NEW BRUNSWICK RENOVATIONS

Energy Efficiency

Energy-efficient renovation upgrades including insulation, heat pumps, HRV systems, air sealing, and NB Power rebates

13 Expert Answers from Reno IQ

newbrunswickrenovations.com/construction-brain

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Q1

Is radiant in-floor heating worth adding during a renovation in NB?

Radiant in-floor heating is absolutely worth considering during NB renovations, especially for bathrooms, kitchens, and basement finishing projects where you're already replacing flooring. The upfront cost ranges from **$8-15/sq ft** for electric systems to **$12-25/sq ft** for hydronic (water-based) systems, but the comfort and efficiency gains in New Brunswick's long heating season make it a smart investment.

Electric radiant systems are the most practical choice for single rooms during renovations. Installation costs **$8-15/sq ft** including the heating mat, thermostat, and professional installation. A typical bathroom (80 sq ft) runs $800-1,500 installed. Electric radiant works exceptionally well under tile, luxury vinyl, and engineered hardwood. The system adds about 1-2 inches to floor height, which needs planning during bathroom or kitchen renovations where transitions to adjacent rooms matter.

Hydronic radiant systems cost more upfront (**$12-25/sq ft**) but offer superior efficiency for whole-home applications. These systems circulate heated water through tubing embedded in the subfloor or concrete slab. A hydronic system for a 1,500 sq ft main floor runs $20,000-40,000 installed, including the boiler, manifolds, and controls. The payback comes through reduced heating costs — hydronic radiant is 20-30% more efficient than forced-air heating because it heats objects and people directly rather than heating air that rises to the ceiling.

New Brunswick's climate makes radiant heating particularly attractive. Our long heating season (October through April) means you'll benefit from the comfort for 6+ months annually. Radiant heating eliminates cold spots and drafts common with baseboard or forced-air systems. In coastal NB communities where humidity and dampness are constant challenges, radiant floors help dry out moisture and create a more comfortable indoor environment. The even heat distribution also reduces the humidity swings that plague NB homes, where forced-air systems create hot and cold zones.

Timing during renovation is critical. Electric radiant mats install directly under new flooring, so this is the perfect time to add them. Hydronic systems require access to subfloors and walls for tubing runs, making renovation the ideal opportunity. Retrofitting radiant heating into finished spaces is expensive and disruptive — plan for it during your renovation or miss the window for years.

Best applications in NB homes include bathroom floors (luxury everyone appreciates on cold Maritime mornings), kitchen floors (where you spend significant time standing), basement floors (eliminates the perpetual chill of concrete slabs), and mudrooms or entryways (helps dry wet boots and coats). Master bedroom floors are increasingly popular for the comfort factor during NB's long winters.

Material compatibility matters. Tile and luxury vinyl are ideal over radiant systems. Engineered hardwood works well with proper installation. Avoid solid hardwood over radiant heat — NB's humidity swings combined with heating cycles cause excessive expansion and contraction. Carpet reduces efficiency significantly and isn't recommended over radiant systems.

Professional installation is essential for both electric and hydronic systems. Electric systems require TSANB-licensed electrical work for proper circuit installation and GFCI protection. Hydronic systems need licensed plumbers for the water connections and pressure testing. Improper installation voids warranties and creates expensive problems. Budget for professional installation — this isn't a DIY project.

The investment makes sense during renovation when you're already disrupting floors, but evaluate it against your total project budget. A $2,000 radiant system in a $25,000 bathroom renovation adds significant value. The same system in a $8,000 cosmetic refresh might push your budget too far.

Need help finding experienced contractors who specialize in radiant heating installation? New Brunswick Renovations can connect you with local professionals who understand both the technical requirements and NB's specific climate considerations.

Q2

What are the best energy-efficient upgrades for a New Brunswick home?

The single highest-impact energy upgrade for most New Brunswick homes is a cold-climate heat pump combined with improved insulation and air sealing — together these three measures can cut heating costs by 30-60% and dramatically improve year-round comfort. NB homeowners heating with oil or electric baseboard have enormous room to reduce energy consumption with targeted upgrades, and NB Power rebate programs make the economics even more compelling.

A cold-climate heat pump (mini-split or central ducted) is the foundational upgrade for NB energy efficiency. Modern cold-climate models operate efficiently down to -25°C or lower, making them genuinely effective through even the coldest Fredericton or Edmundston winters. A single-zone mini-split serving the main living area costs $3,000-$6,000 installed; a multi-zone system covering the whole house runs $8,000-$18,000 depending on the number of heads and the complexity of installation. Heat pumps move heat rather than generate it, making them 200-400% more efficient than electric resistance heat — for every dollar of electricity consumed, you get $2-$4 worth of heat delivered.

Attic insulation is the second most impactful upgrade, and in NB's older housing stock it's consistently underperforming. Provincial and federal building code now targets R-50 or better for attics in NB's climate zone — many older NB homes sit at R-20 to R-30, and some older homes have even less. Upgrading an attic from R-20 to R-50 with blown-in cellulose or fibreglass costs $2,500-$6,000 for a typical NB home and can reduce heating energy by 15-25% on its own. The payback period at current energy prices is typically 3-7 years, and the upgrade also reduces summer cooling loads and prevents ice damming by keeping attic temperatures closer to outdoor temperatures.

Air sealing is the unglamorous but incredibly effective partner to insulation. Most older NB homes leak enormous amounts of conditioned air through electrical boxes, plumbing penetrations, attic hatches, rim joists, and thousands of small gaps in the building envelope. A blower door test (part of an EnerGuide energy assessment) quantifies exactly how leaky your home is. Professional air sealing of a typical older NB home costs $1,500-$5,000 and can reduce heating energy by 10-20%. Critically, air sealing must be paired with proper mechanical ventilation — an HRV (Heat Recovery Ventilator) or ERV is essential when you tighten up an NB home to ensure fresh air exchange without heat loss.

Window replacement is often discussed as an energy upgrade, but the economics are more nuanced. Triple-pane windows ($600-$1,200 each installed) are genuinely more efficient than aging single or double-pane windows, but the energy savings alone rarely justify the cost of full window replacement in an otherwise-reasonable home. Windows make the most financial sense when the existing windows are drafty, damaged, or near end of life. If your windows are in good condition, air sealing around the frames (interior and exterior caulking, weatherstripping) delivers most of the benefit at 5% of the cost.

Basement rim joist insulation and air sealing is one of the most overlooked upgrades in NB homes — the rim joist (where the floor system meets the foundation wall) is typically uninsulated or poorly insulated and is one of the largest sources of cold air infiltration. Spray foam applied directly to the rim joist area seals and insulates in one step, costs $1,500-$4,000 for a typical NB home, and noticeably improves first-floor comfort through the winter. For detailed energy guidance specific to your situation, New Brunswick Electrical at newbrunswickelectrical.com covers heat pump systems and electrical upgrades in depth.

For any energy efficiency project, book an EnerGuide energy assessment first — it costs $150-$400 and is often partially subsidized through federal programs. The assessment maps your home's energy losses, prioritizes upgrades by cost-effectiveness, and qualifies you for rebate programs through NB Power and Natural Resources Canada that can offset $1,000-$10,000 of your upgrade costs. Starting without an assessment means guessing; starting with one means investing precisely.

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Q3

How much can I save on heating by improving insulation in my NB home?

Improving insulation in a typical New Brunswick home can reduce heating costs by 20-40%, with older homes seeing savings at the higher end — a home spending $4,000/year on heating oil could realistically save $800-$1,600 annually after a comprehensive insulation upgrade, with payback periods running 5-12 years depending on the scope of work and current energy prices. The savings vary significantly based on what insulation your home currently has, what heating system you use, and which insulation upgrades you make.

NB's climate makes insulation savings more impactful than in milder provinces. The province's long heating season — typically November through April with meaningful heating loads even in May and October — means your insulation is working hard for seven or more months of the year. Every reduction in heat loss translates directly to a reduction in fuel consumption. At current oil prices (around $1.40-$1.60 per litre in NB in 2026), and with the heating load that Moncton, Saint John, Fredericton, and especially northern communities like Bathurst and Campbellton demand, insulation improvements deliver real, measurable dollar savings every winter.

Attic insulation upgrades produce the largest single savings. Heat rises, and an under-insulated attic allows expensive conditioned air to escape directly out of the building. Upgrading from R-20 to R-50 in a 1,000 sq ft attic can reduce heating energy by 15-25% on its own. In a home spending $3,500/year on heating, that's $525-$875 annually. The upgrade typically costs $3,000-$6,000, giving a payback of 4-8 years — then savings continue for the remaining 25-40 year lifespan of the insulation. Few renovation investments beat that return.

Wall insulation is more expensive to improve because it requires either opening walls from inside or removing and replacing exterior cladding. Dense-pack cellulose blown into existing wall cavities from the exterior (before residing) is the most cost-effective approach and can bring 2x4 walls from R-8 to R-13 to R-14. New exterior continuous insulation (adding rigid foam outside the existing wall sheathing during a siding replacement) brings even larger gains by eliminating thermal bridging through studs. If you're already planning a siding replacement, adding 1-2 inches of exterior rigid foam at the same time adds $3,000-$8,000 to the project but cuts heating costs meaningfully

for decades.

Basement insulation is the most urgent upgrade in many NB homes. Uninsulated concrete foundation walls lose significant heat directly to the ground and to outdoor air at the above-grade section. Insulating basement walls with closed-cell spray foam or rigid foam board with sealed joints — both of which also serve as vapour and air barriers — costs $4,000-$10,000 for a full perimeter and can reduce basement heat loss by 60-80%. The rim joist area, where the floor system meets the top of the foundation wall, is often completely uninsulated in older homes and should be the first target: spray foam the rim joist perimeter for $1,500-$4,000 and you'll notice the difference in first-floor comfort immediately.

The most accurate way to quantify your specific savings potential is an EnerGuide home energy assessment, conducted by a registered energy advisor and subsidized through federal programs. The assessment includes a blower door test that measures air leakage, a room-by-room heat loss calculation, and a prioritized list of upgrades ranked by cost-effectiveness. It costs $150-$400 out of pocket (often partially offset by program subsidies) and gives you a precise roadmap rather than general estimates. Homes assessed before and after upgrades qualify for Canada Greener Homes grants of up to $5,600, which meaningfully changes the payback calculation.

One important caution: when you significantly tighten and insulate an NB home, you must ensure adequate mechanical ventilation. A well-insulated, air-sealed home needs an HRV (Heat Recovery Ventilator) to bring in fresh air without wasting heat. An HRV costs $2,000-$4,000 installed and should be budgeted as part of any serious insulation project — improving indoor air quality while maintaining the energy gains you've just worked hard to achieve. For detailed guidance on heat pump integration with your insulation improvements, New Brunswick Electrical at newbrunswickelectrical.com covers the electrical and HVAC side of NB home energy upgrades in depth.

Q4

What NB Power rebates are available for energy-efficient renovations in 2026?

NB Power's Total Home Energy Savings program remains the province's most accessible rebate pathway for energy-efficient renovations in 2026, offering incentives on heat pumps, insulation, windows, doors, and more — with individual rebates typically ranging from $500 to $5,000+ depending on the upgrade.

The Total Home Energy Savings (THES) program is NB Power's flagship residential rebate offering, and for most NB homeowners it is the first place to look when planning an energy renovation. The program covers air-source heat pumps (including mini-splits and ducted systems), heat pump water heaters, insulation upgrades for attics, walls, and basements, triple-pane windows, and air sealing work. Rebate amounts change periodically, so confirming current values directly with NB Power before budgeting is essential — the program has evolved significantly in recent years and 2026 rebate levels should be verified at nbpower.com or by calling their energy efficiency team.

To access most NB Power rebates, you must use a participating contractor who is registered with the program. This is not just a formality — registered contractors understand the documentation requirements and submit the rebate paperwork on your behalf. If you hire a contractor who is not registered, you may be ineligible for the rebate even if the work itself qualifies. Always confirm contractor participation before signing a contract for any energy upgrade you plan to rebate.

Stacking Rebates for Maximum Savings

Savvy NB homeowners can layer NB Power rebates with federal programs. The Canada Greener Homes Grant (now wound down as a grant but evolved into loan programs) and the Oil to Heat Pump Affordability Program have provided additional funding layers in recent years. The NB government has also run supplemental programs, particularly targeting oil-to-heat-pump conversions. Checking with Efficiency NB alongside NB Power gives you the full picture of what is stackable in 2026.

An energy audit by an NRCan-registered energy advisor is often the gateway to the most substantial rebates. Some programs — particularly insulation rebates — require pre- and post-renovation energy assessments to qualify. A home energy audit costs $400-$600 in NB but unlocks access to rebate programs that can return $2,000-$8,000 or more on a comprehensive energy renovation, making the audit cost a clear investment. The audit also gives you a prioritized upgrade roadmap so you are spending money on improvements that actually move the needle on your energy bills.

NB's climate makes energy efficiency renovations particularly valuable. With heating seasons running from October through April and fuel oil prices that have swung dramatically in recent years, the payback period on heat pumps,

insulation, and window upgrades is shorter in NB than in milder provinces. Many NB homeowners who switched from oil heat to heat pumps with NB Power rebate support are reporting 40-60% reductions in annual heating costs.

For the most accurate and current rebate amounts, contact NB Power's energy efficiency program directly or use the rebate finder at nbpower.com. Program details and rebate levels in 2026 should be confirmed before contracting any work — these programs are updated regularly and the information in any guide, including this one, can become outdated. Get connected with local contractors experienced in energy upgrades through the New Brunswick Construction Network directory at newbrunswickconstructionnetwork.com/directory — many are already registered NB Power program participants.

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Q5

Is it worth upgrading to a heat pump during a renovation in New Brunswick?

For most NB homeowners currently heating with oil or electric baseboard, upgrading to a heat pump during a renovation is absolutely worth it — modern cold-climate heat pumps operate efficiently down to -25°C, and combined with available rebates, the payback period is often 5-8 years with decades of savings to follow.

New Brunswick's heating market has shifted dramatically in recent years, and heat pumps are now the dominant choice for renovation projects that include mechanical upgrades. The technology has matured significantly — the concern that heat pumps do not work in NB winters is outdated. Today's cold-climate mini-split heat pumps from brands like Mitsubishi, Fujitsu, and Bosch maintain full heating capacity down to -15°C and partial capacity well below -25°C. For an NB home with a winter that regularly sees -15°C to -20°C in Fredericton or Edmundston, a properly sized cold-climate heat pump handles the vast majority of heating hours with remarkable efficiency.

The economics are compelling. A single-zone ductless mini-split system supplying heating and cooling for a primary living area costs **$3,000-$5,000 installed** in NB. A multi-zone system covering 3-4 areas runs **$7,000-$14,000 installed**. A ducted central heat pump system replacing a furnace runs **$8,000-$18,000 installed**, depending on

whether ductwork modifications are needed. Against these costs, NB Power rebates through the Total Home Energy Savings program can offset $1,000-$4,000+ depending on the system and efficiency rating. The Oil to Heat Pump Affordability Program has provided an additional $2,000-$5,000 for oil-to-heat-pump conversions for qualifying households — confirm current availability with NB Power for 2026.

Timing a heat pump installation during a broader renovation is strategically smart. When walls are open or ceilings are accessible, the electrical work needed to support a heat pump — often a new dedicated 240V circuit or panel upgrade — is far cheaper and less disruptive to complete than after the renovation is finished and walls are drywalled and painted. If your renovation involves any kitchen, bathroom, or basement work that opens up wall or ceiling cavities, bring your electrical contractor into the heat pump conversation early.

One important planning consideration for NB homes is backup heat. Most renovation contractors and energy advisors recommend retaining a backup heat source for the extreme cold snaps that hit northern NB — Edmundston, Campbellton, and Bathurst regularly see -25°C or colder. This can be an existing oil furnace kept in standby, electric baseboard left in key rooms, or a heat pump water heater that also contributes warmth. A hybrid system — heat pump as primary, oil or propane as backup — is a pragmatic NB approach that maximizes efficiency while providing peace of mind.

For cooling, NB's increasingly humid Maritime summers have made the air conditioning function of heat pumps a bonus that many homeowners did not anticipate but now consider essential. A heat pump providing both heating and cooling is a significant comfort and resale value upgrade for any NB home.

Hiring a licensed refrigeration mechanic (TSANB licensed) to size and install your heat pump system properly is non-negotiable — undersized systems work overtime and fail prematurely, while oversized systems short-cycle and do not dehumidify effectively. Get 3+ quotes and ask each contractor to provide a heat load calculation, not just a guess at system size. New Brunswick Renovations can connect you with experienced local contractors through the New Brunswick Construction Network directory.

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Q6

What is the best insulation type for an older New Brunswick home?

For most older NB homes, the best insulation strategy combines closed-cell spray foam at the rim joists and basement walls, blown-in cellulose or fibre glass in the attic, and rigid foam plus air sealing in the walls — but the right answer depends heavily on your home's age, construction type, and where the worst heat loss is occurring.

Older New Brunswick homes — particularly those built before 1980 — were constructed with minimal insulation standards by today's reckoning. A typical 1960s or 1970s NB home has 2x4 framing with perhaps R-12 fibre glass batt insulation (if any was installed at all), single-pane or early double-pane windows, and an attic with R-10 to R-20 where current code calls for R-50 to R-60. The basement walls may be bare concrete or hollow block, and the rim joist area — where the floor framing meets the foundation wall — is almost always a significant source of heat loss and air infiltration.

For **attic insulation**, blown-in cellulose is the gold standard for older NB homes. Cellulose is made from recycled paper treated with borate-based fire retardant, and it excels at filling irregular spaces, settling around existing framing, and handling the freeze-thaw cycling NB attics experience. Blown fibre glass is also effective. The goal is achieving R-50 to R-60 in the attic — this is the single highest-impact insulation upgrade for most NB homes because heat rises and attic bypass is responsible for 25-40% of heat loss in a typical older home. Blown-in attic insulation costs **$1.50-$3.00 per square foot** installed, so an 800-1,000 sq ft attic runs **$1,200-$3,000** — excellent return on investment.

For **basement walls**, fibre glass batts against a concrete or block wall are the wrong choice for NB's conditions. Without a continuous air barrier and proper vapour management, fibre glass against concrete traps moisture between the batt and the wall and creates mould conditions within a few years. **Rigid foam board** (XPS or polyisocyanurate) fastened directly to the concrete wall, then framed inside it, is a proven NB approach. Alternatively, **closed-cell spray foam** applied directly to the concrete wall provides both insulation and air/vapour barrier in one step — it is more expensive but eliminates moisture risk entirely. Closed-cell spray foam at R-6 to R-7 per inch gives you R-20 in about 3 inches and is the choice most energy advisors recommend for NB basement walls.

Rim joists — the perimeter framing just above the foundation — should be addressed with cut-and-cobble rigid foam or spray foam as a priority. These are often completely uninsulated in pre-1980 NB homes and represent a disproportionate source of heat loss and cold air infiltration relative to their size.

Wall cavities in older 2x4 homes are challenging because you cannot easily add more than R-13 to R-15 inside a finished wall cavity. The most effective approach is exterior continuous insulation during a siding replacement —

adding 1.5 to 2 inches of rigid foam board under new siding adds R-7.5 to R-10 to the whole wall assembly and eliminates thermal bridging through the studs. If a full siding replacement is in your renovation plan, this is the time to add exterior continuous insulation. Costs add approximately **$1.50-$3.00 per sq ft** to the siding project, but the energy payback and comfort improvement are significant.

For homes built before 1980 in NB, particularly in Fredericton, Saint John, or Moncton's older neighbourhoods, get an energy audit first. A registered energy advisor will use a blower door test and thermal imaging to identify exactly where your home is losing heat — the results often surprise homeowners and redirect budget to where it will have the most impact. New Brunswick Basements at newbrunswickbasements.com has detailed guidance on basement insulation and moisture management if your project focuses on the lower level.

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Q7

How much does spray foam insulation cost for a New Brunswick home?

Spray foam insulation in New Brunswick costs $1.50-$3.50 per square foot for open-cell foam and $3.00-$7.00 per square foot for closed-cell foam, with most whole-home applications (rim joists, attic, basement walls) running $3,000-$15,000 depending on scope and foam type.

Spray polyurethane foam comes in two fundamentally different products that serve different purposes, and understanding the distinction saves both money and building performance headaches. **Open-cell spray foam** (about 0.5 lb density) is softer, expands dramatically to fill cavities, and achieves R-3.5 to R-4 per inch. It is vapour-permeable and excellent for interior applications like interior wall cavities, attic rooflines, and sound dampening. **Closed-cell spray foam** (about 2 lb density) is rigid and dense, achieving R-6 to R-7 per inch, and acts as both an air barrier and vapour retarder. For NB applications involving moisture management — basement walls, rim joists, crawl spaces, and exterior applications — closed-cell foam is almost always the correct choice despite costing roughly twice as much.

For typical NB renovation applications, here is what to expect on pricing. **Rim joist sealing** (the perimeter framing above the foundation) with 2-3 inches of closed-cell foam runs **$800-$2,000** for a typical NB home — this is one of the highest-return spray foam applications because rim joists are often completely uninsulated and are a major source of cold air and heat loss. **Basement wall spray foam** with 2-3 inches of closed-cell foam on concrete walls runs **$2.50-$4.50 per sq ft** installed, with a typical 1,000 sq ft of basement wall area costing **$2,500-$4,500**. **Attic application** (open-cell foam applied to the underside of roof sheathing to create an unvented conditioned attic) runs **$1.50-$3.00 per sq ft** for open-cell, with a 1,000 sq ft attic floor costing **$1,500-$3,000**.

Why NB Conditions Make Foam Choice Critical

NB's Maritime climate — with its dramatic humidity swings from 20-30% in winter to 60-70%+ in summer — makes vapour management essential in any insulation strategy. Using open-cell foam in a basement wall application or against exterior sheating in NB is a common and costly mistake. Open-cell foam allows vapour to pass through it; in a NB basement, this means moisture from the concrete wall passes through the foam and can condense on framing or drywall surfaces. Closed-cell foam stops vapour movement entirely, which is exactly what you need between the cold concrete and the warm interior.

For attic applications in NB, the decision between a vented attic (blown-in insulation on the attic floor) and an unvented conditioned attic (spray foam on the roofline) affects whole-house performance. An unvented conditioned attic eliminates ice damming risk, protects mechanical equipment in the attic space, and removes the attic bypass problem that plagues older NB homes. The spray foam roofline approach costs more upfront but can be the right solution for homes with complex roof geometries, HVAC equipment in the attic, or chronic ice dam problems.

Spray foam must be installed by a trained professional with specialized equipment — this is not a DIY project. The chemicals off-gas significantly during and immediately after application, requiring proper PPE and ventilation. Licensed spray foam contractors should provide documentation of the specific products used, including R-value data. Get 3+ quotes for any spray foam project, as pricing varies significantly between NB contractors. Confirm the contractor carries WorkSafeNB coverage and liability insurance before work begins — spray foam applied incorrectly or with incompatible products can cause structural issues and indoor air quality problems that are expensive to remediate. New Brunswick Renovations can connect you with local insulation contractors through the New Brunswick Construction Network directory.

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Q8

Should I get an energy audit before renovating my New Brunswick home?

Yes — for any NB renovation with a budget over $15,000 that touches insulation, heating, windows, or the building envelope, a home energy audit is worth every dollar of its $400-$600 cost and often pays for itself many times over by directing your renovation budget toward the upgrades that actually matter.

A home energy audit by an NRCan-registered energy advisor gives you two things that are genuinely hard to get any other way: an objective measurement of where your home is losing heat, and a prioritized upgrade roadmap. Without an audit, most homeowners guess at what to fix — and the guesses are often wrong. It is common for an audit to reveal that a homeowner planning $20,000 in window replacements would have gotten three times the energy savings by spending $8,000 on attic insulation and air sealing instead. Windows matter, but they are rarely the biggest energy problem in an older NB home.

The audit process involves a blower door test — the auditor depressurizes your home with a calibrated fan and measures air leakage — combined with thermal imaging (infrared camera) and a physical inspection of the attic, basement, and mechanical systems. The blower door test reveals total air infiltration, while the thermal camera shows exactly where cold air is entering and heat is escaping. In NB homes built before 1990, the results are

frequently startling: rim joists bleeding cold air, bypasses around ceiling fixtures, gaps around pot lights, uninsulated knee walls, and drafty electrical boxes are all visible with thermal imaging that would be invisible to a visual inspection.

Beyond the diagnostic value, an energy audit unlocks access to rebate programs. NB Power's Total Home Energy Savings program and various federal programs require an initial EnerGuide audit to establish a baseline before upgrades. After the renovations are complete, a follow-up audit documents the improvement and triggers the rebate payment. The audit cost is often partially or fully rebated through these programs. Homeowners who skip the audit and just do the upgrades they assumed were needed frequently discover too late that they do not qualify for the available rebates — leaving thousands of dollars on the table.

The timing of the audit matters for NB's seasons. A blower door test can be done year-round, but thermal imaging is most useful in winter when there is a significant temperature differential between inside and outside — the greater the difference, the more clearly heat loss shows up on the infrared camera. If you are planning a spring or summer renovation start, booking an audit in January or February gives you the best thermal imaging results and leaves time to process any rebate pre-approvals before your contractors start work.

For older NB homes — particularly those in Fredericton's older residential neighbourhoods, Saint John's heritage housing stock, or rural properties built before 1970 — an energy audit is not just financially smart, it is the responsible first step before any significant investment. These homes were built before energy codes existed, and the hidden air leakage, thermal bridging, and moisture risks inside their walls can be severe. An audit tells you the true condition of your building envelope so your renovation addresses real problems rather than cosmetic ones.

Contact an NRCan-registered energy advisor directly to book your audit — the Natural Resources Canada website lists certified advisors by province. For NB homeowners planning energy upgrades as part of a broader renovation, New Brunswick Renovations can connect you with local contractors experienced in energy-efficient renovation through the New Brunswick Construction Network directory.

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Q9

What are the Canada Greener Homes Grant options for NB homeowners in 2026?

The Canada Greener Homes Grant program as originally structured has wound down, but federal energy efficiency support for NB homeowners continues in 2026 through the Canada Greener Homes Loan and the Oil to Heat Pump Affordability Program — NB homeowners should confirm current program availability directly with Natural Resources Canada and NB Power, as federal program landscapes have been shifting rapidly.

The original Canada Greener Homes Grant ran from 2021 through 2024, offering up to $5,600 in direct grants for energy upgrades including insulation, heat pumps, windows, and energy audits. That grant program is no longer accepting new applications, but its successor programs continue to offer support. Understanding what is currently available in 2026 requires checking directly with Natural Resources Canada (nrcan.gc.ca) and NB Power, since program details, funding levels, and eligibility rules have changed significantly since the original grant launched.

The **Canada Greener Homes Loan** replaced the grant component with interest-free financing — loans up to $40,000 for qualifying energy upgrades, repaid over 10 years. For NB homeowners who have the cash flow to manage loan payments, this effectively provides zero-cost financing for insulation, heat pumps, windows, and other qualifying improvements. The loan still requires EnerGuide energy audits before and after the upgrades, which adds to the administrative process but ensures the improvements actually deliver measurable results.

The **Oil to Heat Pump Affordability Program** has been particularly relevant for NB, where a significant portion of the housing stock still relies on heating oil. This program has targeted lower- and moderate-income households heating with oil, providing substantial support (in some cases $5,000 or more) toward heat pump installation costs. NB Power has administered provincial top-ups alongside the federal program. Eligibility and current program status should be confirmed with NB Power and Natural Resources Canada — program funding allocations and intake periods have varied.

NB homeowners face a specific frustration with federal energy programs: the requirement for NRCan-registered energy advisors means you must work with a specific category of professional, and wait times for energy audits in NB have sometimes run 4-8 weeks during peak program periods. If you are planning a renovation that you want to align with federal rebate programs, book the energy audit as early as possible — before contractors start work, before permits are pulled, before materials are ordered. Programs typically require the pre-renovation audit to be completed before any upgrade work begins, and retroactive applications are not accepted.

For maximizing total support available in 2026, the strategy most energy advisors recommend for NB homeowners is stacking: combine available federal programs with NB Power's Total Home Energy Savings rebates and any

provincial programs currently active. A comprehensive energy renovation — heat pump installation, attic insulation upgrade, basement air sealing, and window upgrades — could qualify for support from multiple programs simultaneously, with total rebates and loan support potentially reaching $15,000-$25,000 on a $40,000-$60,000 energy upgrade project.

This is one area where the guidance available today may not reflect what is available tomorrow — federal energy programs in Canada have changed substantially from year to year since 2021. The safest approach is to speak with an NRCan-registered energy advisor, who will know exactly what programs are currently accepting applications and what your specific home and project will qualify for. New Brunswick Renovations can connect you with local contractors experienced in navigating energy rebate programs through the New Brunswick Construction Network directory.

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Q10

How much does it cost to upgrade from oil heating to a heat pump in NB?

Switching from oil heat to a heat pump in New Brunswick costs $3,000-$18,000 depending on whether you choose a ductless mini-split or a central ducted system — before rebates that can reduce the net cost by $2,000-$6,000 or more through NB Power and federal programs.

The oil-to-heat-pump conversion is the most impactful energy renovation a New Brunswick homeowner can make right now, and it is happening across the province at a rapid pace. NB's housing stock has an unusually high concentration of oil heat compared to most Canadian provinces, and rising oil prices combined with maturing cold-climate heat pump technology have made this conversion financially compelling for most households.

For a **ductless mini-split system**, a single-zone unit providing heating and cooling for a primary living area costs **$3,000-$5,000 installed**. A multi-zone system with 3-4 heads covering most living areas of a typical NB home runs **$7,000-$14,000 installed**. Multi-zone systems suit homes where one or two heat pump heads can serve open-concept living spaces, with existing oil heat (baseboard electric or oil furnace) retained for bedrooms and less-used spaces. For many NB homeowners, this hybrid approach — heat pump as primary for 80%+ of heating hours, oil as emergency backup — provides the best balance of efficiency and peace of mind for cold snaps.

For a **central ducted heat pump system** replacing an oil furnace, costs run **$8,000-$18,000 installed**. If existing ductwork from the oil furnace is in good condition, an air handler replaces the furnace and connects to an outdoor heat pump unit. If ductwork needs modification or extension, add **$2,000-$6,000** for duct work. A ducted system heats every room uniformly and is often preferred for two-storey homes where mini-splits leave upper floors inadequately served.

Electrical requirements add an important layer to oil-to-heat-pump conversions. Mini-split systems typically need one or more dedicated 240V circuits. If your panel is currently a 100-amp service (common in NB homes built before 1985), upgrading to 200-amp service adds **$2,000-$5,000** for the electrical work alone, but it is often needed anyway for a modern home and unlocks the capacity for EV chargers, induction ranges, and other future upgrades. Plan this as part of the overall project cost.

After rebates, the economics shift significantly. NB Power's Total Home Energy Savings program offers rebates on qualifying heat pump systems — rebate amounts should be confirmed with NB Power for 2026 values. The federal Oil to Heat Pump Affordability Program has provided an additional $2,000-$5,000 for qualifying low- and moderate-income households. Stacking provincial and federal programs has allowed some NB homeowners to complete the conversion for net costs under $5,000 on systems that would have listed at $10,000-$15,000.

On operating costs, NB homeowners who have switched from oil to heat pump report annual heating bill reductions of 40-65%. With NB Power electricity rates and recent oil prices, the payback on a typical conversion (excluding rebates) runs **6-10 years**. With available rebates factored in, payback periods of **4-7 years** are realistic — followed by decades of lower operating costs and a home that also has air conditioning for summer comfort.

The installation must be done by a TSANB-licensed refrigeration mechanic — this is provincial law, not optional. Ask each contractor quoting the job to provide a heat load calculation for your specific home. A contractor who quotes without measuring your home's heat loss is guessing at system size, and an improperly sized heat pump either cannot keep up in cold weather or short-cycles and wears out prematurely. Get 3 quotes and compare scope, system brands, and warranties, not just price. For detailed guidance on heat pumps within a broader renovation, New Brunswick Renovations can connect you with local mechanical contractors through the New Brunswick Construction Network directory.

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Q11

What is the best way to reduce heat loss through walls in a New Brunswick home?

The most effective way to reduce heat loss through walls in a New Brunswick home is a combination of air sealing all bypasses and penetrations followed by adding continuous exterior rigid foam insulation — if your renovation includes siding replacement, this is the optimal moment to add R-7.5 to R-15 of exterior foam, transforming wall performance without gutting the interior.

Wall heat loss in NB homes happens through two distinct mechanisms: conduction (heat moving through the insulation and framing) and air leakage (cold air infiltrating through gaps, cracks, and penetrations). Most homeowners fixate on R-value (the insulation's resistance to conductive heat flow) while the air leakage problem often accounts for as much or more of the heat loss. Both need to be addressed, and the sequence matters — fix air leakage first, then upgrade insulation value.

For NB homes built with 2x4 framing (standard before the mid-1990s), interior wall cavities hold a maximum of R-15 even when perfectly insulated. But the 2x4 studs themselves conduct heat freely — they represent about 15-25% of the wall area with essentially zero insulation value. This thermal bridging through framing is why walls that measure R-15 in the cavity often perform at effective R-8 to R-10 whole-wall. **Continuous exterior insulation** is the only way to address thermal bridging, because it wraps the entire wall — studs included — in an uninterrupted layer of foam.

When a siding replacement is in your renovation budget — a common project for NB homes every 20-30 years — adding rigid foam under the new siding is the right move. **1.5 inches of XPS or polyisocyanurate foam** under vinyl or fibre cement siding adds approximately R-7.5 to R-10 to the whole wall assembly at a cost of **$1.50-$3.00 per sq ft** of wall area beyond the baseline siding cost. For a 1,500 sq ft exterior wall area, this runs **$2,250-$4,500** in additional material and labour — a sound investment that will outlast multiple siding cycles. The exterior foam also acts as a secondary drainage plane and reduces moisture entry into the wall cavity, which matters enormously in NB's wet Maritime climate.

For walls where siding replacement is not in the plan, the interior approach involves removing existing interior finishes, adding insulation, and refinishing — expensive and disruptive but effective. **Blown-in insulation** through small holes drilled through the siding (dense-pack technique) is a less invasive option that fills existing wall cavities with minimal disruption. A contractor drills holes between each stud bay, blows in dense-pack cellulose or fibre glass until the cavity is completely filled, and plugs and paints the holes. Cost runs **$1.50-$3.00 per sq ft** of wall area, making it competitive with exterior foam when siding replacement is not happening anyway.

Air sealing deserves its own dedicated effort before any insulation upgrade. In older NB homes, heat loss from air movement through the wall system — around electrical boxes, through top and bottom plates, around window and door frames, and through attic bypasses above interior walls — often rivals the conductive loss through the insulation. A blower door test during an energy audit quantifies this and thermal imaging pinpoints exactly where the leakage is worst. Common solutions include acoustical sealant around all electrical boxes, spray foam in gaps around window and door framing, and foam gaskets behind outlet and switch covers on exterior walls.

For a typical NB home in Moncton, Saint John, or Fredericton, a comprehensive wall upgrade strategy — air sealing through an energy audit process, dense-pack wall fill, and exterior continuous foam during the next siding cycle — might total **$8,000-$18,000** but deliver meaningful reductions in heating bills for decades. Always sequence the work: audit first to understand the problem, air sealing next, insulation upgrades after. For detailed painting and siding guidance alongside wall upgrades, New Brunswick Painting at newbrunswickpainting.com covers exterior preparation in depth.

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Q12

What R-value insulation do I need for walls and attic in New Brunswick?

New Brunswick's current building code targets R-22 minimum for walls (in new construction) and R-50 to R-60 for attics — but in existing NB homes, the attic upgrade almost always delivers the best return on investment and should be prioritized before walls if your budget requires a choice.

R-value is the measure of thermal resistance — the higher the R-value, the better the insulation resists heat flow. NB falls into a heating climate zone where the required R-values are higher than warmer Canadian provinces, reflecting the province's long, cold heating season. Understanding both the code minimums and the practical performance targets for existing NB homes gives you a clear framework for any insulation upgrade.

For **attics**, the National Building Code as adopted in NB calls for minimum R-50 in the ceiling/attic floor assembly. Many energy advisors and NB Power's efficiency programs recommend pushing to R-60 to R-80 for maximum payback, particularly in northern NB communities like Edmundston and Campbellton where heating degree days are significantly higher than coastal Moncton or Saint John. The good news is that attic insulation is cheap and effective — blown-in cellulose or fibre glass at R-50 to R-60 costs approximately **$1.50-$3.00 per sq ft** installed, making a 1,000 sq ft attic upgrade a **$1,500-$3,000** investment with an exceptional payback period. Most older NB homes have R-12 to R-20 in the attic — less than half of what is needed — making this the single highest-impact upgrade available.

For **walls in new construction or full gut renovations**, NB building code targets an effective whole-wall R-value in the R-22 range, typically achieved through R-20 batt insulation in a 2x6 framed wall plus continuous exterior insulation to address thermal bridging through the studs. In existing homes with 2x4 framing, filling the cavity with R-15 dense-pack insulation and adding R-7.5 to R-10 of exterior continuous foam gives a whole-wall performance of approximately R-20 to R-22 effective — close to code-equivalent performance in a renovation context.

Basement walls should target R-20 minimum in NB. As discussed earlier, closed-cell spray foam or rigid foam board are the appropriate materials — fibre glass batts against concrete are not. Three inches of closed-cell spray

foam at R-6.5 per inch delivers approximately R-20, while 4 inches of rigid XPS board (R-5 per inch) delivers R-20 plus the air barrier function when joints are taped.

For **cathedral ceilings and sloped roof assemblies** — common in renovated older NB homes and additions — achieving adequate R-value is challenging because rafter depths limit insulation thickness. A 2x10 rafter provides 9.25 inches of depth. Filling with R-30 spray foam and adding exterior continuous foam board over the roof deck (under new sheathing and roofing) can push total assembly values to R-40+. This is a more complex and costly assembly but necessary for high-performance renovation work in NB's climate.

The practical priority order for most NB homeowners working through existing homes is: **attic first** (biggest heat loss, easiest and cheapest to address), **rim joists second** (disproportionate air leakage relative to their area), **basement walls third** (moisture management and comfort), and **above-grade walls last** (expensive and disruptive to improve significantly in a finished home). An energy audit helps confirm whether this sequence makes sense for your specific home or whether unusual conditions — a home with an already-insulated attic but bare concrete basement walls, for example — suggest a different priority. For whole-home insulation work as part of a major renovation, New Brunswick Renovations can connect you with experienced local contractors through the New Brunswick Construction Network directory.

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Q13

How does upgrading windows and doors improve energy efficiency in an NB home?

Upgrading from single-pane or older double-pane windows to modern triple-pane units can reduce window heat loss by 40-60% and eliminate cold draughts that make rooms feel uncomfortable regardless of thermostat settings — but in most NB homes, windows are rarely the biggest energy problem, and an energy audit should guide whether windows or other upgrades deliver better value first.

Windows and doors are the most visible and tangible energy upgrade a homeowner can make — you can feel the difference walking past a new triple-pane window on a January night in Moncton versus the cold radiation emanating from a 1970s single-pane. That tactile improvement is real and meaningful for comfort, but the financial payback on window replacements is longer than most homeowners expect because windows represent a relatively small fraction of a typical NB home's total surface area. A 1,500 sq ft NB bungalow might have 200-300 sq ft of window area against 2,000+ sq ft of wall, ceiling, and floor area — meaning windows account for 10-15% of the envelope at most.

That said, older windows have dramatically lower thermal performance than the surrounding wall. A single-pane window is approximately R-1. An early double-pane (1980s-1990s vintage, no low-e coating) is R-2 to R-3. A modern triple-pane with low-e coatings and argon fill achieves R-6 to R-8. For NB's winters — where January outdoor temperatures in Fredericton and Edmundston regularly reach -20°C to -25°C — the difference between R-1 and R-7 at the window surface is not just an energy number, it fundamentally changes the comfort of rooms adjacent to those windows. Cold radiation from poor windows drives heat demand, creates condensation and frost on window frames and glass, and can create mould conditions on surrounding walls and framing.

Triple-pane windows are increasingly considered standard for NB renovations rather than a premium upgrade. The cost premium over double-pane is roughly 20-30%, while the performance improvement is meaningful in NB's climate. For a full window replacement on a typical NB home (15-20 windows), budget **$10,000-$20,000** installed for quality vinyl triple-pane units. Fibreglass windows cost 20-40% more than vinyl but offer superior thermal performance and minimal expansion/contraction — worth considering for larger windows or coastal NB homes where salt air exposure is a factor.

For **exterior doors**, the upgrade from an older hollow-core or single-glazed door to a modern fibreglass or steel insulated door with a low-e glazing insert is significant. Modern exterior doors achieve R-5 to R-12 in the door slab itself, versus essentially R-1 for an older door with air leakage around the frame. A quality fibreglass exterior entry door installed in NB runs **$1,500-$3,500**; a patio or garden door system runs **$2,500-$6,000** installed.

Beyond the window and door units themselves, **installation quality** determines how much of the theoretical performance is actually achieved. Poorly installed windows with gaps in the rough opening, inadequate air sealing with expanding foam, or missing flashing and proper drainage are common in NB renovation work and negate much of the performance benefit. In NB's climate, where freeze-thaw cycling repeatedly stresses every joint and seam, proper installation with durable flashing, continuous backer rod and sealant, and correct air barrier integration around the rough opening is as important as the window unit itself.

For coastal NB communities along the Bay of Fundy or Northumberland Strait, marine-grade exterior sealants and hardware corrosion resistance matter when selecting windows and doors. Standard zinc hardware and fasteners corrode in salt-air environments — look for stainless steel hardware and frames with appropriate corrosion-resistant coatings.

NB Power's Total Home Energy Savings program has included rebates on triple-pane windows and insulated doors — confirm current 2026 rebate availability before purchasing. Combining a window replacement with air sealing work on the surrounding wall assembly maximizes the energy benefit of the project. New Brunswick Renovations can connect you with experienced local window and door contractors through the New Brunswick Construction Network directory.

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