



Brookfield

ENVIRONMENTAL, SOCIAL  
AND GOVERNANCE

# ESG at Brookfield

BROOKFIELD ASSET MANAGEMENT

# A Global Leader in Real Assets

Brookfield Asset Management is one of the world's largest alternative asset managers with approximately \$250 billion in assets under management focused on long-life, high-quality real estate, renewable power, infrastructure and private equity assets that represent critical elements of the global economy and provide employment to over 70,000 people in more than 30 countries.

We are one of the largest investors, owners and developers of real estate globally with \$148 billion in AUM across office, retail, multifamily, industrial and other real estate sectors. On the infrastructure side, we are one of the world's largest private sector investors in infrastructure assets globally with \$32 billion in AUM across the utilities, transportation, energy and sustainable resource sectors. We also are one of the world's largest pure-play renewable power investors globally, managing \$30 billion in AUM primarily in hydroelectric power and wind generation. Finally, our leading private equity business with \$18 billion in AUM owns and operates high-quality businesses that benefit from high barriers to entry and low capital expenditures.

Throughout our operations, we are committed to environmental, social and governance (ESG) practices that have a positive impact on the communities in which we operate.

90%

OF OUR CORE OFFICE  
PORTFOLIO ACHIEVED A GREEN  
BUILDING CERTIFICATION

52

BROOKFIELD RENEWABLE  
HYDRO ASSETS CERTIFIED  
BY THE LOW IMPACT  
HYDROPOWER INSTITUTE

90%

REDUCTION IN ENERGY  
USAGE FROM OUR  
INFRASTRUCTURE DISTRICT  
ENERGY BUSINESS\*

\*As compared to a conventional heat-exchange system.

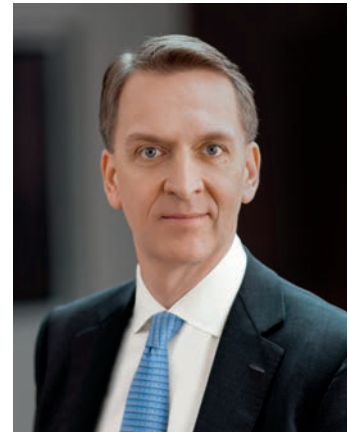
# “ESG is a key priority at Brookfield, and it is fully integrated into how we acquire and operate our businesses to create value over the long term.”

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At Brookfield, we recognize that our success depends on the long-term health of the communities in which we conduct business. Around the world, we operate the real assets in our portfolios with the view that we will own them for the long term, and this approach dictates both our investment strategy and our commitment to ESG practices — we believe that value creation and sustainable development are complementary goals.

Our Board of Directors, management and operating employees aim for excellence across all aspects of our business. Our goal is to ensure the well-being and safety of our employees by offering competitive wages, providing safe work environments and implementing nondiscriminatory hiring practices. We also aim to mitigate the impact of our operations on the environment and to be actively engaged with our stakeholders, and we always work to be good corporate citizens. Finally, we strive to conduct our business according to the highest ethical standards by continually monitoring our policies and procedures against best practices.

On the following pages, we share in greater detail some of the measures we are taking and the positive impact we have made.



A stylized, handwritten signature in black ink, consisting of a large loop followed by a few strokes.

**Bruce Flatt**

Chief Executive Officer

Brookfield Asset Management

# At Brookfield, ESG Is Good Business

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We own and operate real assets that form the backbone of the global economy — from real estate to renewable power plants to transportation infrastructure networks, and many others.

Throughout our history, we have recognized that acting responsibly toward our stakeholders is fundamental to operating productive, profitable businesses over the long run. Our ESG principles are embedded across our operations and help us ensure that our business model will be sustainable well into the future. We firmly believe adhering to ESG principles is simply good business.

## A VALUABLE OWNER/OPERATOR PERSPECTIVE

Our ESG approach reflects our expertise as owners and operators of real assets, which in turn informs how we do business.

Experience has shown us that achieving success demands more than entering into legal agreements or obtaining licenses and permits: It is also vital to earn trust and have the social license to operate within communities; and we are keenly aware of the importance of being good stewards and community members.

## THE BOTTOM-LINE BENEFITS OF DOING THE RIGHT THING

*We know from experience that operating sustainably is the right thing to do, and it's good for business. Our ESG approach has the potential to add value in three fundamental ways:*

### **1. Improved operating profitability**

*Improving a company's ESG standards not only benefits the environment and our stakeholders, but in many cases also improves the cost structure and efficiency of our operations.*

### **2. Reduced risk**

*Bringing a company into alignment with ESG best practices reduces operational and reputational risks and may lower the company's cost of capital, resulting in higher valuations.*

### **3. Increased opportunities**

*Having a reputation as a reliable business partner who is known to adhere to best-practice ESG principles may lead to increased deal flow.*

*Strong ESG principles benefit the environment, our communities, stakeholders and investors while also significantly boosting the potential for higher investment returns. The bottom line is that it reduces risk and increases value.*

# Our ESG Principles

As we pursue our value-related goals, the following principles and associated practices ensure that we manage our investments with integrity, balancing economic goals with good corporate citizenship.

## ENSURE THE WELL-BEING AND SAFETY OF EMPLOYEES

### EMPLOYEE WELL-BEING

Meet or exceed all applicable labor laws and standards in jurisdictions where we operate, which includes respecting human rights, offering competitive wages and implementing nondiscriminatory, fully inclusive hiring practices.

*Please see pages 12–13 for examples.*

### HEALTH & SAFETY

Aim to have zero serious safety incidents within our businesses by working towards implementing consistent health and safety principles across the organization.

## BE GOOD STEWARDS IN THE COMMUNITIES IN WHICH WE OPERATE

### COMMUNITY ENGAGEMENT

Engage with community groups that might be affected by our actions to ensure that their interests, safety and well-being are appropriately integrated into our decision-making.

*Please see page 14–17 for examples.*

### PHILANTHROPY

Empower our employees to participate in — and use our resources to give back to — the communities in which we operate.

## MITIGATE THE IMPACT OF OUR OPERATIONS ON THE ENVIRONMENT

### ENVIRONMENTAL STEWARDSHIP

Strive to minimize the environmental impact of our operations and improve our efficient use of resources over time.

*Please see pages 18–21 for examples.*

## CONDUCT BUSINESS ACCORDING TO THE HIGHEST ETHICAL AND LEGAL/REGULATORY STANDARDS

### GOVERNANCE, ETHICS AND FAIRNESS

Operate with high ethical standards by conducting business activities in compliance with applicable legal and regulatory requirements, and with our Code of Business Conduct and Ethics.

### TRANSPARENCY

Be accessible to our investors and stakeholders by being responsive to requests for information and timely in our communication.



## Our Commitment to Sound Governance Practices

We are always working to maintain sound governance practices to ensure ongoing investor confidence. This involves a continual review of how evolving legislation, guidelines and best practices should be reflected in our approach.

### GOVERNANCE FRAMEWORK FOR PORTFOLIO COMPANIES

Our governance framework for portfolio companies in which we have a controlling interest includes three noteworthy components that reflect our high standards:

#### **Code of conduct**

*Each company is required to adopt our Code of Business Conduct and Ethics or ensure that existing practices are consistent with it and equal in substance.*

#### **Anti-bribery and corruption (ABC) policy**

*We have a zero-tolerance approach to bribery, including facilitation payments, and we require that our portfolio companies adopt equally stringent ABC policies.*

#### **Ethics hotline**

*We require every portfolio company to have a whistle-blower hotline in operation within six months of acquisition. The portfolio companies also take measures to ensure that every employee is aware of the existence and purpose of the hotline.*

### CONFLICT OF INTEREST POLICY

As part of our obligation to act in the best interest of our investors, we adhere to a rigorous conflict of interest policy. Each potential investment is screened for possible conflicts and, if any are identified, they are elevated for review to the Conflicts Committee, which is overseen by several of Brookfield's senior executives and the Head of Compliance, prior to execution of the transaction.

### PERSONAL TRADING POLICY

We maintain a stringent personal trading policy. Employees who are actively involved in recommending or making investment decisions on an ongoing basis, as well as their family members living in the same household, are restricted from being involved in trading in any non-Brookfield equity securities. This trading policy exceeds the standard legal requirements, which mandate only preclearance of employees' trades.





## Our Emphasis on Health & Safety

Employee health and safety is a top priority at Brookfield. We view health and safety as an integral part of the management of our business and, therefore, consider it a line responsibility that in the first instance is best managed by portfolio companies. In addition, we have established a health and safety steering committee, which includes the CEOs of each business group, to promote common values and a strong health and safety culture, share best practices, and monitor serious safety incidents and remedial action undertaken across our portfolio companies.

At Brookfield, we have identified a health and safety framework, and each operating business and portfolio company is expected to adhere to these or substantially similar principles:

- ✓ **Senior executives are accountable** for health and safety at their businesses.
- ✓ Health and safety systems are **tailored** to company-specific risks and **integrated** into the management of the business.
- ✓ Health and safety **performance is measured** and systems are reviewed regularly to identify areas for improvement.
- ✓ Policies and procedures apply to **employees, contractors and subcontractors** and take into consideration the **protection of the public** in general.
- ✓ **Training programs** ensure that employees have the necessary skills to conduct their work safely and efficiently.
- ✓ We promote **transparency and learning from experience** to continuously improve our systems and performance.
- ✓ If a serious safety incident occurs, Brookfield **conducts an in-depth investigation** to determine root causes and formulate remediation actions.

# Considering ESG at Each Stage of the Investment Management Process

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## Pre-Acquisition

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### DUE DILIGENCE

**Applying operating expertise to preliminary review** — We utilize our operating expertise to identify any material ESG risks and opportunities relevant to the potential investment.

**Deeper due diligence on identified ESG issues** — We perform substantial due diligence on potential risk areas, using internal experts and, when needed, third-party consultants.

**Essential analysis in a highly regulated environment** — Because we often operate in highly regulated industries, any due diligence involves ensuring sufficient environmental, legal and other regulatory compliance.

**An eye to the future** — We consider potential ESG factors in acquisition targets and identify opportunities to add value by mitigating risk and capitalizing on opportunities post-acquisition.

### INVESTMENT COMMITTEE APPROVAL

**Obtain mandatory fund-specific approval** — All investments made by a Brookfield fund must be approved by the fund's Investment Committee.

**Outline merits, disclose risks** — To ensure that ESG considerations are fully integrated in the due diligence phase, investment teams provide a detailed memorandum to the Investment Committee, outlining the merits of the transaction and disclosing any potential risks and mitigants.

**Weigh risks against mitigation strategies** — The Investment Committee discusses material ESG issues and potential mitigation strategies, including bribery and corruption risks, health and safety risks, and legal risks, as well as environmental and social risks.



## Post-Acquisition



### **TAILOR AN INTEGRATION PLAN WITH IMPLEMENTATION TIME FRAMES**

For each acquisition, the investment teams create a tailored integration plan that, among other things, ensures that any ESG-related matters are prioritized.

Different matters require different time frames: Issues flagged for immediate implementation, such as remediation for regulatory compliance purposes, can be accomplished quickly, while a change involving a shift in the health and safety culture of an organization may take longer.

Priorities are not static, but get updated regularly.

### **ACTIVELY MANAGE ESG FACTORS**

ESG risks and opportunities are actively managed by the portfolio companies with guidance from our in-house teams. This allows us to draw on local expertise, which provides valuable insight given the wide range of asset types and locations in which we invest.

For governance and health and safety, we adopt common principles and share best practices for addressing risk across the organization.

### **FOCUS ON CONTINUED IMPROVEMENT**

As long-term investors motivated to drive value creation, we continually look for opportunities to address ESG matters.





AN ILLUSTRATION

## Our Turnaround Strategy at Longview

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Our investment in **Longview Fibre Paper and Packaging Company** is a good example of how we take ESG factors into consideration at each step of our investment process.

Longview was one of the largest pulp and paper facilities in North America with nine operating paper machines and a capacity of one million tons per year. But the company was consistently cash-negative and was widely considered a failed business, and therefore destined to be shut down.

### 1 PRE-ACQUISITION

We sourced the struggling portfolio company through a public auction process, but we were quickly considered the preferred buyer because we were the only bidder with expertise in both timberlands and manufacturing. Through comprehensive due diligence, we revealed that the assets were fundamentally sound, but the business was severely undermanaged. Longview had one of the worst safety records of any paper company in the U.S. — so bad that it was often removed from the Pacific Northwest safety evaluation benchmark because it skewed the results.

### 2 POST-ACQUISITION

After acquiring Longview, we began to actively manage the asset by prioritizing key issues and opportunities. We upgraded the management and professional expertise of the company by introducing new people, empowering existing employees and investing in a significant multi-year training program across the entire workforce to improve technical skills. Critically, over time we instilled a culture that emphasized safety, environmental protection, open communication and profitability. Rigorous safety rules were put in place; one, for example, required that safety gear be worn before getting out of a vehicle on the premises. We introduced regular and rigorous safety training sessions focused on identifying high-risk behaviors and prioritizing mitigation tactics rather than just punishing violations. To implement the new safety practices, we changed behavior by rewarding successful

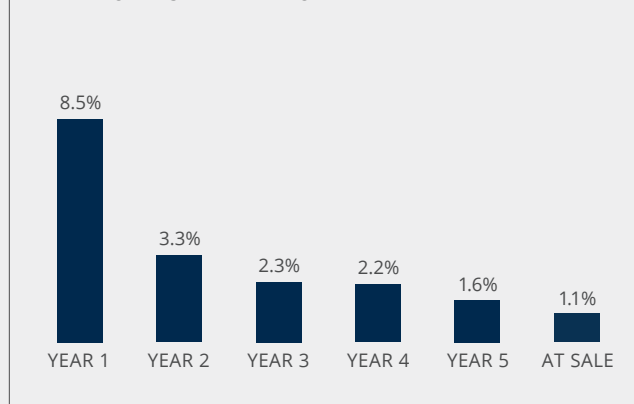


compliance while also stipulating disciplinary action for negligence. We also introduced standard operating procedures across the business to reduce the variations in how tasks were executed.

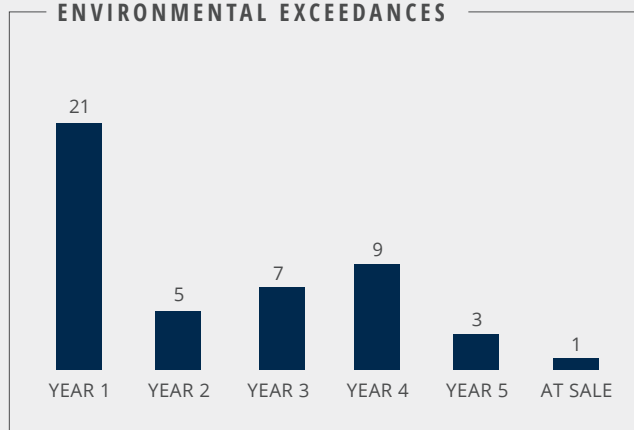
As a result, Longview's safety performance moved from the bottom quartile in the industry to the top quartile, resulting in the best safety record in the Pacific Northwest. As the charts at right show, the annual safety incident rate was lowered dramatically — from 8.5% at acquisition to 1.1% when we divested ourselves from the company, representing an 87% reduction in injuries. We also reduced the number of environmental exceedances from 21 to only one during that same period.

When we sold Longview to a leading North American paper and packaging manufacturer, significantly exceeding our return target, the chairman and CEO of the acquiring entity made the following statement on Longview's turnaround success: "The Longview team orchestrated a transformation that is truly, in my experience, the most amazing that I've actually ever seen in my 55 years in the industry."

#### ANNUAL SAFETY INCIDENT RATE



#### ENVIRONMENTAL EXCEEDANCES








# ESG in Action

On the following pages  
we illustrate how we have  
put our ESG goals and  
principles into practice.









# Ensuring the Well-Being and Safety of Employees

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## ARTERIS

### Implementing a Rigorous Safety Culture

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Brazilian toll-road operator Arteris improved roadside safety for its employees through in-depth training, proactive safety audits and innovative worksite enhancements.

Arteris is one of Brazil's largest toll-road operators with more than 3,200 km of roads and approximately 16,000 employees and contractors working at 7,000 separate worksites. One of the most material ESG factors Brookfield identified at Arteris was the need for roadside safety at active worksites.

As part of its commitment to reducing the number of roadside incidents, Arteris implemented the Critical Tasks Safety Review Project, a program that reviews safety instructions for 11 high-risk tasks and provides detailed instructions on executing tasks safely. Arteris then teamed up with a third-party safety and sustainability consultant to improve existing safety training reviews for employees and contractors. So far, more than 8,000 employees and contractors have been trained, and Arteris has delivered 1,000 safety manuals to its

employees and contractors. To ensure compliance, Arteris conducted more than 940 safety audits of its worksites in 2016 alone.

In addition, in the first program of its type in Brazil, Arteris has implemented electromechanical “robot” flagmen that stand in place of road workers to minimize the number of accidents resulting from road workers working near live traffic. To date, 100 robot flagmen are in operation in this pilot program, which is supported by state and federal highway authorities.

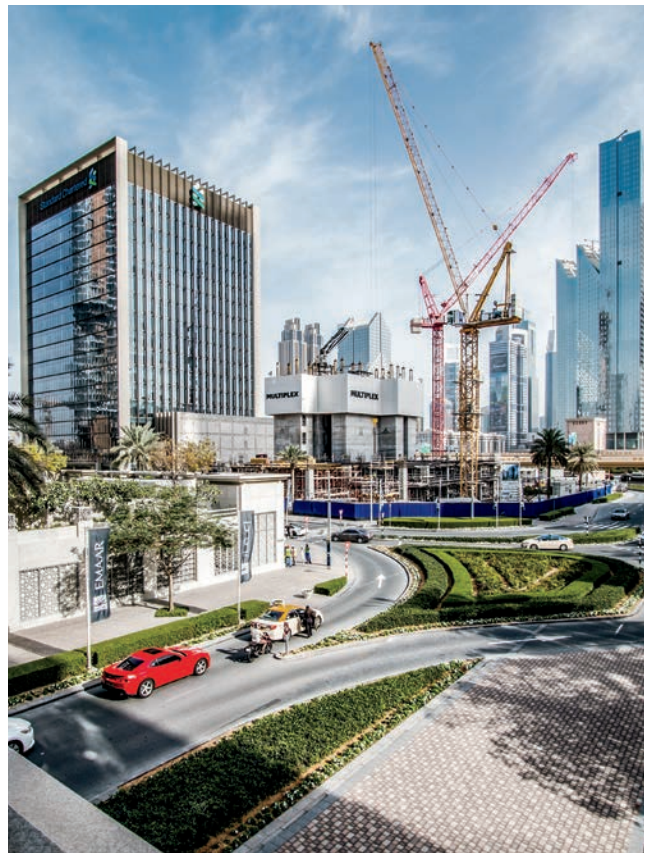
Other safety initiatives include installing concrete barriers at jobsites and using speed radar at worksites, building pedestrian overpasses, and equipping work vehicles with rearview cameras. Last but not least, in 2016 Arteris extended physical protection barriers at its toll booths, aimed at preventing potential collisions.



## MULTIPLEX MIDDLE EAST

# A Leading Global Contractor Prioritizes Its People

Multiplex is a global contractor with over 50 years' experience in building major projects across a broad range of sectors. Over the last 12 months, Multiplex Middle East has created stringent welfare policies that ensure the rights and well-being of its employees, contractors and suppliers. As part of this effort, Multiplex Middle East is a founding member and on the steering committee of a global business initiative called *Building Responsibly*. The initiative is overseen by BSR, a nonprofit organization that specializes in helping companies across the globe implement sustainable business practices. *Building Responsibly* aims to develop best-practice guidelines concerning recruitment practices, working and living conditions, and subcontractor and supply chain practices.





# Being Good Stewards in the Communities in Which We Operate

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## **BARRA DO BRAÚNA HYDROPOWER**

### Engaging Stakeholders to Support a Community

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In Brazil, Brookfield Renewable collaborated with regulators and municipalities and invested millions of reais to stimulate the local economy and support social and cultural programs for residents.

Barra do Braúna is a Brazilian hydroelectric power plant located in the State of Minas Gerais. When Brookfield began operating the plant in 2011, the firm worked with the state's environmental regulators to develop a R\$670,000 economic stimulus plan for the communities in the surrounding region. Brookfield not only developed and implemented the agreed-upon plan, but also went beyond its scope to launch a number of initiatives to support the local communities. Five years later, Brookfield had invested more than R\$5 million in socioeconomic and environmental initiatives — primarily designed to help stimulate the economy of the local communities through fish farming, rubber tree and native plant species production, and dairy farming.

The project also benefited from the financing contract Brookfield entered into with Brazil's National Bank for Economic and Social Development: Brookfield was the first company to receive a loan stipulating that a portion be invested in social projects. The loan was used to build a waste sorting, recycling and composting plant in the municipality of Recreio that is entirely managed and operated by the local community. Brookfield also established a partnership with the town of Laranjal to build a community center for social, cultural and technical training programs. Finally, in partnership with the municipality of Dois Lajeados, Brookfield constructed a communal space at the local senior care facility.

## ARTS BROOKFIELD

### Providing Unique Cultural and Educational Experiences

Brookfield is committed to developing vibrant, engaged communities enlivened by arts and culture. As a staunch supporter of the arts, Arts Brookfield is one of the largest privately funded arts programs in the world. Founded in New York in 1988, the program is designed to invigorate the public spaces of Brookfield's premier properties through the presentation of free cultural experiences. Arts Brookfield has since expanded to more than 30 properties in Los Angeles, Denver, Houston, Washington, DC, Toronto, Sydney, Perth and London, and hosts more than one million attendees at over 500 events each year. From concerts, theatre and dance to film screenings, art exhibitions and more, Arts Brookfield brings public spaces to life. In 2017, Brookfield was recognized by the National Building Museum along the National Endowment for the Arts for its cultural contributions through Arts Brookfield.



## BROOKFIELD CARES

### Partnering to Serve New York City's Communities

Brookfield's New York-based Brookfield Cares Program is proud to participate in NYC Service's "Good for Me. Good for My City." campaign, which unites several New York City companies as partners in championing employee volunteer engagement. Led by NYC Service, a division of the Office of the Mayor, this campaign unites several New York City-based companies in a pledge to further their employees' impact. In April 2017, the mayor's office honored Brookfield as one of the 30 companies that have engaged at least 20% of their city-based employees in volunteerism in 2016. For 2017, Brookfield has pledged to engage at least 200 employees in volunteerism and 30 employees as mentors to New York City high school students.



## Collaboration for a First-of-Its-Kind Community Solar Initiative

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By making several rooftops available to one office tenant, Brookfield made it possible to create a solar array that reduces electricity costs for affordable housing residents.

Brookfield Properties is engaged in an innovative, first-of-its-kind solar project in partnership with one of its Washington, DC office tenants, Nixon Peabody. The Community Renewable Energy Act, a District of Columbia law passed in 2013, allows producers of solar power to direct the energy credits associated with their solar production to other ratepayers. Brookfield's rooftops at 799 Ninth Street, the Victor Building, and 77 K Street have become the first downtown commercial locations to produce solar power for this purpose.

Brookfield Properties' partnership with Nixon Peabody in this project began in 2014, with the tenant's right to use 799 Ninth Street's rooftop for solar power negotiated into the lease. However, as Nixon Peabody progressed with the complex planning and financing of the solar power infrastructure (a challenge that has prevented

most commercial buildings from installing solar power), it became clear that more than one rooftop would be necessary. Brookfield Properties worked with the tenant to find and allocate additional space on two more downtown buildings, which allowed the project to move ahead.

The solar array went live in December 2016, and more than 60 affordable housing units in Southeast Washington are expected to realize roughly \$20 per month in savings on their electric bills as a direct result of the Brookfield / Nixon Peabody panels.

**60+**

**AFFORDABLE HOUSING UNITS**



**BROOKFIELD RENEWABLE PARTNERS  
AND HIAWATHA INSTITUTE FOR  
INDIGENOUS KNOWLEDGE (HIIK)**

## A Transfer of Culturally and Spiritually Significant Land

When Brookfield Renewable purchased the School Street hydroelectric facility in Waterford, NY, it acquired the surrounding land as well — land that had been the site of a historic event for Indigenous peoples in North America. Centuries ago, the Mohawk, Oneida, Onondaga, Cayuga and Seneca nations were at war with one another when a man referred to as the Peacemaker arrived from the western shore of Lake Ontario bringing a message of peace and unity. The Peacemaker met with the Mohawk Nation and set out the foundations of what has become known as the Great Law of Peace. This in turn led to the formation of the Haudenosaunee Confederacy (the Six Nations Iroquois), the world's oldest alliance of free nations. Brookfield Renewable identified and approached the HIIK regarding the 100 acres of sacred land, and an agreement was created to transfer this revered land to HIIK for future generations to enjoy.







# Mitigating the Impact of Our Operations on the Environment

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## ENWAVE TORONTO

### The World's Largest Lake-Source Cooling System

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Enwave's closed-loop chilled water system has significantly reduced the energy it uses to heat and cool Toronto buildings.

Enwave Energy Corporation is a Canadian district energy business that has integrated many sustainable technologies into its platform. One of the largest district energy systems in North America, Enwave provides heating and cooling services to more than 150 buildings in downtown Toronto. The company's innovative deep lake-water cooling system uses cold water from Lake Ontario as its clean, renewable and reliable cooling source.

Enwave, in conjunction with Toronto's water department, draws cold water (4°C/39°F) from a depth of 83 meters (272 feet) below the surface of Lake Ontario, which is filtered and sent to a pumping station that houses Enwave's main chilled water plant. Enwave transfers the heat from its closed-loop chilled water system into

Toronto's potable water, thereby recycling energy from major buildings in downtown Toronto. The project cost about \$250 million to develop, and has resulted in an approximately 90% reduction in energy usage, compared to existing in-house fuel-based or electrical cooling systems.

# 90%

**REDUCTION IN ENERGY USAGE**



## BROOKFIELD PROPERTIES

### Awarded for Sustainability

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For the fourth straight year, Brookfield Properties has been identified as a Global Real Estate Sustainability Benchmark (GRESB) Survey Green Star. The portfolio scored in the 87th percentile of 733 global GRESB respondents, and the overall 2016 GRESB score was 80 out of 100 — about 20 points higher than the average GRESB participant and 15 points higher than its peer group average. In addition, Brookfield Properties achieved a 16% baseline reduction in greenhouse gas emissions, an 8% savings in energy usage and an 8% reduction in water usage.

# 16%

**BASELINE REDUCTION IN  
GREENHOUSE GAS EMISSIONS**



## BROOKFIELD RENEWABLE

### Transferring 4,000 Acres to The Nature Conservancy in Tennessee

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In May of 2013, Brookfield Renewable transferred 4,000 acres of land in Tennessee to The Nature Conservancy, and the land became public as a result. The land connects the Great Smoky Mountains National Park and Cherokee National Forest in Tennessee — a region that is home to 21 rare or endangered species, including the bald eagle, the peregrine falcon and the bristle fern, among others. The transfer represents a major development in land conservation and received accolades from government officials and other stakeholders, including the U.S. Forest Service and the National Park Service.

## THE KOKISH HYDROELECTRIC FACILITY

### An Innovative “Fish-First” Design

Close collaboration between Brookfield Renewable and the ‘Namgis First Nations helped protect and enhance the habitat of eight fish species.

The Kokish hydroelectric facility is located on northeastern Vancouver Island, British Columbia. This run-of-river facility is owned and operated by Kwagis Power — a truly collaborative partnership between Brookfield Renewable Partners and the ‘Namgis First Nations. Commissioned in 2014, Kokish has an installed capacity of 45 MW, generating enough clean renewable energy to power 13,000 homes annually.

A key feature of the Kokish project has been the unique equity partnership that was created between the ‘Namgis and Brookfield Renewable to develop, build and operate the facility. Respecting the environment was a priority for both during construction. Great care was taken not only to protect but also to enhance the fish habitat and fisheries resources in the Kokish River watershed. In fact, project planning began in 2004 and was followed by years of studying the river system, gathering data and preparing environmental plans.

The Kokish River is home to Coho, Chinook, Chum, Pink and Sockeye salmon, as well as to Cutthroat, Steelhead and Rainbow trout. To ensure that fish could continue to migrate, and to minimize the impact on the environment,

the design of the facility included a fish ladder, which allows fish to swim upstream, and an elaborate screen to prevent fish from entering the intake box.

The Kokish hydroelectric project is not only a model of how sustainability, energy and environmental concern can come together, but also a great example of how the public, First Nations communities and the private sector can collaborate and work on a renewable power project that improves the Canadian energy infrastructure.



Canadian  
Electricity  
Association

Association  
canadienne  
de l'électricité

**2015 Social Responsibility Award**  
**CEA 2015 Sustainable Electricity™ Awards,**  
**for the Facility Partnership with the ‘Namgis First Nations**

**2015 Award of Excellence**  
**The Canadian Consulting Engineering Awards**

*“The Kokish project is one of the most environmentally complex run-of-river hydroelectric projects that I have worked on since starting in this industry over a decade ago. In my opinion, the application of a diligent, science-based approach was the key to successfully overcoming complex environmental challenges that were faced by the project team.”*

— Ian Murphy, Project Manager, Ecofish Research

**GGP**

## Smarter Water Usage

In the United States, aging infrastructure, climate change and mandated water restrictions have increased water rates from 5% to 20% annually. Facing this reality, GGP, a leading retail real estate company, is exploring ways to rethink water use for irrigation and landscaping needs. Last year, GGP implemented new smart water irrigation systems at seven California properties. Smart technology monitors both real-time weather and soil conditions, which allows watering to occur only as needed. The system comprises controllers that optimize watering automatically, based on plant and soil type, slope, geography and angle of the sun, to establish appropriate irrigation conditions for each landscaped zone. This new system will reduce overwatering and landscaping damage. In the four months following installation, GGP saved approximately 10 million gallons of water at these seven properties.



**BGIS**

## A Leader in Green Building Initiatives

BGIS is a leading North American real estate management company with over 200 million square feet managed. The company aims to be a leader in its industry when it comes to ESG practices.

Since 2006, BGIS's earnings have increased more than 400%, employee engagement has improved by over 20%, and the latest customer satisfaction results have reached a record high of 90%. These results have been achieved while reducing energy intensity per employee by more than 10% in the last four years and implementing energy efficiency programs that reduced BGIS's customers' consumption.

In early 2017, BGIS launched the Building Energy Innovators Council (BEIC), an industry-driven initiative to accelerate the collaboration, innovation, and adoption of clean building technologies across Canada.

# ESG at Brookfield: A Continual Evolution

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Implementing sound ESG practices is an ongoing effort, and we continue to make strides. We have undertaken many innovative initiatives already, but we know there's more work to be done to reach the high standards we set for ourselves.

Among our successes, Brookfield Residential and Brookfield Renewable North America have both recently undertaken materiality analyses to determine their most critical ESG issues. Each entity has identified enhanced metrics and goals, and they are in the process of producing their own ESG reports documenting their progress.



## Portfolio Company Goals for 2017

Our other portfolio companies are positioning themselves for the future as well. The following are their ESG-related goals for 2017.

<b>CANARY WHARF</b>	<b>BROOKFIELD PROPERTIES</b>	<b>GGP</b>
<b>100%</b> RECYCLING RATE FOR ALL CONSTRUCTION WASTE	<b>100%</b> NEW DEVELOPMENTS BUILT ACCORDING TO LEED® GOLD STANDARD	<b>+9%</b> COMPOSTING RATE
<b>CENTER PARCS</b>	<b>BGIS</b>	<b>EBSA TRANSMISSION</b>
<b>1.5%</b> CARBON TON REDUCTION PER GUEST	<b>5%</b> WATER, WASTE AND ENERGY REDUCTION	<b>300</b> SURVEYS OF POWER TRANSFORMERS TO ELIMINATE PCB CHEMICALS
<b>PEAK INFRASTRUCTURE</b>	<b>QUADRANT ENERGY</b>	
<b>3,000</b> HOURS OF HEALTH & SAFETY TRAINING OF WORKFORCE	<b>ZERO</b> CUMULATIVE TIER 1 AND TIER 2 LOSS OF PRIMARY CONTAINMENT (LOPC) INCIDENTS	



# Industry Recognition and Engagement

Below are a number of certifications, awards and memberships that show how we and our portfolio companies engage with the broader sustainability industry.

## CERTIFICATIONS



BREEAM®



\*



\*This product includes Low Impact Hydropower from facilities certified by the Low Impact Hydropower Institute (an independent non-profit organization) to have environmental impacts in key areas below levels the Institute considers acceptable for hydropower facilities. For more information about the certification, please see [www.lowimpacthydro.org](http://www.lowimpacthydro.org).

## AWARDS





# Contact Us

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For more information, please visit **brookfield.com** or contact us through one of our offices:

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