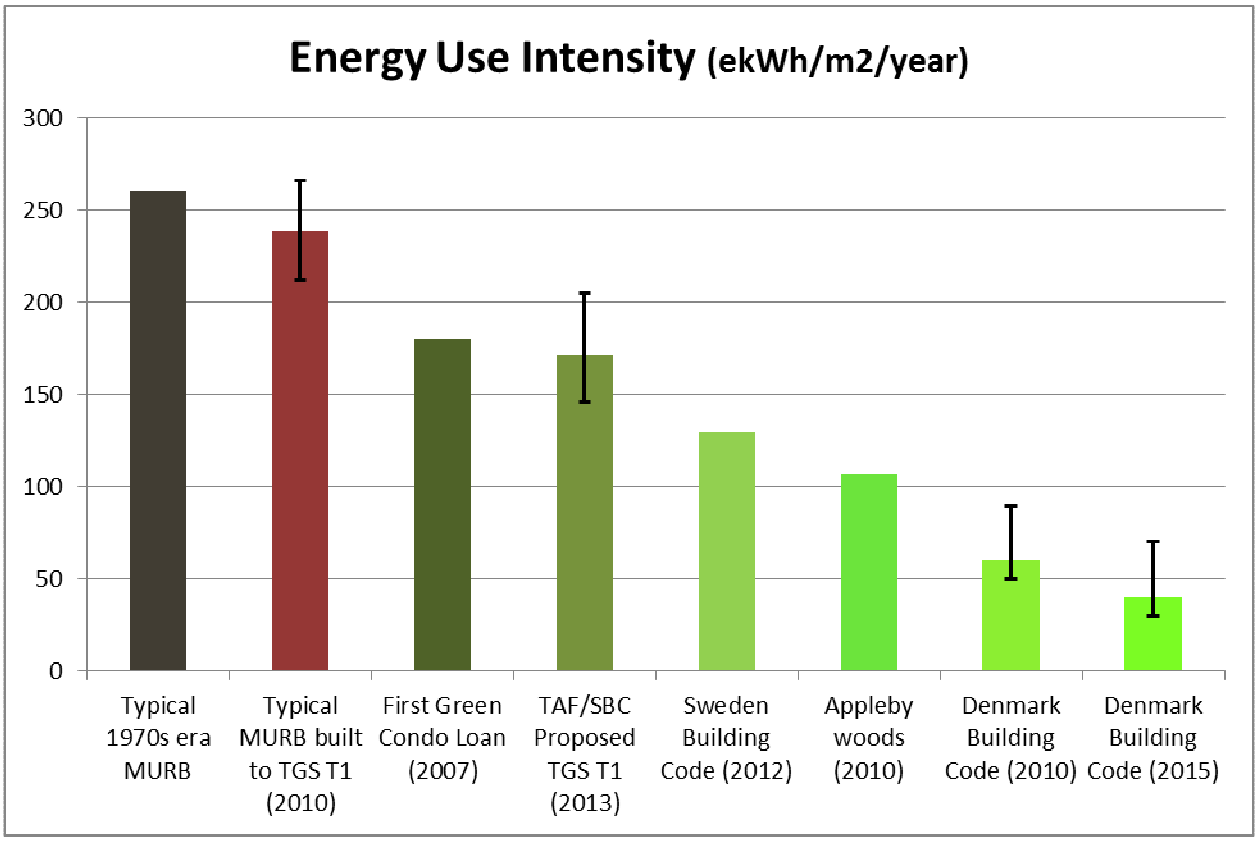
SUMMARY

The Toronto Green Standard (TGS) was created as a voluntary standard in 2006 to encourage greater energy and environmental standards for new construction projects. In 2010, the City of Toronto took a leadership position by making the TGS mandatory for all new buildings. As a result of Toronto's leadership, Toronto's new home-owners and building operators are savings an estimated $20M annually on energy bills, and have reduced climate damaging GHG emissions by approximately 180,000 tonnes eCO2 per year. In 2012, the Ontario Building Code adopted Toronto's energy standards province-wide.

The TGS is scheduled for an update in 2014. A study undertaken for City of Toronto Planning Division, sponsored by TAF, found that higher energy efficiency standards are possible at very modest incremental cost to developers, using off-the-shelf technologies and standard design practices. The study recommended a 15% increase to the minimum energy performance standard. TAF supports the study findings and recommends that the TGS energy requirements be raised by 15% effective January 2014, saving Torontonians an additional $10M in annual energy costs and further reducing GHG emissions by 75,000 tonnes/year.

BUILDING ON TORONTO'S GREEN LEADERSHIP

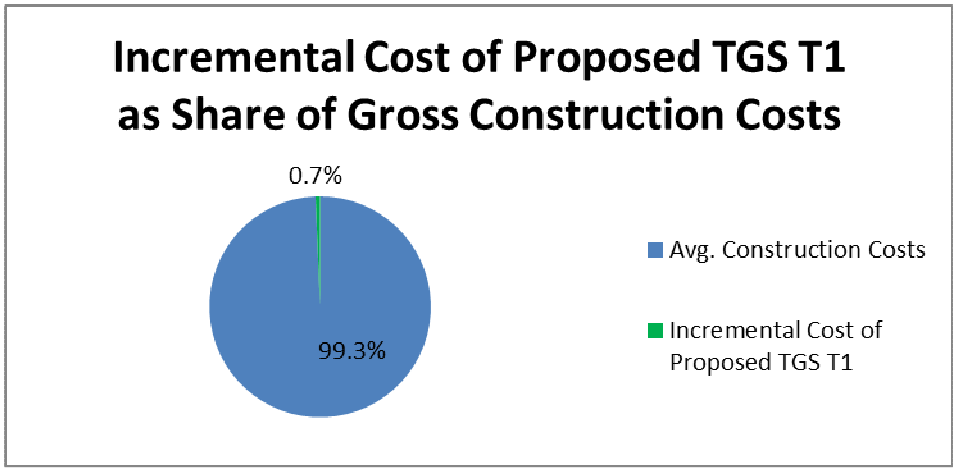
Recent research undertaken for TAF by the University of Toronto Sustainable Buildings Group indicates that the energy efficiency of new Multi-Unit Residential Buildings (MURBs) peaked in the 1970's, following the oil crisis, and actually declined steadily through the 1980's until the early 2000's. As a result of the Toronto Green Standard, new MURBs built to the minimum requirements today are finally outperforming buildings built in the 1970s. However, leading developers in Toronto, as well as leading building codes internationally, have demonstrated that much deeper improvements are possible. The chart below illustrates the performance of buildings built to Toronto's minimum standards (based on 12 projects approved between 2010-12), in comparison to a variety of local and international benchmarks.



Notes:
Typical 1970's MURB based *Meta-Analysis of Energy Consumption Multi-Unit Residential Buildings in the Greater Toronto Area*, University of Toronto, 2012.
Typical MURB built to TGS T1 based on average of 12 MURB energy models submitted to the City of Toronto between 2010-12.
Appleby Woods is a GTA Condo completed in 2010, full case study available at www.towerwise.ca/files/applebywoods.pdf

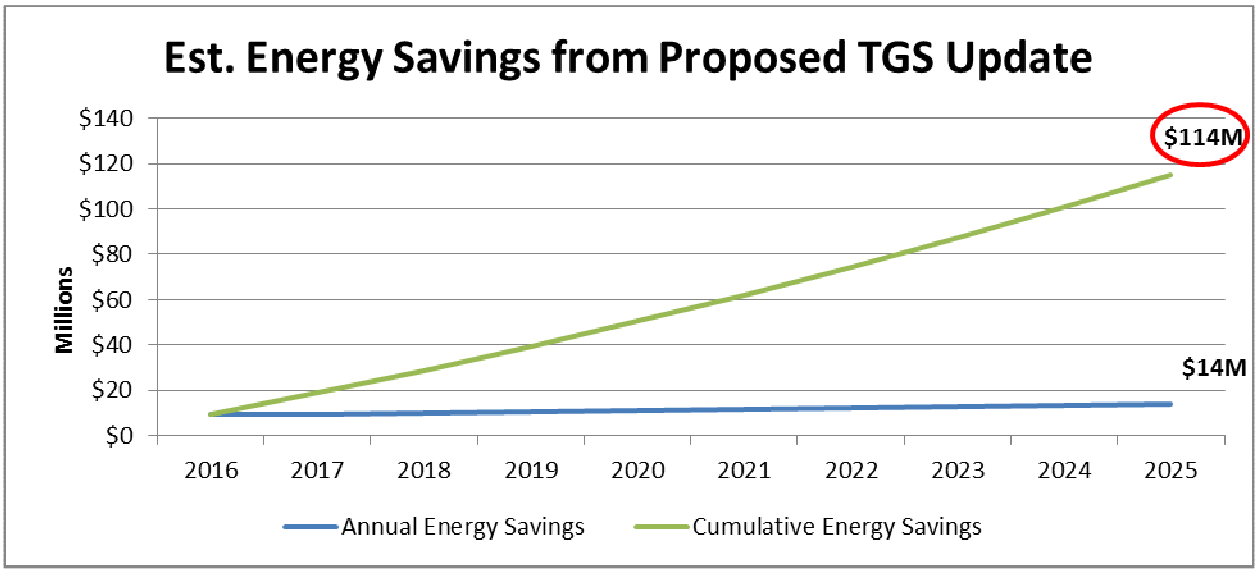
INCREMENTAL COSTS

The estimated incremental cost of meeting the proposed new TGS energy standard is modest (<1%), and is unlikely to have a significant impact on the pace of development in Toronto. Furthermore, the study found that the incremental cost was likely to fall rapidly as the industry adapts to the new requirements.



ECONOMIC BENEFITS

Despite modest incremental costs to developers, the proposed standards are projected to generate over $114M in cumulative energy savings for Toronto homeowners and building operators by 2025.



These energy savings also provide local economic stimulus and support local employment. An estimated 80% of dollars spent on energy leave the City of Toronto, draining billions of dollars from the City's economy every year. Most of the dollars saved on energy due to higher standards are expected to be spent on local goods and services, supporting local businesses and local jobs.

Enhanced energy efficiency standards will also lead to improved housing affordability. All new residential units built to the proposed standards would qualify for the *Green Home Mortgage Insurance Rebate* offered by the Canada Mortgage and Housing Corporation, valued at $500-1000 per home. This has the potential to save low-and-middle income home buyers up to an additional $10M by 2025.

ENVIRONMENTAL BENEFITS

Energy-use in homes and buildings accounts for over 50% of Toronto's GHG emissions. In order to achieve Toronto's 2020 target of reducing GHG emissions to 30% below 1990 levels, energy-use in Toronto's existing buildings needs to be reduced by another 15% — without accounting for growth. It is therefore critically important that new buildings are built to a high standard of energy efficiency. It is estimated that the proposed TGS energy standards would reduce emissions by a cumulative total of 757,000 tonnes eCO2 by 2025.