

June 24th, 2021

Toronto Planning and Housing Committee item PH25.17

Re: **Letter of support for PH25.17 Toronto Green Standard update**

Dear Toronto Planning and Housing Committee members:

**We strongly support the adoption of TGS V4.**

Buildings are the largest source of emissions, responsible for nearly 60% of Toronto's carbon emissions. Transform TO has identified that all new buildings must be built to net zero emissions by 2030. Geothermal for heating and cooling has been identified as a technology that not only allows developers to achieve the current TGS Tier 2 Standard but plays a major role in achieving net zero and the transition to electrification of buildings.

Advancements in technology has eliminated some of the barriers which hindered the adoption of geothermal. The most significant advancement has come in the form of the Energy as a Service (EAS) business model which eliminates the upfront cost, risk and the complexity associated with geothermal. Currently there are several firms including us operating in the GTA providing geothermal solutions as well as the EAS business model. This no cost approach not only eliminates the cost of geothermal but offers a net savings for the developer by eliminating the cooling tower and boilers. The result is a green building at a lower cost. Geothermal drilling firms are ramping up production to meet the new demand. Firms such as Aecon are purchasing new rigs as well as mobilizing drilling crews from Alberta who are in need of work due to the downturn in the oil and gas industry. These efforts have addressed any capacity concerns that may exist as a result of changes in carbon emission policy.

Geothermal is a unique technology that offers much more than just GHG and energy reduction, it also eliminates rooftop cooling towers and drastically reduces the footprint of the mechanical penthouse. Beyond the quest for zero carbon this provides some practical benefits for the City as well as the building occupants. Eliminating the cooling tower provides developers the opportunity to offer more rooftop amenity space. The Plant Condo in Liberty Village is a great example of this, not only did it achieve Tier 2 by adopting geothermal they were able to provide a rooftop community garden for the occupants. This would not have been possible with a cooling tower taking up space and creating noise. In some cases, we have seen the roof top penthouse eliminated, reducing the overall height of the building but maintaining the same density. Cooling towers also consume millions of litres of valuable water every year the peak of this accruing mid summer during water shortages. This consumption gets eliminated with geothermal providing a benefit to the City and cost savings for occupants. Each year we are also seeing condo fees increasing as a result of the energy costs, maintenance and repairs associated with heating boilers and cooling towers. Buildings that utilize geothermal with the EAS business model eliminate these variable costs replacing them with a fixed fee providing condo corps with long-term cost certainty.

Although with the help of geothermal and the no cost approach achieving Tier 1 is not a problem the proposed Tier 2 may be a challenge for Developers. The feedback we have received is the financial incentives are not enough to warrant the additional costs. We believe much of this could be resolved by allowing developers to re-allocate rooftop mechanical space to residential space as part of Tier 2 or Tier 3. The space is being either reduced or eliminated anyway as a result of geothermal and the financial

benefit to the developer would be significant. The net height would be the same and the City would receive additional DC and future tax revenue. A true win win for all parties.

Most developers are resistant to adopting new technology especially when it results in an increase in cost and risk. Fortunately, the EAS business model has a proven track record both financially and operationally. There are currently dozens of multi-residential buildings in the GTA operating successfully with 100% geothermal heating and cooling. With a no cost approach and a proven track record developers across the City have identified geothermal as a practical solution to reducing energy and GHG. The uptake in this geothermal business model has debunked the myth that geothermal is a cost premium. Most of the projects we are engaged in the developer is seeing a cost savings by eliminating the cooling tower. Geothermal has now become the lower cost alternative. I personally have been in the geothermal industry for 16 years and for the first time we are witnessing developers and building designers actively seeking out geothermal for their projects. They no longer view the TGS V4 update as being forced to comply with new aggressive target but instead see this as an opportunity to differentiate themselves and market their firms as leaders in innovation and addressing climate change. We have the luxury of speaking to developers every day on this topic and I can assure you most of them see this as the future not just as a policy change but also from demands in the market. We feel there is enough inertia in the market, confidence with developers and market ready solutions that the City should move forward with confidence when adopting new standards such as the TGS V4 update.

Regards,



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Diverso Energy