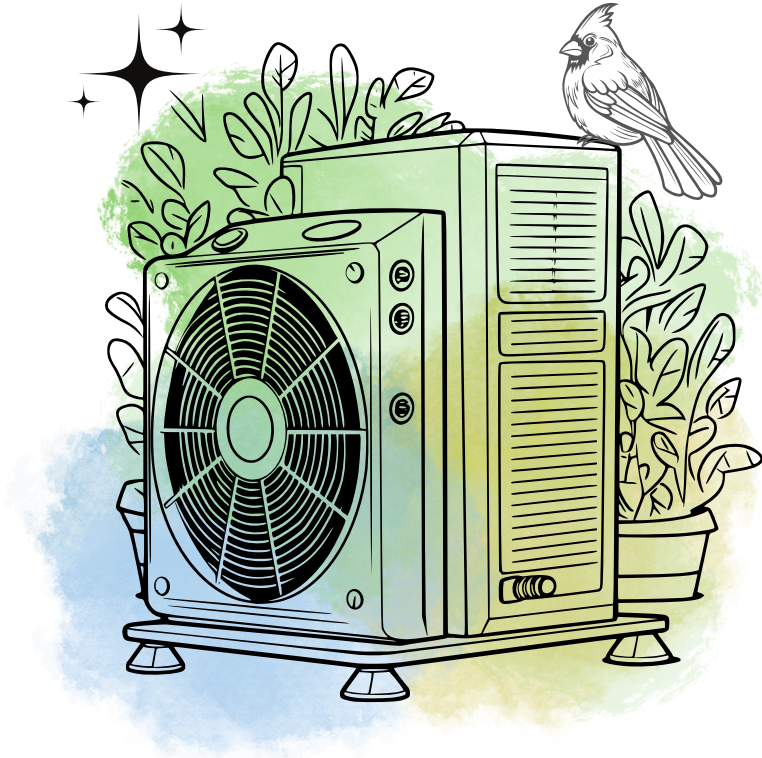


Your First Heat Pump Guidebook



A cold climate heat pump can keep you cozy all winter, cool all summer, and get your home off fossil fuels

Welcome!

Installing a heat pump is a huge boost to your home comfort — and the single most impactful thing you can do to reduce pollution that comes from heating your home.

The homeowners we've worked with are relieved that they can heat their homes without fossil fuels and improve their comfort at the same time, all for less than the cost of updating a bathroom. But installing a heat pump takes a little more research than swapping one furnace for another.



This guidebook is your map to the home heating and cooling world. Our goal is to help you install your first heat pump, stress-free.

This bird's-eye tour includes links to in-depth articles where you need them. It will steer you away from those “I wish I had known that sooner!” moments that make home improvement projects so frustrating.

Also, this guidebook is meant to be interactive—please scribble away!



Toronto
Home Energy
Network

You might be wondering who we are! **We're Toronto Home Energy Network.** As a non-profit, we share best practices and connect you with experts and neighbours who've already made the switch.

We're here to support you—just friendly guidance to make your home more comfortable! There's nothing for sale in this guidebook.





We Love Retrofit Advisors

Before we dive in, an important note: we recommend Retrofit Advisors A LOT in this guidebook.

In case study after case study, and from our team's firsthand experience getting their heat pumps installed, Retrofit Advisors have been the difference between stress and success.

Retrofit Advisors coach homeowners through heat pump selection and sizing, finding contractors, and (best of all!) they handle the rebate paperwork for you (if you qualify) —that's hours of form-filling that you won't have to do.

In case you're curious, we do NOT receive referral fees for guiding people to Retrofit Advisors. Our funding is transparent. See the yellow box below.

Our mission is to support homeowners who want to move away from heating their homes with polluting fossil fuels. To achieve that, we:

- Write free educational documents like this one.
- Build community groups across Toronto that provide personalized coaching and technology demonstrations.

OK—enough preamble. On to the guidebook!



Thank you to our funders for backing community projects in Toronto:




Table of Contents

This guidebook has six sections:

1.  Heat Pumps Demystified (Pages 9-13)

Understand the basics

2.  Prep (Pages 14-21)

Learn about your home's existing systems

3.  Contractor Visit Cheat Sheet (Pages 22-23)


Make sure the little details don't get missed


4.  Tips for a Comfortable Install (Page 24)

Stay comfy during the project

5.  Your New Heat Pump (Page 25)

Dial in your heat pump's settings

6.  Glossary (Pages 26-27)

If you see this blue book emoji () next to a word, it's defined in this section

Warning...as you start asking around about heat pumps, chances are some people will try to steer you away from them. Old technology, shoddy installations, and misinformation plague the humble heat pump.

So, let's start with some myth-busting before diving into the guidebook. By the end of the next few pages, you'll be able to separate fact from fiction.





Heat Pumps Work In Canada



A modern cold climate heat pump works efficiently down to -30°C and keeps you cool through a heat wave—they're awesome.



Older conventional heat pumps struggle at -5°C and need backup heating. They're still installed in milder places like British Columbia.



Fun fact: The last time it was -30°C or colder in Toronto was January 16, 1994, over 30 years ago. The temperature reached -31°C . This is the coldest temperature recorded in Toronto in recent history.

Bottom Line:

- A cold climate heat pump can probably replace your existing heating without a gas furnace to back it up.
- A hybrid system, in which your heat pump is linked to your existing gas furnace (Page 10), is another valid option if you have a new furnace or a worried spouse.
- A new heat pump will replace your existing A/C.
- $\frac{1}{3}$ of homes in New Brunswick are heated and cooled by heat pumps.
- $\frac{2}{3}$ of homes in Norway and Sweden are heated and cooled by heat pumps.



The **BetterHomesTO** site has links to free coaching through the City's Furnace Upgrade Program
Google: [Better Homes TO](#)





Real Costs

People love to cut costs on their heating and cooling appliances. Don't be tempted! Your heat pump will keep you cozy all year. Paying for a reliable one is worth it.

You can get a very basic cold climate heat pump installed for \$8,000-\$11,000. These heat pumps might need a furnace for backup heating (more on that on Page 10). Setting aside \$1,000-\$3,000 for simple home updates like air sealing (Page 16) is also a good idea.

Higher-end cold climate heat pumps cost between \$12,000 and \$25,000. Like with any appliance, the cost rises as you get more powerful heat pumps with added features. This is still less than a kitchen reno, and you feel the improved comfort every single minute you're home.

Operating Costs: A heat pump and gas furnace are cost-comparable, with many homeowners finding that the heat pump costs less over the whole year (especially if the heat pump replaces an old A/C unit).



Incentives Are Available

Torontonians often get \$1,000-\$2,250 back on their heat pump from the Home Renovation Savings Program.

There are other incentives, but the amount of money you can receive depends on your existing system, your income, and the work you do.



We host and regularly update a page with info on all of the heat pump incentives.

thenetwork.to/guidebook





Your Comfort Zone

Let's start with a simple reflection: how involved do you want to be in your heat pump installation? Are you happy to set a budget and trust the pros, or are you curious to learn more about home heating and cooling?

Scan these levels of involvement and circle the one that feels right for you.

1 – Full Service

I want to set the budget, sign the paperwork and trust the experts. Research and planning are not my jam!

2 – Light Involvement

I want to learn the basics, but I'd rather leave the real decision-making and coordination to a professional.

3 – Heating and Cooling Curious

I don't mind learning some new terminology to understand my home's heating and cooling systems.

4 – Active Involvement

I'm happy to do my own homework, then get everything double-checked by a professional.

5 – Totally DIY

Although Home Depot sells DIY Heat Pump Kits, you will be handling refrigerants and electricity, which can be dangerous. We don't recommend trying this at home!

Keep your answer in mind as we move on to this next section.

Interestingly, one of the biggest barriers to getting a heat pump isn't a tricky technical question or a tight budget. **It's decision fatigue!**



We've found that tuning into what really excites you about heat pumps is the #1 way to give your project a North Star. Let's try that now.

Three main things get people excited about heat pumps:

Modern Tech — You want your home to be smart and connected. A heat pump with extra features and an app where you can tweak its settings is right for you.

Climate Action — You're mostly excited about having a greener home. Doing the upfront work to get your home 100% off fossil fuels should be top of mind for you.

Replacement — You're ready to replace your aging furnace or A/C. Heat pumps are the natural choice for keeping you comfortable year-round.

If you're not sure, that's OK! There's no shame or wrong answers here. Take your best guess for now.

Now, let's bring it all together. If you answered 1 or 2 on the previous page, and Climate Action or Replacement resonates with you, check out our Retrofit Advisor page below before reading on. We highly recommend introducing yourself to someone on that page.



Our **Retrofit Advisor page** has your options and links to contact them. Don't be shy—they love what they do.
thenetwork.to/guidebook



The rest of the guidebook is helpful for all comfort levels and motivations, so let's carry on to the next section. It covers some heat pump basics (no HVAC degree required!).







Types of Heat Pumps

This is the first part of the Heat Pumps Demystified section. We'll start adding technical terminology, but it's not meant to scare you! Getting a few terms down before calling a contractor puts you way ahead of homeowners who wing it.

Remember to flip to the Glossary at the end of the Guidebook if you need a definition.

First, you don't need to drill underground for any of these systems! Heat pumps in Toronto almost always get their heat from the outside air (called an  **air-source**), rather than the ground ( **ground-source**).

There are four main ways that a heat pump can provide warm and cool air to your home. We will describe each and the home it's best suited for.

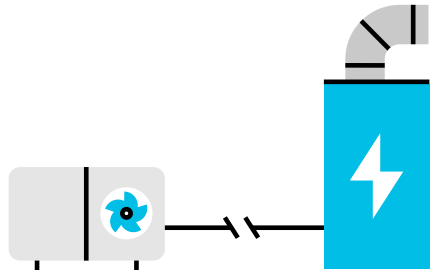
A central heat pump is best if your home has ducts

The heat pump serves the entire house by moving hot and cool air through the ductwork.

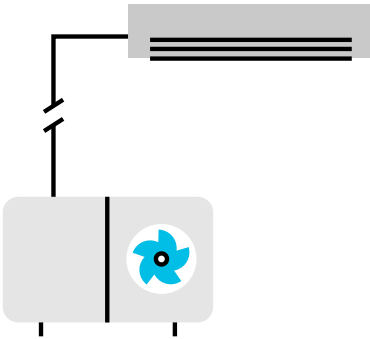
A cold climate heat pump can provide all of a

home's heating and cooling. Many Torontonians decide to add electric coils in their ductwork for backup heating.

The coils are pricey to run, but they should only flip on for short bursts on the coldest days. Whether you should add backup coils is a bit technical—it's a good conversation to have with your contractor or Retrofit Advisor.



A ductless system is best if your home doesn't have ducts

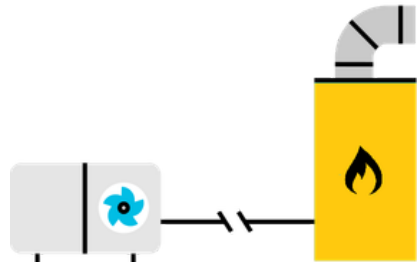


A ductless system uses “mini-split” units mounted on walls or ceilings. These “mini-split” units look like wall-mounted air conditioning units.

The number of indoor units you will need depends on your home’s size and layout.

A hybrid system is best if you have a new (~5-year-old) furnace or boiler

These systems use a cold climate heat pump until the outside temperature drops below a set temperature.



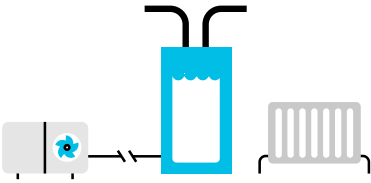
At this point, the system switches automatically to your furnace or boiler. After working with a contractor or Retrofit Advisor, you may learn that your home isn’t right for a cold climate heat pump by itself. That’s OK! Hybrid systems can still significantly cut your home’s gas use. Our recommendation is to start with a cold climate heat pump as your goal.





Caution: Some HVAC installers will say you “absolutely need” a gas furnace for backup heat. This is usually because they aren't confident in sizing your heat pump...something we cover in the next section.

If your home has radiators, things are a bit trickier!



You have two choices:

Fully Electric (a.k.a Air-to-Water Systems): A heat pump transfers heat to a

water tank that is then piped through your radiators at a lower temperature than your boiler does. These systems are common in Europe, but not so much in Toronto. Air-to-Water heat pumps typically **do not** provide cooling.

Hybrid System: A ductless heat pump is paired with your boiler. Your boiler provides heating on the coldest days. The heat pump does the rest and **adds summer cooling**.



We hosted a whole webinar on pairing heat pumps and radiators!
thenetwork.to/guidebook




BC Hydro has an excellent video on the different types of heat pumps.
[YouTube: Which Heat Pump Is Right For You?](#)





Heat Pump Sizing

Like cars, heat pumps come in different sizes. The size you need depends on your home's  **heat load**, the amount of heat your home needs to stay warm.

With proper heat pump sizing, you can stare down polar vortexes and heat waves without fear—you'll know that your heat pump will keep you comfortable.



Why sizing matters: An undersized heat pump will run at max capacity a lot of the time, shortening its life. An oversized heat pump will "short cycle," meaning it will turn on and off constantly, which also shortens its life, and is very energy inefficient.

Calculating your actual heat load takes technical training, but you just need to remember two things:

- Your contractor or Retrofit Advisor should calculate your heat load.
- Your old utility bills are a great way for them to run that calculation.

Sadly, we've seen highly recommended HVAC installers get heat load wrong. If your contractor tells you either of these two things, you have cause for concern:

- They say they only need to know your home's square footage. This is a very common myth. It doesn't work because square footage and heat load are not directly correlated! A small house with lots of drafts takes more energy to heat than a larger house that's well-sealed (we'll cover drafts and air-sealing on Page 16).



- They only look at the size of your old furnace. Furnaces are almost always oversized in Canada (meaning they “short cycle”).

Old utility bills are a great answer—the bills tell you exactly how much energy it took to heat your home. There’s no guesswork or modelling required, especially if you average the cost for the past few winters.

Some contractors haven’t been trained in this highly effective method, but every Retrofit Advisor has been.


If your contractor raises an eyebrow when you pull out your old heating bills, it might be time to contact a Retrofit Advisor or find a different contractor.



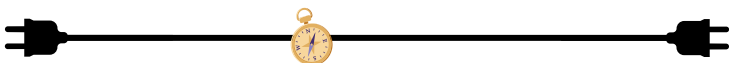
Checklist: Your job is to get those bills ready for your contractor or Retrofit Advisor.

Can you log in to your Enbridge account?

Can you log in to your Toronto Hydro account?

Finally, a heat pump’s size is measured in “ tons,” which is a bit confusing. That’s not referring to the weight of the unit itself! It refers to the amount of cooling it can do as compared to a 1-ton block of ice per day. If that sounds weird, you’re not wrong. It’s from a time when measuring energy was much less precise (horsepower is like that too). Heat pumps come in ½ ton increments. Most Toronto homes need a 2, 2.5, or 3-ton heat pump.

That’s the end of the Heat Pumps Demystified section! Your heat pump knowledge has already come a long way. The next section will have you look more in-depth at your existing heating and cooling system, which will set you up to make some game-changing updates to your home. Keep it up!





Introduction to the Prep Section

This section calls out some of the biggest heat pump installation speedbumps we've seen while working with homeowners, like:

- Ducts from the Dark Ages
- Drafts that suck all the cool or warm air out of your home
- Contractors who just want to do things their way
- Electrical panel panic

This isn't a list of chores—**using the checklists on the next pages can totally change your home's status quo.**

Many people we've worked with believe their chilly toes and drafty bathrooms just come with living in an older home. The reality is that simple, inexpensive improvements can rid your home of those annoyances and make your heat pump much more efficient.

Soon you'll be wondering why you put up with an uncomfortable home for so long!



The best part? People who install a heat pump are surprised at how even and comfortable the heat feels. They're experiencing how heat pumps work steadily to bring your home to one cozy temperature. Furnaces really struggle at this. With a furnace, the home gradually becomes chillier, then a blast of hot air is released to warm it up. This creates a temperature cycle with stuffy peaks and chilly valleys.



Your Existing Heating and Cooling System

Your contractor will definitely ask you about your existing system over the phone, so getting your answers together beforehand will make getting quotes much easier.



Checklist: Ducts or Ductless?

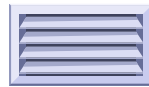
If your home has vents in the walls or floor where hot and cool air comes out, then you have ducts! Remember, heat pumps can work with or without ducts.



If these look familiar, you have ducts!

I have ducts

I don't have ducts



Checklist: Your Primary Heating System

You either have a system that uses ducts:

Forced Air Gas Furnace

Forced Air Heating Oil Furnace

Forced Air Propane Furnace

Forced Air Electric Furnace

Or a system that doesn't use ducts:

Electric Baseboards

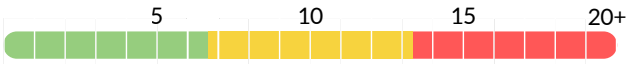
Radiators with a Gas/Heating Oil/Electric Boiler

Don't see your system here? That's OK—the rest of the Prep section will still have useful info for you.



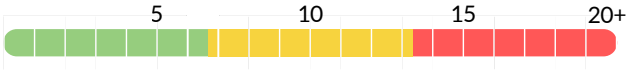


Checklist: How old is your heating system?



Its Age: _____

Checklist: How old is your A/C (if you have it)?



Its Age: _____

15 years is the industry standard replacement timing.



Energy Audits & Air Sealing

All homes have small (and sometimes not-so-small!) gaps and cracks in the roof, walls, windows, doors, and foundation where warm or cool air leaks in or out.

A leaky or drafty home doesn't just mean you'll have chilly toes in the winter: your heat pump will have to work much harder (which will increase your energy bills) to make up for the leaks. The heating system you have today also has to work hard to overpower these drafts.

So, it's time to caulk and seal every leak, right? Surprisingly, no! A completely airtight home is impossible —it wouldn't have doors or windows. Your goal is to find the "just right" zone.


Too drafty/leaky → Your heat pump will have to work harder, or your backup heat source will keep turning on, which will cost you money.

Just right → Your heat pump is sized properly and purrs along efficiently. There is enough incoming and outgoing warm or cool air to keep you comfy.




The bonus is that you can often skip expensive whole-house insulation upgrades by sealing drafts. When we feel cold inside our homes, we usually assume that we need more insulation. But it's often the leaks that are making us shiver. **Sealing leaks is much cheaper and easier than installing new insulation.**

Finding Your Home's "Just Right" Zone

Measurements beat guesswork every time—this is where we can let you in on one of the best-kept secrets of the heating and cooling world: the  **blower door test**.

Good contractors and Retrofit Advisors can't recommend them highly enough—they are the only way to measure how airtight your home is scientifically.

They're not scary or expensive. They're included in an  **Energy Assessment**, which usually costs around \$500. That's not nothing...but having a less leaky home means no cold drafts on the way to the bathroom in January, and you'll save that \$500 on your energy bills in no time! The Home Renovation Savings Program also offers money back on Energy Assessments. It pays to get one done.

With leaks and drafts covered, it's time to move on to ducts.



See a blower door test in action in this PBS video. [YouTube: How to Perform a Whole-House Energy Audit | Ask This Old House](#)



Leaky, Dirty & Undersized Ducts


You can skip this section if your home doesn't have ducts.

Ducts are easy to ignore, but your new heat pump will rely on them to make you comfortable. Here are some common duct issues that could affect your heat pump:

Blocked ducts → bad indoor air quality; your heat pump needs to work harder

- Solution: Your contractor or Retrofit Advisor can diagnose the block and figure out the best way to clear it.

Leaky ducts → rooms far away from your heat pump won't warm up or cool down.

- Solution: Leaky ducts can be fixed easily and relatively inexpensively with  **AeroSealing**.

Undersized ducts → air will get backed up and not reach where it needs to go.

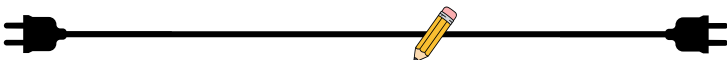
- Solution: Replace the grilles with less restrictive collars and/or install properly sized or additional ducts.

Like with measuring leaks, asking your contractor or Retrofit Advisor to measure your ducts is the fastest way to make sure that they're heat pump-ready.

With your ducts in order, we can get some tips on choosing the right contractor. The next section is a little longer, so grab a cappuccino and settle in!



Checklist: Ask your contractor or your Retrofit Advisor to measure the airtightness and volume of your ducts.





Contractors

Contractors are the biggest make-or-break of your heat pump installation. You want a contractor who shares your enthusiasm for heat pumps. If they don't encourage you to install one, keep looking.

You need to make sure your contractor:

- 1) Understands that heat pumps work in Canada.
- 2) Knows how to properly install them.

Most contractors we've talked to are warm towards heat pumps...until you ask them to remove the furnace.



Many contractors will assume you want a hybrid system (Page 10) and actively push you there, often to the point of recommending that you buy a new furnace to pair with your heat pump. A well-sealed home with a properly sized cold climate heat pump can keep you cozy all winter by itself. Electrical coils can be added as backup for the coldest days of the year.



A good shortcut to avoid wrangling with a contractor is to find one who will put your needs first—we've written an article to help you find the right one.

thenetwork.to/guidebook



Once you have your contractor shortlist, you'll need to contact them for quotes. Two questions will help you narrow the field (just make sure you don't leave off "cold climate" when you mention heat pumps).



Ask Your Contractor Before the Quote:

- I'm interested in a cold climate heat pump —what do I need to know to install one without a gas furnace backup?
- Can you share some referrals for previous cold climate heat pump installations?

You want a contractor who is:

- Curious about your home and will do the work to find your heating needs (aka your heat load).
- Open and enthusiastic about sharing previous work.
- Recommended by their previous heat pump clients.

We know that asking these questions will make some people nervous, but it is essential to find someone who respects your needs and your home's unique features—these questions aren't rude!

Bedside manner is also crucial. If they sound distracted or annoyed with your questions, they're probably not your Contractor Charming.



You can record your quotes on this printable worksheet.
thenetwork.to/guidebook





Electrical Panel

Adding a heat pump in place of a gas furnace means your electrical panel (aka the box with all the breakers or fuses) will have a new, large appliance that needs to be fed.

Warning! We've come across many contractors who insist you need to upgrade your electric service and buy a bigger electrical panel before putting in a heat pump.

If that sounds expensive and time-consuming, you'd be right. Fortunately, most Toronto homes (even century homes) already have a big enough panel.

The confusion happens because these contractors add up the electrical demand as if every single one of your appliances were running at full blast at the same time, and then add 25% on top of that...that's just not realistic.

Toronto Hydro recently released a tool to help you fact-check Panel Paranoid contractors. It's called the Peak Demand tool, and it tells you the actual highest amount of electricity your home drew at one time. The article below links to it, but you only need to read it if a contractor insists that you need a panel upgrade before they will install your heat pump.



If your contractor insists that you need a new, larger electrical feed and panel before getting a heat pump, our article can help you fact-check their claim.

thenetwork.to/guidebook





Contractor Visit Cheat Sheet

At this point, you've got a contractor in mind for the install. But before you sign the papers, run through this pre-install checklist with them. It's full of important little details that need to be tackled regardless of the model or price of your heat pump.

This section is not meant to scare you—these are lessons learned from other homeowners who hit speed bumps before and after their installation.

Getting these figured out before you sign anything with your contractor puts you way ahead of homeowners who dive in unprepared.



Equipment. Your installer might have preferred brands. Ask them:

- Do you offer an extended warranty with any manufacturers?
- Are you certified to install by the manufacturer you are recommending?

Unit Placement. Where will the outside compressor unit go? It should be:

- Away from bedroom windows & outdoor sitting areas (though heat pumps are usually much quieter than most air conditioners).
- Easy to remove snow or placed under shelter.
- Clear of barriers for good airflow.
- Water can drip off the unit and freeze on the ground. **The unit should be placed away from paths that you use regularly in the winter.**
- Easy to reach for future maintenance visits. In other words, rooftop placement is a last resort.





Thermostat. Way too often, we hear about contractors installing a new thermostat, then not teaching their client how to use it! This leads to callbacks and frustration. Make sure:

- They are willing to help you set up your new thermostat (if a new one is required).
- That you know what features it has.

This is especially important if you install a hybrid system! Thermostats are your heat pump's brain.

Commissioning. This is when the installer returns to your home a few months after installation to make sure your heat pump is working at its peak efficiency. Before signing a contract, make sure that:

- There's a plan to return.
- They do performance measurements (not just a visual inspection).
- They do the first maintenance check, which includes:
 - A thorough inspection of the heat pump.
 - Refrigerant pressure tests.
 - High-voltage wiring checks.
 - Heat exchanger cleaning.
 - Full system inspection to get ready for summer or winter.

Commissioning can really boost your heat pump's performance—it pays to ask for it.

That's a lot of technobabble! The goal isn't for you to learn the intricacies of heat pump installation—that's your contractor's job. The goal of this checklist is to level the playing field.

With these questions in hand, you can make sure your contractor isn't taking shortcuts with your installation. Your comfort is key. Good contractors will welcome your interest in their work.





Tips for a Comfortable Install

Kudos—you've done the hard work! At this point, you've prepped your home and selected your trustworthy contractor. Your new heat pump is just around the corner.

If you've gone through the guidebook, you're set up for success. But if something unexpected pops up, or you're bamboozled by your quote, here's how to get help:

- The **Home Retrofit Forum** Facebook group answers questions quickly. It's moderated and overflowing with firsthand heat pump experience. Posting your issue or searching past posts can get you unstuck.
- A Retrofit Advisor is ready to help. Even if you got started without one, they can be parachuted in to untangle a tricky situation.

It's time to get excited! You'll soon be cozy through polar vortexes and heat waves, all while dramatically reducing your home's fossil fuel use. Thank you for doing your part.



Join the **Home Retrofit Forum** for advice, news, and events.
thenetwork.to/guidebook



Your New Heat Pump

Your new heat pump should now be installed! Every time it whirs to life, it keeps fossil fuels in the ground—you've improved your comfort and helped the environment.

There are just a few things to keep in mind to make sure it keeps you comfortable all year:



- Don't turn the thermostat radically down overnight, then way back up again in the morning. Think of it like a crock pot—just “set it and forget it!”
- When your heat pump turns on for the very first time, it will take a couple of hours to get your home to a comfy temperature.
- Keep snow from piling up around your outdoor unit.



Our **Heat Pump Owner's Manual** has more tips to help you dial in your heat pump's settings.

thenetwork.to/owners-manual



Also, we would love to snowball your success story by helping you organize a **Heat Pump Party** (seriously!). This is how we get whole neighbourhoods excited about making the switch—thenetwork.to/guidebook has more.

Finally, tracking heat pump installations makes our funders very happy. If this guidebook helped you get your first heat pump, please pay it forward by letting us know at thenetwork.to/guidebook-feedback. Your note will help make a cleaner, more sustainable Toronto.

Thank you for reading! Keep in touch with our fun and infrequent newsletter. The link is on the back cover.



We hope this **Guidebook** helped! But you might still have some questions. No problem—what would help you most right now? Seeing a heat pump in someone's home? More articles or videos? We'd love to connect you with the help you need. Just email: info@thenetwork.to





Glossary

Aerosealing — Aeroseal is a patented technology that seals duct leaks from the inside out. The process causes polymer particles to stick first to the edges of a leak, and then to each other until the leak is completely sealed.

Air Source Heat Pump — A heat pump that obtains heat from the air. Cold climate air source heat pumps can gather heat even when the air is very cold.

Blower door test — A blower door test is a simple way to see how drafty your home is. A technician fits a big fan into your front door and gently pulls air out of the house, which makes it easier to find drafts and leaks.

BTUs (British Thermal Units) — Like calories or kilowatt-hours, BTUs are a scientific way to measure energy. Heat pumps are often rated in BTUs. The higher the number, the more powerful the heat pump.

Commissioning — This is fine-tuning and maintenance that a heat pump installer can do on your heat pump after it's installed. The tuning can increase its efficiency, which may lower your utility bills.

Energy Assessment — An energy efficiency check-up for your home. Trained Assessors do measurements, like the Blower Door Test, to find the biggest opportunities for home comfort improvement. They cost around \$500. Some Retrofit Advisors are trained to do Energy Assessments, and the Home Renovation Savings Program can cover some of the costs (if you qualify).



Ground Source Heat Pump — A heat pump that uses underground pipes to draw and disperse heat, like geothermal. Given the amount of drilling required to install this system, it's not practical for most Toronto homes.

Heat Load — The amount of energy it takes to heat your home. The size of your home matters (bigger homes have higher heat loads), as does how well sealed your home is (leaky homes lose lots of heat). If there's one thing you take away from this guidebook, it's the importance of getting a heat load calculation done by your contractor or Retrofit Advisor before anyone recommends a heat pump.

Mini-Split — A heat pump that doesn't use ducts. Instead, it has multiple heads that can be controlled independently.

Tons — Heat pumps are usually sized by the “ton”—this doesn't refer to the weight of the outdoor unit! This refers to how much cooling it has compared to a ton of ice per day.

SEER — When you get your quote, you might see something like “24,000 BTU, 21 SEER Ductless Unit.” That's a lot of abbreviations! Let's unpack those:

SEER stands for the Seasonal Energy Efficiency Ratio, and it's like the fuel efficiency of a car. A higher SEER rating indicates a more efficient unit that uses less energy and results in lower utility bills (though they cost more upfront). Shoot for a SEER rating above 20. Working with your contractor or Retrofit Advisor is the best way to find the right balance of upfront vs. ongoing costs for you.

BTUs = British Thermal Units, which we defined above. There are 12,000 BTUs per ton, so 24,000 BTUs would be a 2-ton heat pump.



You don't have to figure it out by yourself.

Toronto Home Energy Network will help you get your first heat pump with neighbour-to-neighbour support and expert guides.



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