



## OUR EVOLUTION IN ENERGY

Shifting toward cleaner energy for all



**LONSDALE**  
**energy**

# 2024 Annual Report

*For the year ending December 31, 2024*



# LAYING THE GROUNDWORK



**LARRY SAWRENKO**

Chair, Lonsdale  
Energy Board

On behalf of the Board of Directors, I'm pleased to welcome you to Lonsdale Energy's 2024 Annual Report. This past year stands out as one of the most significant in our company's 21-year history. We not only achieved the largest growth in our operations to date, but made significant strides as we embarked on our decarbonization journey.

The Board has been actively engaged in guiding Lonsdale Energy through the complexities of transitioning to cleaner energy sources, while continuing to manage the largest municipally-owned community energy system in Western Canada. We're proud of the work being done to enhance our network and expand access to sustainable energy options for our customers and community.

A major milestone in 2024 was securing \$17.5 million in funding from both the federal and provincial governments to support the development of a new renewable energy plant that will recover waste heat from sewage—an innovative and forward-thinking project for our city. Planning is also underway for the construction of an electric energy centre, which will further strengthen our low-carbon energy supply.

I'm equally proud to share that our financial performance remained strong, keeping pace with the rapid growth and scale of our operations. This positions us well to continue investing in the systems, technologies, and partnerships that will power a cleaner energy future for the City of North Vancouver. We look forward to building on this momentum in the year ahead.

# FOR A GREENER TOMORROW

As I reflect on the past year, I'm filled with pride at the remarkable progress our organization has made. 2024 was truly a pivotal year—an extraordinary amount of work was accomplished in just twelve months, and the momentum we've built is both exciting and inspiring.

This was a year of sharpening our focus and grounding our efforts in clearly defined core values: efficiency, sustainability, customer service, and innovation. These principles now guide everything we do. We made significant strides in identifying new low-carbon energy sources, expanding our network infrastructure, and deepening our presence in the community—all while maintaining the high standards our customers have come to expect.

With the continued support of the Mayor and Council, and growing support across all levels of government, we've seen strong validation of the role that community energy plays in creating a cleaner, more resilient future. The commitment shown by our City underscores the increasing importance of local energy solutions in meeting climate goals.

I am incredibly proud of our team, whose dedication and professionalism have made this progress possible. They've embraced every challenge with efficiency and innovation, keeping us on target with our energy transition.

Looking ahead, I'm excited to share more milestones as we shift further toward low-carbon energy sources and continue building a more sustainable future for North Vancouver—together.



**KARSTEN VENG**

Chief Executive  
Officer





# ABOUT LONSDALE ENERGY

In the City of North Vancouver, Lonsdale Energy is a cornerstone of community life, delivering reliable, efficient energy to residents, businesses, and public facilities.

Lonsdale Energy operates the City of North Vancouver's community energy network. By connecting to our system, buildings no longer need their own heating system. Instead, they receive heat from one of our eight energy centres located throughout the City. Our energy centres produce heat energy to keep our 17,900 customers warm and comfortable year-round, all with greater efficiency. We have proudly received numerous awards in recognition of our innovative approach and vital role in advancing key City projects.





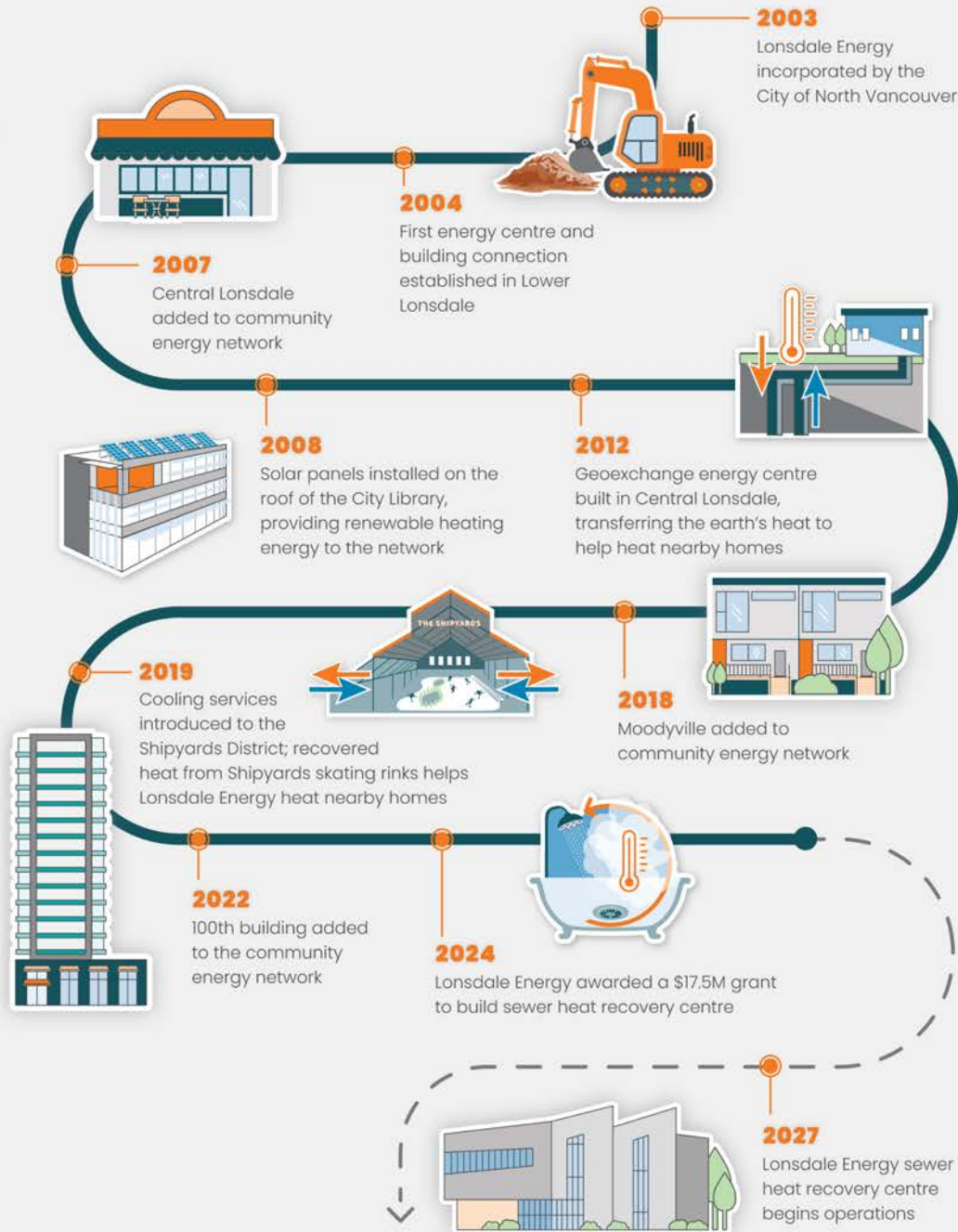


Notably, nearly all high-rise developments constructed in the City over the last two decades are part of our network. This includes prominent buildings like Centreview in Central Lonsdale, The Trophy at the Pier within the Shipyards District, and Founder's Block in Moodyville. These developments contribute to a sustainable and interconnected community, showcasing our commitment to providing efficient energy solutions that benefit everyone.



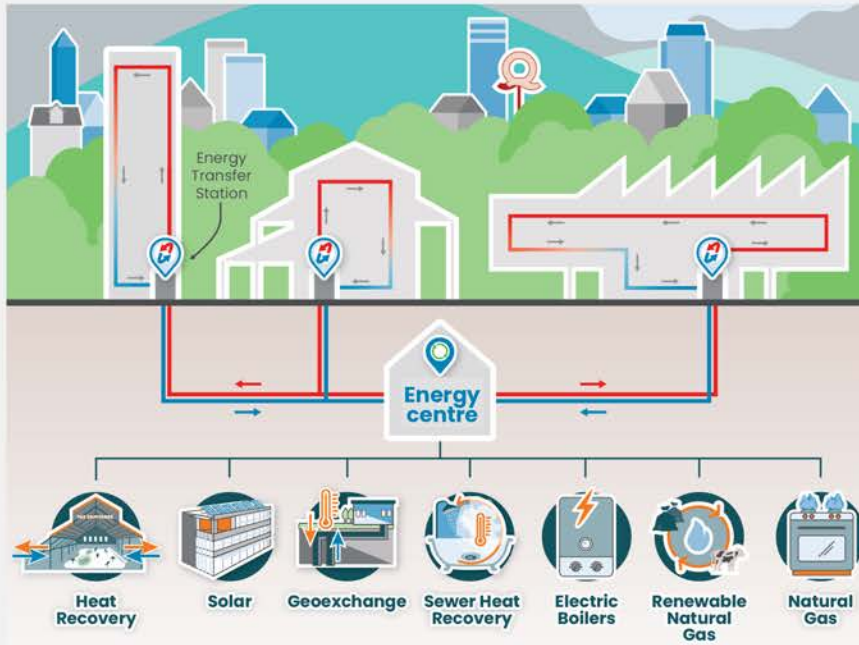


Building on milestones from previous years, this timeline highlights key moments that have shaped our continued progress and commitment to innovation.



# OUR ENERGY, OUR EVOLUTION

# SHARED ENERGY, SHARED BENEFITS



## What's a community energy network?

Also called district energy systems, it supplies heat from a central energy centre to multiple buildings in a neighbourhood.

Similar to how we share parks, libraries, and recreation centres, we can also share energy. It's a more innovative, sustainable way to heat our homes and buildings.

## How the community energy system works

### Step 1: Energy is produced

It all starts at one of our 8 energy centres, where we create heat using a mix of different sources, like natural gas, renewable natural gas, geoechange, solar energy, and even some recovered heat from the Shipyards skating rink. By 2025, we'll be adding electric boilers into the mix, and sewer heat recovery in 2027.

### Step 2: Heat energy is distributed to buildings

The heat travels through underground pipes, staying warm at about 75°C to 80°C, directly to all the buildings connected to our system.

### Step 3: Customers use the heat energy

Inside each building, there's a heat exchanger that helps move that heat into the building's system. This means you have a cozy space, hot water, and your dishwasher running smoothly.

### Step 4: Unused heat is sent back

Any heat that isn't used gets sent back to the energy center. There, we reheat it and send it back out again, helping us reduce energy waste wherever we can.







## OUR GUIDING PRINCIPLES

### Mission

Considered an essential part of the City of North Vancouver, Lonsdale Energy delivers clean, reliable and competitively priced energy to our customers through our community energy system.

### Our Values

We are safe.  
Our service is reliable.  
We are committed to our customers.  
We are innovative.  
We care about our natural environment.  
We use resources efficiently.

### Vision

To be an environmental leader within the City of North Vancouver by using innovation and renewable energy to reach net zero emissions by 2050 while driving community resiliency.



# FLEXIBLE BY DESIGN

## Diverse energy sources

Our network is designed for flexibility, allowing us to incorporate a variety of energy sources. In 2024, about 16% of our energy came from low-carbon or renewable sources — a number that will keep growing as we add more clean energy options. Our ultimate goal is to achieve net-zero emissions by 2050.

As we transition to cleaner energy, every connected building benefits — from lower long-term costs to a reduced carbon footprint that will improve local air quality.

### CURRENT ENERGY SOURCES



**Solar heat**  
Energy from solar panels at the City Library



**Geoexchange**  
Heat from the ground



**Natural gas**  
A fossil fuel



**Renewable natural gas**  
Energy from organic waste



**Heat recovery**  
Waste heat from the Shipyards skating rink



Building energy use currently accounts for about half of the City's total greenhouse gas (GHG) emissions. Taking steps to decarbonize the community energy network is essential for achieving the City's climate target of reaching net-zero emissions by 2050.

### OUR ENVIRONMENTAL TARGETS

- 40% of energy to come from low-carbon sources by 2027
- 60% of energy to come from low-carbon sources by 2030
- 80% carbon emission reduction (from 2007 levels) by 2040
- Net-zero emissions by 2050



# A YEAR IN REVIEW

Lonsdale Energy experienced significant growth this year, both in the size of our network and the scope of our efforts. It was a record year in terms of the number of new developments connecting to Lonsdale Energy. This year also proved to be a significant year in launching new initiatives to enhance customer service and communications, and to kickstart our decarbonization journey.

The following four highlights will showcase the breadth and depth of our work and help explain why 2024 was a pivotal year for the company and the team at Lonsdale Energy.

**1**

## Largest year of growth

### Record network expansion

With 11 developments added to the community energy network, 2024 marked Lonsdale Energy's largest expansion year to date.

**2**

## Plan for progress

### Business plan completed

We finalized Lonsdale Energy's five-year business plan, which outlines our path for growth, our decarbonization strategy, and how we plan to increase organizational effectiveness.

**3**

## Big boost for green energy

### Grant for sewer heat recovery energy centre

Lonsdale Energy received a \$17.5 million grant from federal and provincial governments to support the design and construction of a new sewer heat recovery energy centre.

**4**

## Putting customers first

### New community initiatives and resources launched

A number of new initiatives were launched in an effort to better serve our customers and inform City residents about our community energy network.



# 1 Record network expansion

Eleven new developments joined our network in 2024, adding over 1.67 million square feet of service area, nearly double the typical annual growth rates.



## Lions Gate Paul Myers tower

A notable addition was Lions Gate Hospital's new six-storey acute care tower, a facility that provides 108 private patient rooms and eight new operating rooms.

# 2 Corporate business plan completed

To achieve our vision for a sustainable and resilient energy future, Lonsdale Energy identified key goals to shape our priorities over the next five years.

These goals will be supported by a series of strategic initiatives designed to accelerate decarbonization, improve operational effectiveness, ensure long-term financial and environmental sustainability and deliver exceptional service to our customers.

*The climate crisis, a growing population, and the rapid changes in technology and policy will require major investments in new, low-carbon energy sources.*

## **Goal 1: Lower greenhouse gas emissions**

Key initiatives include:

- Commission an electric boiler energy centre in 2025
- Commission a low-carbon sewer heat recovery energy centre in 2027
- Complete the Clean Energy Action Roadmap (CLEAR), our guide to reach net-zero emissions by 2050

## **Goal 2: Expand services and formalize community benefits**

Key initiatives include:

- Develop a policy for cooling services
- Develop a separate low-carbon heat offering (conditional on standards for new buildings or customer demand)





*Enhanced customer communications, community engagement and stronger partnerships are vital components in providing satisfactory service to our customers and ensuring organizational success.*

### **Goal 3: Increase organizational efficiency and effectiveness**

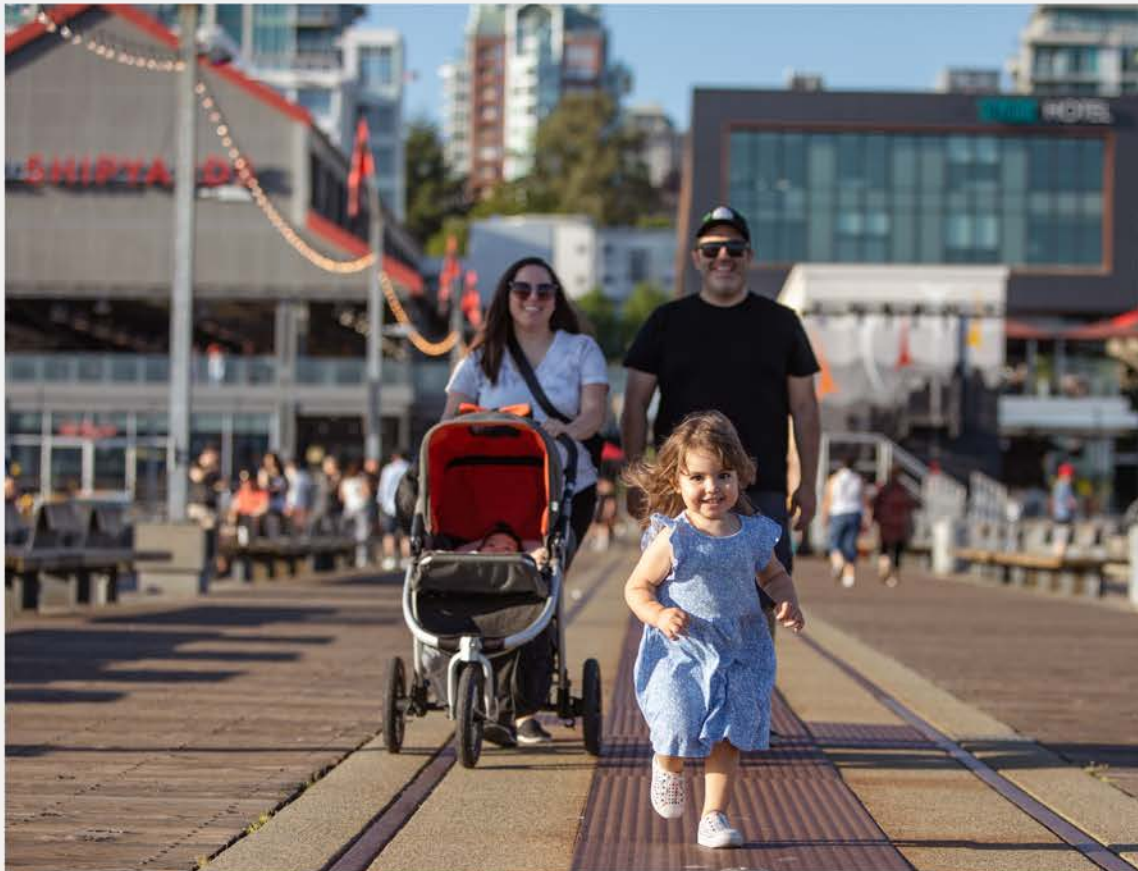
Key initiatives include:

- Improve the cost-of-service model to facilitate forecasting, rate setting and benefits sharing
- Develop staffing plan to support business plan initiatives

### **Goal 4: Improve customer service and expand partnerships**

Key initiatives include:

- Develop Lonsdale Energy's first public website
- Establish key internal functions for communications and customer service
- Develop resources to support residents, stratas, building managers, and developers



## 3 Grant for sewer heat recovery energy centre

In 2024, Lonsdale Energy was awarded a \$17.5 million grant from the federal and provincial governments to support the design and construction of a new sewer heat recovery centre in North Vancouver.

This innovative facility will harness thermal energy from raw sewage flowing through Metro Vancouver's North Vancouver Interceptor trunk line—capturing heat before the wastewater reaches the treatment plant.

The plant will feature high-temperature electric water-to-water heat pumps, delivering at least 5MW of thermal energy. In addition to supporting Lonsdale Energy's low-carbon energy goals, the project includes environmental and public realm enhancements near Mosquito Creek. Once operational in 2027, the plant is expected to reduce Lonsdale Energy's greenhouse gas emissions by 40%, cutting approximately 7,600 tonnes of CO<sub>2</sub>e annually—the equivalent of removing



*Tour at a Lonsdale Energy community energy centre with federal minister, the Honourable Jonathan Wilkinson (third from right).*

*Left to right: Sean Wood, Lonsdale Energy, Larry Sawrenko, Lonsdale Energy Board Chair, Luke Gillies, Lonsdale Energy, Uwe Fabert, Lonsdale Energy, Jessica McIlroy, City Councillor and Board director, Joanna Linsangan, Lonsdale Energy*





2,700 cars from the road each year. This project marks a significant leap toward advancing clean energy solutions in our community.

#### Public realm enhancements

To harmonize with the natural beauty of the city, wood will be incorporated both inside and outside the building. A curtain wall system is being considered to allow natural daylight into the facility, fostering a connection between the building and its surroundings. Low-carbon concrete will be used to support the primary mechanical spaces of the building on the ground and first floor.

Situated beside Mosquito Creek, the area already supports a rich habitat for spawning salmon, eagles, herons, otters and beavers. The project aims to complement and enhance this habitat by preserving existing trees, planting new ones post-construction, restoring previously disturbed ground, and removing invasive weeds from the surrounding area. These restoration

***"This project represents a significant step towards our goal of building a low-carbon city for future generations."***

*Linda Buchanan,  
Mayor of the City of North  
Vancouver*







efforts will improve ecosystem functions, such as stabilizing soils to prevent erosion and providing shade to cool both stream and air temperatures. Additionally, the centre will have a green roof, which will contribute to the City's pollinator meadows program, enhancing biodiversity and creating valuable habitat for bees, butterflies, and hummingbirds.

Finally, the site design incorporates a layout that facilitates public access and spaces for energy and environmental education.

*Karsten Veng, CEO of Lonsdale Energy, is featured in this screenshot from the North Shore News, highlighting the City of North Vancouver and Lonsdale Energy's receipt of a \$17.5 million grant, the largest in the City's history.*

# North Vancouver utility taps raw sewage to heat homes

The new plant will provide the greenhouse gas reduction equivalent of taking about 2,000 cars off the road forever.



**Brent Richter**

Sep 22, 2024 6:08 PM










## 4 New customer and communications resources launched

Lonsdale Energy has begun a new chapter by prioritizing customer service, community engagement, and partner relations. Our focus is on improving efficiency, reducing miscommunication, and strengthening connections with both customers and partners. We are inviting everyone to join us on our journey toward achieving a cleaner, greener North Vancouver.

A key milestone was the launch of our first public website, [www.lonsdaleenergy.ca](http://www.lonsdaleenergy.ca). This initiative aims to make service information more accessible, to showcase our commitment to sustainability, and to help customers, partners, and the broader community learn about the benefits of our community energy network. A related effort introduced email newsletters to expand communication with customers.



Screenshot of Lonsdale Energy's new website, [www.lonsdaleenergy.ca](http://www.lonsdaleenergy.ca)



Other highlights from the year include the release of our first Developer Guidelines and Requirements, a new resource designed to help developers optimize their projects when connecting to the network. We also established brand guidelines and messaging to ensure consistency in our public materials and clarity in our communications.

Internally, we improved our customer service processes by restructuring the contact database and implementing a ticketing system to track service requests. An employee intranet was developed to share company news and enhance communication and engagement among staff.

Externally, we participated in our first three community events, engaging with over 675 city residents and visitors.

Looking ahead, we will continue to build on these efforts, as well as introduce new initiatives such as a customer satisfaction survey and support materials for stratas and building managers. Together, these initiatives aim to build trust, enhance service, and raise awareness of the benefits of community energy networks.



### Customer care in action

*"Mourat, one of our valued customers, reported a loud noise, suspecting it might be from Lonsdale Energy's equipment.*

*We promptly went on-site to investigate and confirmed it wasn't our system but nearby construction. Mourat appreciated our swift response and shared that he's always been very happy with our service.*

*Another satisfied customer!"*

*- Randy, engineer*



# FINANCIAL PERFORMANCE

## Energy sales increase due to network growth

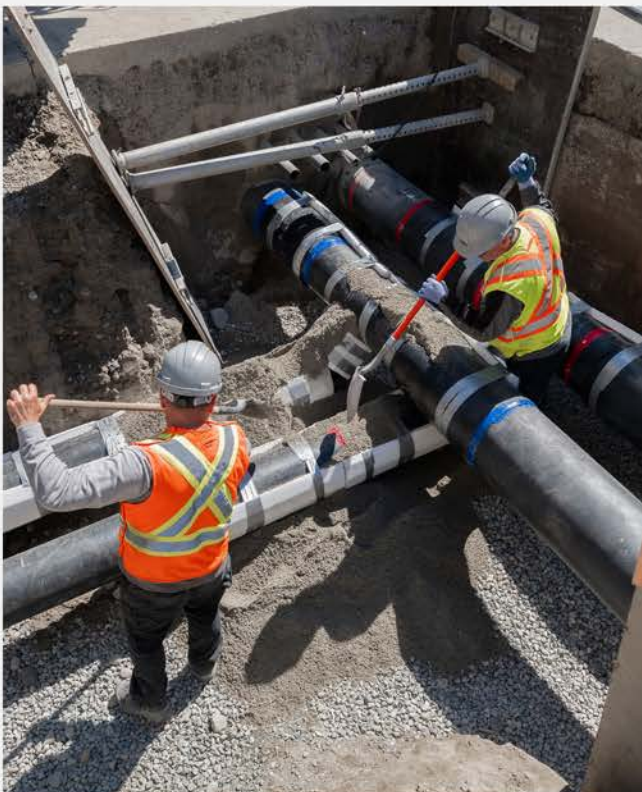
Due to the high volume of new connections made in 2024, energy sales increased to \$9,507,138 in 2024, up nearly \$1 million from 2023. Now serving over 17,000 residents, Lonsdale Energy delivered 84,941 MWh of thermal energy, up from 78,150 MWh in 2023. Of that, 16% of energy was from low-carbon sources – solar, geothermal, heat recovery and renewable natural gas.

## Growth in assets

Lonsdale Energy's asset base grew significantly in 2024, with nearly \$10 million in long-term infrastructure investments, including a new energy centre at North Harbour, 500 metres of new distribution piping, and the design of the sewer heat recovery energy centre.

## Big boost with government funding

A major finance highlight of the year was securing a \$17.5 million grant and additional incentives to support the development of a new sewer heat recovery energy centre. This project represents a key step in our clean energy transition. By reducing reliance on conventional energy sources, it will help mitigate future cost pressures on customers.



**\$10 million**

value of assets added in 2024  
(total assets, \$54 million)

**\$9.5 million**

total energy sales in 2024 (up from  
\$8.5 million in sales in 2023)

**\$17.5 million**

grant funding received for sewer  
heat recovery energy centre

**\$297,000**

net income in 2024 (up from  
\$157,00 net income in 2023)



# LOOKING FORWARD

Building on the momentum of recent accomplishments, Lonsdale Energy is entering 2025 with a clear focus on growth, innovation, and sustainability. The coming year will be pivotal as we continue to expand our low-carbon energy network and improve how we serve our customers, partners, and the broader community.

A key infrastructure milestone in 2025 will be the completion of major projects at Harbourside. Construction will begin on the new sewer heat recovery centre, following the completion of its detailed design. In parallel, we will complete the new electric energy centre, further enhancing the flexibility and resilience of our network.





In 2025, we will also finalize our Clean Energy Action Roadmap (CLEAR), a comprehensive strategy that defines our path to net-zero emissions by 2050. The roadmap will outline the investments, technologies, and partnerships needed to meet our long-term climate goals while maintaining reliable, affordable energy service.

To ensure we're meeting the needs of our customers, we will issue our first customer satisfaction survey in 2025. The feedback gathered will help us identify ways to improve service delivery and enhance the overall customer experience.

As we look to the future, Lonsdale Energy remains committed to delivering clean, reliable energy solutions that support the City's climate targets and benefit the people of North Vancouver. With innovation, collaboration, and a bold vision for 2025 and beyond, we are building a brighter, more sustainable tomorrow.



# KEY STATISTICS 2024

Each year, we track important numbers to monitor our growth, performance, and emissions.

The following statistics are effective up to December 31, 2024.

## NETWORK CONNECTIONS



**119**

Total building connections



**58**

Residential



**33**

Mixed Use



**16**

Institutional



**12**

Commercial

**26%**

**CITY  
RESIDENTS  
SERVED**



**1,100**

Residential  
suites added



**2,310**

Residents  
added



**17,900**

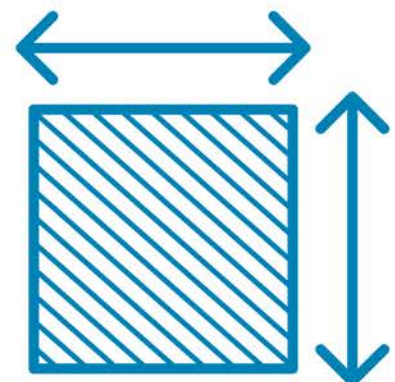
Total residents  
as customers

**1.67 million**

Gross floor area added in 2024 (sq. ft.)

**9.93 million**

Total gross floor area served (sq. ft.)





## CUSTOMER ENERGY USE



35 MW  
**Peak heating  
capacity**

82,600 MWh  
**Total heating  
delivered**

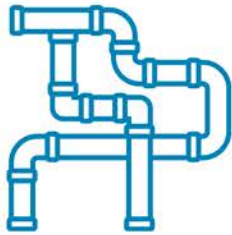


1.2 MW  
**Peak cooling  
capacity**

2,200 MWh  
**Total cooling  
delivered**



**99%**  
Reliability rate



**500 metres**

Network length added in 2024

**15.2 kilometres**

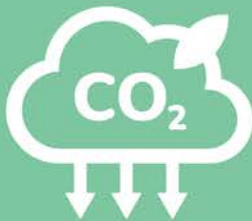
Total network length



**8**

Number of  
energy centres

LONSDALE ENERGY RUNS WESTERN CANADA'S LARGEST  
MUNICIPAL COMMUNITY ENERGY NETWORK.



Emission  
intensity  
(kg/CO<sub>2</sub>/MWh)

**218**  
2020

**218**  
2021

**187**  
2022

**189**  
2023

**179**  
2024

GHG emission intensity tells us how much carbon dioxide (CO<sub>2</sub>) is released for every unit of energy we deliver, measured in kilograms per megawatt-hour (kg CO<sub>2</sub>/MWh).

It helps us understand how clean our energy is. The lower the number, the better — it means we're producing heat in a way that creates fewer emissions and has less impact on the environment.

As we add more clean energy sources, our GHG emission intensity will significantly decrease.



**LONSDALE**  
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