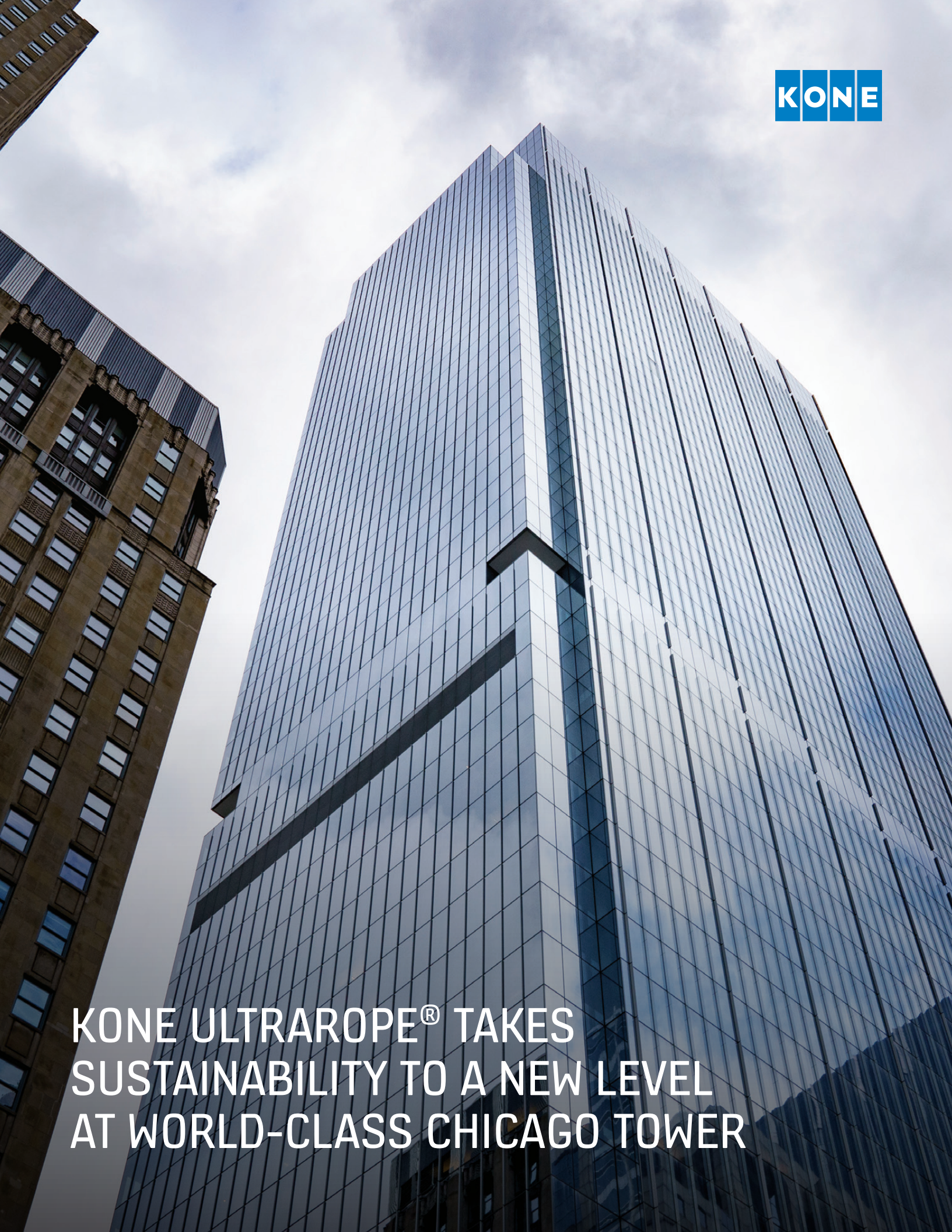


KONE ULTRAROPE® TAKES SUSTAINABILITY TO A NEW LEVEL AT WORLD-CLASS CHICAGO TOWER

SOLUTIONS

Innovative elevators that deliver high-speed people flow and energy efficiency.

In 57-story tower, maximum sustainability is a top priority.

Optimal elevator performance and reliability is essential in world-class property.

RESULTS

Significant reduction in high-rise elevator energy consumption.

Reduction in property's building life-cycle costs.

Regenerative drive technology recycles energy for immediate reuse within a building.

FAST FACTS

110 NORTH WACKER
CHICAGO

- Owners: The Howard Hughes Corporation and Riverside Investment & Development Company
- New construction at historic site on Chicago River
- Class A office building
- 57 floors; completed 2020

KONE SOLUTIONS

30 KONE elevators

KONE Turnstiles

KONE UltraRope® on eight high-rise and two service elevators

KONE Access with Bluetooth credential for security and KONE Elevator Call

Certified BACnet PR18 compliant controller

Next generation destination operation panels

KONE InfoScreens

KONE Office Flow

The trophy-class 110 North Wacker Drive office tower in the Chicago Loop business district occupies a distinctive spot on the Chicago skyline. The city's tallest office building and the second largest office building to be delivered there in more than 30 years, the state-of-the-art Class A tower's distinctive form accentuates its verticality.

Extensive integration of open space throughout the building begins at ground level, with an expansive 45-foot-wide Riverwalk. Inside, a 45-foot-high lobby is enclosed by a cable-supported glass wall. Located on a historic site along the Chicago River, the 57-story tower offers exceptional amenities.

Smart building solutions drive a world-class visitor experience. Behind the scenes, innovative KONE technology reduces the building's energy consumption, contributing to a sustainable urban environment.

KONE SOLUTIONS

Among 30 KONE traction elevators installed at 110 North Wacker Drive are eight high-rise passenger elevators and two high-rise service elevators using a revolutionary elevator hoisting technology that sets a new benchmark for high-rise towers. Composed of a carbon fiber core surrounded by a unique, high-friction coating, KONE UltraRope® weighs significantly less than similar conventional steel rope – and that translates to a significant reduction in high-rise elevator energy consumption.

At 110 North Wacker Drive, that means dramatic energy savings. Based on 300,000* starts annually, we estimate that energy consumption in each of the eight high-rise elevators and two high rise service elevators using KONE UltraRope® was reduced by 35 percent compared to elevators using conventional steel rope.

*†The anticipated 35% energy consumption reduction is based on KONE EnerCal (energy calculation tool) results using 300,000 starts and other typical energy consumption inputs associated with KONE products. The results are KONE's best estimates of the annual energy consumption. Actual results may vary depending on the actual installation and other factors.

110 NORTH WACKER DRIVE - ENERCAL REPORT

H1-H8 High Rise Passenger Group

Estimated Net Annual Energy Consumed By Hoisting Based Upon 300,000 - Starts/Yr. - Annual	Kilowatt Hrs (kwh)
1600 FPM MiniSpace with Conventional Steel Rope - Per Elevator	24,424.00
1600 FPM MiniSpace with KONE UltraRope - Per Elevator	14,209.00
Anticipated Energy Savings - Annual - Per Elevator	10,215.00
Anticipated Energy Savings - Annual - Entire Group	81,720.00

S1-S2 High Rise Service Elevators

Estimated Net Annual Energy Consumed By Hoisting Based Upon 300,000 - Starts/Yr. - Annual	Kilowatt Hrs (kwh)
1200 FPM MiniSpace with Conventional Steel Rope - Per Elevator	26,854.00
1200 FPM MiniSpace with KONE UltraRope - Per Elevator	24,019.00
Anticipated Energy Savings - Annual - Per Elevator	2,835.00
Anticipated Energy Savings - Annual - Entire Group	5,670.00

H1-H8, S1-S2 High Rise Elevators - Ten (10) Total Elevators

Estimated Net Annual Energy Consumed By Hoisting Based Upon 300,000 - Starts/Yr. - Annual	Kilowatt Hrs (kWh)
Anticipated Energy Savings - Annual - Total All Elevators	87,390.00

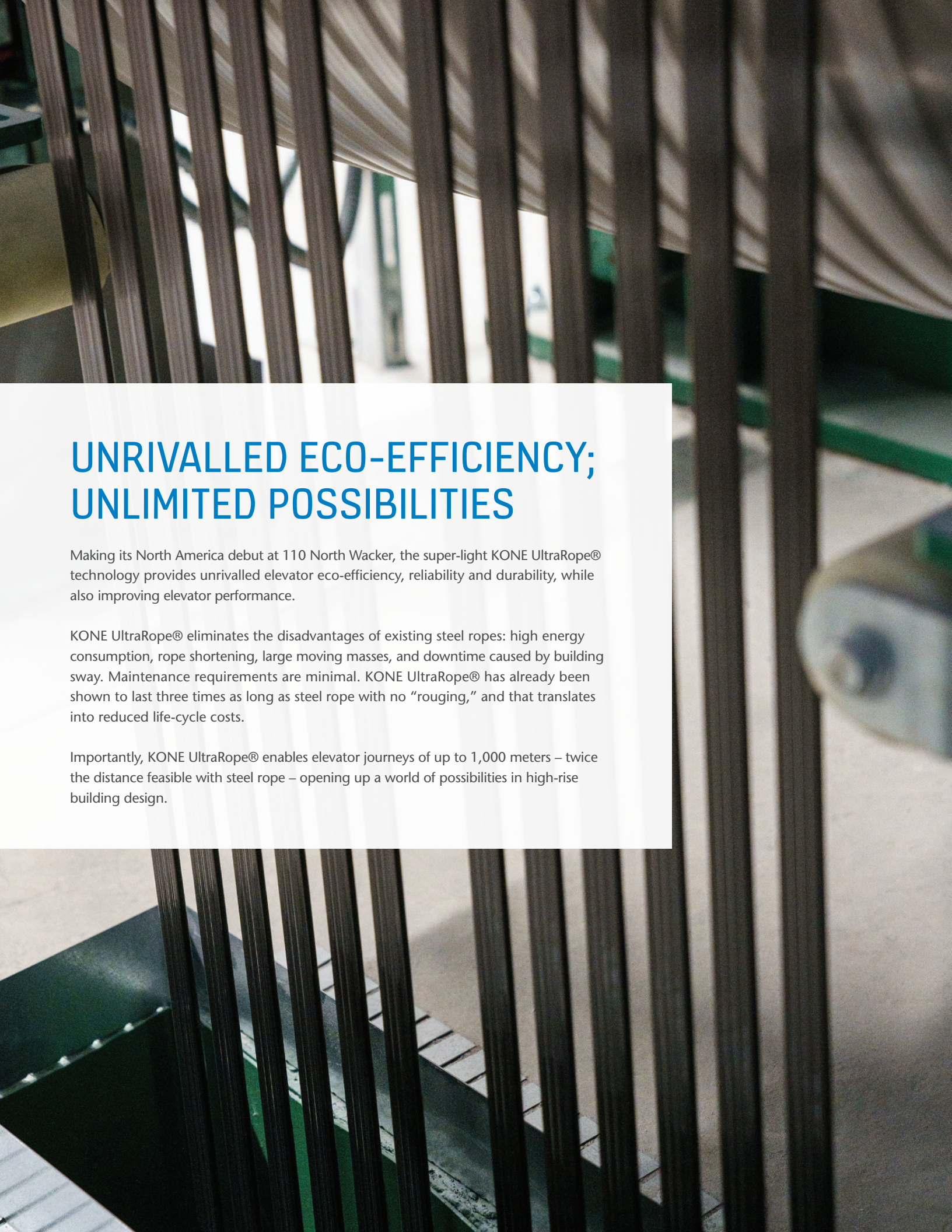
Estimated Net Annual Energy Consumed By Hoisting Based Upon 300,000 - Starts/Yr. - 5 Year Cumulative	Kilowatt Hrs (kWh)
Anticipated Energy Savings - Annual - Total All Elevators	436,950.00

Estimated Net Annual Energy Consumed By Hoisting Based Upon 300,000 - Starts/Yr. - 10 Year Cumulative	Kilowatt Hrs (kWh)
Anticipated Energy Savings - Annual - Total All Elevators	873,900.00

ANTICIPATED ENERGY REDUCTION AS A PERCENTAGE	35.08%†

Ancillary costs reductions related to HVAC should also be considered. Machine room cooling energy can be calculated by assuming 2/3 of the elevators energy consumption is turned into heat in the machine room. This means that 2/3 of the energy saving from hoisting can be calculated as benefit in reduced cooling need.

**Disclaimer: The results of the Enercal energy calculation tool are based on the typical energy consumption of KONE products. The results are KONE's best estimates of the annual energy consumption but the real-life values may vary depending on the actual installation. †The anticipated 35% energy consumption reduction is based on KONE Enercal (Elevator energy calculation tool) results using 300,000 starts and other typical energy consumption inputs associated with KONE products. The results are KONE's best estimates of the annual energy consumption. Actual results may vary depending on building use and KONE equipment.



UNRIVALLED ECO-EFFICIENCY; UNLIMITED POSSIBILITIES

Making its North America debut at 110 North Wacker, the super-light KONE UltraRope® technology provides unrivalled elevator eco-efficiency, reliability and durability, while also improving elevator performance.

KONE UltraRope® eliminates the disadvantages of existing steel ropes: high energy consumption, rope shortening, large moving masses, and downtime caused by building sway. Maintenance requirements are minimal. KONE UltraRope® has already been shown to last three times as long as steel rope with no “rouging,” and that translates into reduced life-cycle costs.

Importantly, KONE UltraRope® enables elevator journeys of up to 1,000 meters – twice the distance feasible with steel rope – opening up a world of possibilities in high-rise building design.

INNOVATIVE KONE ECODISC® TECHNOLOGY

In a building served by 30 traction elevators, energy consumption is an essential consideration. The KONE EcoDisc® hoisting motor is the heart of KONE's elevator solution at 110 North Wacker Drive. An innovative copper winding system reduces the amount of energy lost as heat, making KONE elevators even more energy-efficient.

KONE EcoDisc® uses a synchronous permanent magnet motor. This, on its own, means no motor losses due to motor slip and no magnetizing losses in the rotor. Not only does the machine have a high efficiency, it also has an extremely high power factor, the result of magnetization by permanent magnets.

Combined with the fact that there are no slip losses, this means that the KONE EcoDisc® is much more efficient than conventional gearless machines. The machine's efficiency can be as high as 92 percent, equating to energy consumption 60 percent lower than that of hydraulic units, 50 percent lower than that of geared traction units and up to 30 percent lower than that of conventional gearless units.

The building's parking and service elevators are KONE Machine Room-Less (MRL) elevators with the KONE EcoDisc® hoisting machine. The only one of its kind, KONE EcoDisc® has made the elevator machine room a thing of the past. Despite having a very compact footprint, it can deliver more than twice the torque-per-pound weight of a conventional machine.

The shape of the motor is especially beneficial. While traditional hoisting machines are heavy and bulky and require a machine room, the KONE motor is integrated with the traction sheave, resulting in a profile so thin that it fits between the elevator guide rail and shaft wall. In addition to energy efficiency, this machine requires no oil, increasing sustainability and reducing maintenance costs.

ACHIEVING A NEW STANDARD IN ENERGY EFFICIENCY

KONE was the first elevator company to offer regenerative systems, which recover up to 40 percent of an elevator system's total energy consumption. Setting the standard in energy efficiency for high-speed elevator traffic, the regenerative drive reduces operating costs. All of the elevators at 110 North Wacker Drive have regenerative drives. The recovered energy is returned to the building's energy grid, providing electricity for lighting, computers and other equipment.

The KONE regenerative drive uses Modulated Line Bridge technology to continuously supply energy back to the power network during braking. With the KONE EcoDisc® motor acting as a generator, the car, counterweight and braking system generate energy that is converted into electrical current that can be used elsewhere in the building – or even to drive other elevators. As a result, the net building electricity consumption is reduced. This feature offers considerable cost savings over the lifetime of the equipment.

As a sustainability leader in the vertical transportation industry, KONE has pledged to have carbon-neutral operations by 2030. Committed to making urbanization more sustainable, KONE believes that sustainable business practices are a requirement for long-term success.

At KONE, our mission is to improve the flow of urban life. As a global leader in the elevator and escalator industry, KONE provides elevators, escalators and automatic building doors, as well as solutions for maintenance and modernization to add value to buildings throughout their life cycle. Through more effective People Flow®, we make people's journeys safe, convenient and reliable, in taller, smarter buildings. In 2020, KONE had annual sales of EUR 9.9 billion, and at the end of the year over 60,000 employees. KONE class B shares are listed on the Nasdaq Helsinki Ltd. in Finland.

KONE

www.kone.us

SF3105 Rev 0421
Printed in U.S.A.