

# When Housing Policy meets the Energy Regulator: Understanding the Minister of Energy's Decision to Effectively Overrule the Ontario Energy Board

By Adam Fremeth and Brandon Schaufele

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*"Affordable housing has two components – the cost to buy the house and the cost to operate the home. Both are important. A home may have what appears to be an affordable purchase price, but that price advantage is diminished if the cost to operate the home, including the home's energy costs, are higher than they need to be." (OEB, December 21, 2023, pg. 36).*

Days before Christmas an astonishing series of events unfolded in Ontario's energy sector. On December 21, 2023, the Ontario Energy Board (OEB) released its [Decision and Order on Enbridge Gas's Application for 2024 rates](#). This is an important document and Enbridge's first major rate case in years. It is among the first to wrestle with energy transition and rate regulated natural gas assets in Ontario. It was a bold and far-reaching decision by the adjudicators on the risk of stranded assets as a part of Canada's push towards net zero.

The decision, if it stands, would prevent Enbridge from capturing the cost of new residential gas connections as part of its regulated capital budget. Effectively, this shifts the upfront gas connection cost onto home developers in a manner similar to development charges for water and sewer connections. Unlike water and sewer, however, developers could decide to skip a natural gas connection altogether, opting to install electric heating instead.

Plenty could—and should—be written on the economics of this order. Yet somehow the decision turned out to be a mere prelude of what was to come.

A single day after the OEB released its decision, on December 22, 2023, Ontario's Ministry of Energy made a snap announcement of his own. He decided to use legislation to effectively overrule the OEB. Here is Minister Smith's [full press statement](#):

*"Our government was elected with a mandate to rebuild Ontario's economy as we keep costs down for people and businesses and build the homes our growing province needs.*

*"I am extremely disappointed in yesterday's split decision by the Ontario Energy Board to reduce the amortization period for the cost of installing new natural gas connections for homes. This decision, which would mean costs that are normally paid over 40 years would be owed in full up front, could lead to tens of thousands of dollars added to the cost of building*

*new homes. At a time when Ontario, like the rest of Canada, is already dealing with the difficult headwinds of high interest rates and inflationary pressures, the Ontario Energy Board's decisions would slow or halt the construction of new homes, including affordable housing. We will not stand for this.*

*"In response, I will use all of my authorities as Minister to pause the Ontario Energy Board's decision. At the earliest opportunity, our government will introduce legislation that, if passed, would reverse it, so that we protect future homebuyers and keep shovels in the ground."*

The Government overrode an independent economic regulator because the OEB's decision on an "amortization period ... could lead to tens of thousands of dollars added to the cost of building new homes." The Government position is that this is housing policy, not energy policy and that the OEB strayed "out of their lane." Currently, housing policy trumps environmental concerns.

This post is about the economic trade-offs inherent in linking a natural gas rate-making decision to housing policy. But we must dispose with the obvious at the start. Overriding an independent economic regulator is a big deal. It is not something that should be done lightly. The Government's decision explicitly undermines the OEB and threatens credibility of future energy investment in the province. Moreover, it's not obvious that this move is in Enbridge's long-term interests. Once a precedent to effectively overrule a regulator is established, there's little to stop future governments from using the same tactic to different ends, perhaps against natural gas infrastructure.

To be clear, we are not arguing that the OEB made the right decision. Independent agencies make mistakes. The OEB may have erred in this situation. In fact, one commissioner dissented on part of this final decision. However, if Enbridge or any other party believes that the OEB exceeded its mandate or applied legislation incorrectly, the appropriate recourse is to the courts or to other remedies in administrative law. In fact, independent regulators create value because courts apply transparent processes to decide contentious issues, avoiding the whims of elected officials. Skipping the Ontario Divisional Court creates a dangerous standard and could backfire on the sitting Government.

Regulatory independence and energy transition are the big issues here. Yet, it is also worth understanding the economics of the Government's choice. What does it mean for housing policy? The remainder of this brief is about dollars and cents. It is our attempt to put numbers behind the Government's decision.

Here's the conclusion: as a result of the Ministerial override, new home buyers will see lower annual mortgage payments of between \$128.88 to \$254.52 per year. Lower mortgage payments are because buyers pay a lower price when purchasing their home. However, the cost of natural gas connections must be paid for. To cover these costs, homeowners will pay approximately \$161.78 per year on their natural gas bill. In sum, as the OEB adjudicators concluded, it's "largely a wash for homebuyers" (OEB, December 21, 2023, pg. 37). The Government gains very little on its affordable housing goals.

To be clear, this is very back-of-the-envelope. While the numbers may appear precise, they are not. This is not the rigorous economic analysis required in an expert report or academic paper. Having said that, our calculation is economically consistent in that free money doesn't magically appear out

of thin air. No one is installing natural gas connections for free. Expenses must be paid. Additionally, even though much of the debate in the OEB decision is over amortization periods, we largely abstract from this by focusing on simplified annual estimates.

Before digging into the details on these numbers, it worth noting that Ontario has experience supporting natural gas connections with alternative policy instruments. Since 2019, the province developed a Natural Gas Expansion Program that aimed to connect about 18,000 households across 60 communities. This program was funded through a \$1-per-month charge to existing natural gas customers. The beneficiary communities tended to be in rural or northern locations that previously had no access to gas. The per connection cost, in this situation, was significant with the average cost coming in at over \$25k per house.

In what follows, we sketch how we arrived at these numbers. We proceed in two steps.

### **Step 1: Purchase Price of a New Home**

To start, claiming that reversing the OEB's Order saves "tens of thousands of dollars" on new home construction appears wildly off-the-mark based on the evidence Enbridge provided during the OEB hearing:

*"Enbridge Gas estimated the average cost to connect a home ... to be \$4,412 ... Connection costs for new construction system expansion projects are generally lower than for infill projects, due to economies of scale. The initial cost to Enbridge Gas for a 20 metre connection for an infill project is approximately \$6,000." (OEB, December 21, 2023, pg. 25).*

It's not clear how one gets from \$6,000 to "tens of thousands of dollars". Perhaps there's a way, but this information has not been released.

Political messaging aside, there are several methods to approach the economics of housing. The Ontario Government wants to lower the upfront cost of acquiring a newly built home, the sticker price of new construction. That is a reasonable goal. Yet, anyone with a mortgage knows that upfront costs are a poor way to think about housing. What families care about is the stream of costs and benefits derived from "housing services." Benefits from owning a home include comfort, security, heating, proximity to work and amenities, etc. Costs include mortgage payments, utilities, and maintenance. Notwithstanding down payments, families manage income and expenditures over time, amortizing a house's upfront purchase costs over 25 or 30 years. Scarcity and the supply and demand of housing stock are critical to determining the price of a house, but it is the flow of costs and benefits that factor in the purchase decisions.

Moreover, emphasizing the upfront costs is an odd way to deal with housing shortages, especially if an immediate consequence of lowering the sticker price is an increase the flow cost of owning that home. One must assume that the market doesn't adjust the purchase price based on the house's prospective utility bills. Still, we're talking about new build, so it is possible that the market is structured such that there is merit to the Government's approach.

Estimating the effect on market prices from the Government's policy is not easy. Plenty of assumptions are required. Core to our approach is what is known as a counterfactual scenario.

A counterfactual scenario is the hypothetical outcome where everything is kept constant except for the Government's decision on upfront connection costs. We take as a baseline a housing market where the OEB's decision applies in its entirety – i.e., developers pay to connect to the natural gas distribution system. We then explore what happens to house prices when natural gas connection costs are eliminated.

To develop our counterfactual scenario, we built a simple one-output, two-input partial equilibrium model based on supply and demand. The output is new houses. The first input is natural gas connections and heating equipment. The second input is everything else, including electric heating.

We set the average house price at \$568,535, approximately equal to the November 2023 price in London, Ontario. The elasticity of housing demand was set at -0.5. (This number is from an old Review of Economics and Statistics article.)

Input cost shares were calibrated using the values in the OEB decision. The cost share of natural gas connections and heating is set at 1.5% of total household construction costs (using the average London house price). The price elasticities of input supply were calibrated to match a recent Bank of Canada research paper that estimated the elasticity of housing supply in Canada at 1.94 (technically, we use 1.96).<sup>1</sup>

Our big unknown is the extent to which builders can substitute between natural gas inputs and other inputs. This was a big question in the OEB's decision too. At the market level, there is clearly some opportunity to substitute between, say, a gas furnace and a heat pump, but how much substitution is truly possible is a wild guess.

We deal with this unknown two ways. First, we make the extreme assumption that absolutely no substitution is possible. Builders must use and pay for gas hook-ups (i.e., fixed proportions). We call this scenario 1. Second, we relax this to allow for a moderate level of substitution (specifically, we assume an Allen elasticity of substitution equal to 1.0). This is scenario 2.

Finally, we use Enbridge's connection cost, \$4,412, and assume that this represents 50% the cost of natural gas heating equipment with the furnace being the other half.

Given these assumptions, our model predicts that the sticker price for new houses will fall by:

Scenario 1	\$3,380.78	Extreme scenario
Scenario 2	\$1,710.74	Moderate scenario

In the extreme scenario, new home prices are \$3,400 lower than they would otherwise be. The more plausible scenario pegs the estimate at a \$1,700 reduction. Prices are lower but not by much.

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<sup>1</sup> Paixão, Nuno, 2021. Canadian housing supply elasticities. Staff Analytical Note/Note analytique du personnel — 2021-21.

## Step 2: Amortizing Purchase Price and Operating Costs

Adding a natural gas connection to a new home always involves an upfront cost. The question is who pays this cost. Answering this question hits at the heart of the Government’s policy trade-off.

There are two options.

Option 1 is a stylized version of the “standard” approach, the approach that the Government endorsed. Enbridge Gas incurs the upfront \$4,000 to \$6,000 expense on a new connection. These costs are then incorporated into the rate base and recovered through distribution rates over 30-40 years (OEB, 2023, pg. 25).

Option 2 involves homeowners paying these costs and incorporating them into their mortgages. They are paid over the mortgage’s amortization period.

Option 1 is associated with the lower purchase price, while Option 2 foregoes these purchase savings. Option 2 has lower gas utility bills, however. We focus on Option 1 as this is the route taken by the Government.

We want to keep things simple. For the large majority of families, a mortgage is required on a new home. Based on the lower purchase price, how much does a family save on their mortgage payment with Option 1? Assuming a baseline \$500,000 principal, a 5.79% interest rate and a 25-year amortization period, saved mortgage payments amount to:

	Monthly	Annual
Scenario 1	\$21.21	\$254.52
Scenario 2	\$10.74	\$128.88

The catch with lower mortgage payments is, of course, the home’s energy costs will increase. If Enbridge pays \$4,412 to connect the house to the distribution system, it recoups these costs through the rate base. Enbridge earns a weighted average cost of capital of 6.5%. Adding \$4,412 to the rate base implies that the homeowner pays  $6.5\% * \$4,412 = \$286.78$  per year plus commodity and network costs on this connection.

If we stopped here, it appears that the Government’s decision harms rather than helps new home buyers. An annual \$287 is more than the \$255 in annual savings. Yet, the analysis isn’t complete. Natural gas is more reliable than alternatives and has a lower per unit heating commodity cost. These are opportunity costs that need to be factored in as energy savings for buyers when comparing the policy options. There are many estimates on the differential costs between gas and electric heating, ranging, for example, from FortisBC’s estimate of a \$250 per year for advantage for gas to Pembina’s claim that it’s a virtual tie between gas and electric heating. The Canadian Climate Institute has a calculator that argues cold air heat pumps are better for most Ontarian homeowners. Let’s split the difference and set the savings at \$125 per year.

Importantly, however, gas's advantage over electric heating will diminish as carbon prices increase. In fact, the whole reason that we're dealing with this issue is the carbon dioxide emissions associated with combusting natural gas.

This pegs the annual operating cost of a natural gas connection to a new home buyer at \$161.78, squarely in the middle of our house price savings estimates. It's a wash.

The conclusion is the Government's decision to override the OEB should have virtually no effect on affordable housing in the province. Based on our admittedly rough estimates, their policy might reduce the annual cost of buying a home by \$92.74 or it could possibly increase it by \$32.90. Hardly seems worth damaging regulatory independence for.

*This article was jointly written by Adam Fremeth and Brandon Schaufele, Ivey Energy Policy and Management Centre.*