

Daniels
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Daniels
MPV2
An **EcoUrban** Community

NET-ZERO, FOSSIL FUEL- FREE TOWNHOMES

FREQUENTLY ASKED QUESTIONS

ABOUT NET-ZERO

What is a 'Net-Zero' home?

A Net-Zero energy home generates as much energy as it uses over the course of a year. At MPV2, this is achieved through:

- 1) roof-mounted solar panels
- 2) swapping out natural gas systems to high-efficiency all-electric systems
- 3) improving the efficiency of the home to reduce energy use as much as possible



What are the energy-saving features?

The energy-saving features include:

- Triple-glazed windows
- Increased insulation of walls and roof
- ENERGY STAR® appliances
- Low-flow fixtures
- High-efficiency, all-electric HVAC & hot water system

What does it mean to be 'all-electric'? How is this different than a conventional system?

Being 'all-electric' means that there is no natural gas or other fossil-fuels burned on-site. This is achieved by:

- Replacing the gas furnace with an air-source heat pump. The air-source heat pump looks just like the outdoor unit of an air-conditioner, but this technology is able to supply both heating and cooling.
- Replacing the natural gas hot water boiler with a high-efficiency heat pump hot water heater with an integrated tank. This is an ENERGY STAR® rated appliance that is up to 4 times as efficient as a standard electric tank.

What are the benefits of living in an all-electric net-zero home?

- An all-electric net-zero home has a zero operating carbon footprint and use 50% less energy.
- All-electric homes are expected to be the standard in the near future as our society transitions away from fossil-fuels to reach global climate goals. Selecting an all-electric home today future-proofs your home against costly retrofits or supply-chain issues¹.
- Eliminating natural gas removes a monthly gas bill that comes with hefty customer charges.
- Reduced exposure to escalating utility costs and taxes by lowering energy use and reliance on fossil-fuels.
- Triple-glazed windows offer enhanced thermal comfort and noise dampening.
- Enhanced air quality– The Environmental Protection Agency (EPA) identifies fuel-burning appliances as one of the primary sources of poor indoor air quality.

ABOUT SOLAR PANELS

How do solar panels work?

Solar panels, also called photovoltaic (PV) panels, convert solar radiation into electricity using common, non-toxic materials including silicon (which has the same chemical makeup as sand), aluminum and glass.

What are the benefits of living in community with solar generation?

- On-site solar generation reduces electricity consumption with renewable energy to achieve Net Zero Energy within townhomes.
- Access to clean, zero-emissions energy.
- Reduce consumption of grid electricity, which means the condominium is better insulated against rising energy costs.
- Reduce strain on local energy grids, as the shift away from fossil-fuels and towards electrification (both in buildings, and electric vehicles) creates higher demand for electricity.

¹The City of Vancouver amended the Zoning and Development By-law so that starting Jan. 1, 2022, equipment for space and hot water heating in new low-rise residential buildings must be zero emissions. By 2025, all new and replacement heating and hot water systems must be zero emissions. Source: [City of Vancouver](#) Similar regulations have been proposed in Quebec, where after Dec. 31, 2023, it will be prohibited to replace existing furnaces with any sort of heating system powered by fossil fuels Source: [Government du Quebec](#)

ANSWERS TO IMPORTANT QUESTIONS

FAQ

Where does the energy go?

As with the rest of the roof, the solar panels are a Common Element of the Condominium Corporation, therefore on-site solar generation will be connected to the condominium's common-element electricity meter. This means that the benefit of the solar generation goes to the condominium by reducing the common element electricity bill from the local utility. The condominium will still be connected to a municipal power grid via a 'net meter'. A net meter can read both energy in and energy out of the condominium, where:

- Any additional needs above what the solar panels produces can be taken from the grid; and
- Excess energy generated by the solar panels will be sent back into the electricity grid for a credit with the local utility.

In the summer there may be excess generation, and in this case a credit would go on the Condominium's local utility account. In the winter, less generation is anticipated therefore any credits that carryover will be used up and taken off the Condominium's electricity bill at that time.

Is there battery storage on-site for the solar energy?

There is no battery energy storage on-site, any excess electricity generated will be sent back into the electricity grid for a credit with the local utility.

COSTS

Will having an all-electric home impact my costs as a homeowner?

You can expect your overall energy costs to be equal to a conventional natural-gas system, but with the all the added benefits of lowering your carbon footprint and future-proofing your home for the transition away from fossil-fuels (and more!). This is possible by not just swapping from gas to electric, but also reducing overall energy consumption by including:

- High-efficiency electric HVAC & hot water systems
- Enhanced the thermal envelope (increased insulation of walls and roof)
- Triple-glazed windows
- Energy-efficient lighting and appliances

ANSWERS TO IMPORTANT QUESTIONS

FAQ

Does having an all-electric home impact my maintenance fees?

No, just like most condominium townhomes, the maintenance of the mechanical systems that service your home are the responsibility of the homeowner and are not included in the maintenance fees.

Do the solar panels impact my costs as a homeowner?

There will be no change to your monthly utility bill from the solar panels. Since the solar panels are a common element, the value of the solar energy generation will be reflected in the condominium budget. As with any modern home, your electricity will be sub-metered and you will be billed directly for your electricity consumption.

Do the solar panels impact my maintenance fees?

The operating budget for the Condominium is \$2,500 for annual maintenance of the solar panels. Beyond that, the solar panels are budgeted to be cost-neutral. The value of the solar energy generation be carried in the condominium budget reduces the electricity bill from the local utility. This avoided cost will offset the Solar Panel Agreement which will consist of:

- A financing agreement for the solar panel equipment; and/or
- A Solar Energy Supply and Service Agreement with a third party who may own, operate, and/or maintain the solar panel system, selling the generated renewable energy to the Corporation at a rate equal to or less than market value.

Over time the value of the avoided electricity cost is anticipated to increase with rising energy prices, and it is expected that this will result in a net benefit to the condo budget over the lifetime of the solar panels.

MAINTENANCE & WARRANTIES

What kind of maintenance is needed for an all-electric townhome, and who's responsibility is it?

Like most condominium townhomes, the maintenance of the mechanical systems that service your home are the responsibility of the homeowner. The outdoor unit of the air-source heat pump requires similar maintenance to a typical air conditioner. Regularly changing the air filters and clearing debris will help extend the lifetime and improve the efficiency of any HVAC system.

What is the lifespan of the solar panels and what warranties are in place?

The solar panels can have a lifespan of up to 40 years, but the solar panels are covered by two types of warranties:

- A manufacturer's product warranty covers defects stemming from material quality or manufacturing errors. A product warranty for the solar panels can be from 15-24 years, depending on manufacturer. The inverters (the equipment that changes the solar power from DC to AC) also have a 10-year product warranty.
- While a product warranty protects you from defective equipment, a performance warranty also ensures that solar panels maintain a certain level of output throughout their lifetime. This is typically a minimum 85-90% of first-year performance after 25 years, depending on manufacturer.

These are just typical warranty ranges, as we have not identified the specific manufacturer at this time. Since technology improves every year, we can maximize performance by procuring them closer to the installation date.

What kind of maintenance is needed for the solar panels, and who's responsibility is it?

The maintenance for a solar system is limited but would be the responsibility of the Condominium. Periodic inspections may take place to remove the accumulation of debris. Items under warranty are the responsibility of the installer and/or manufacturer.

What if there are repairs required to the roof?

The solar panel racking mechanism can be removed and panels re-installed after any repairs, however this would require work from an electrician. These costs may be covered by warranty depending on circumstance and timing.

Do solar panels work in the winter? Is snow accumulation an issue?

Yes, solar panels can continue to produce energy during the winter, although production can be reduced. The panels can be covered by snow during the winter without becoming damaged.

Subject to change without notice.
Speak to a Sales Representative for details. E. & O. E.