






**CORPORATE RESPONSIBILITY  
AND SUSTAINABILITY REPORT**

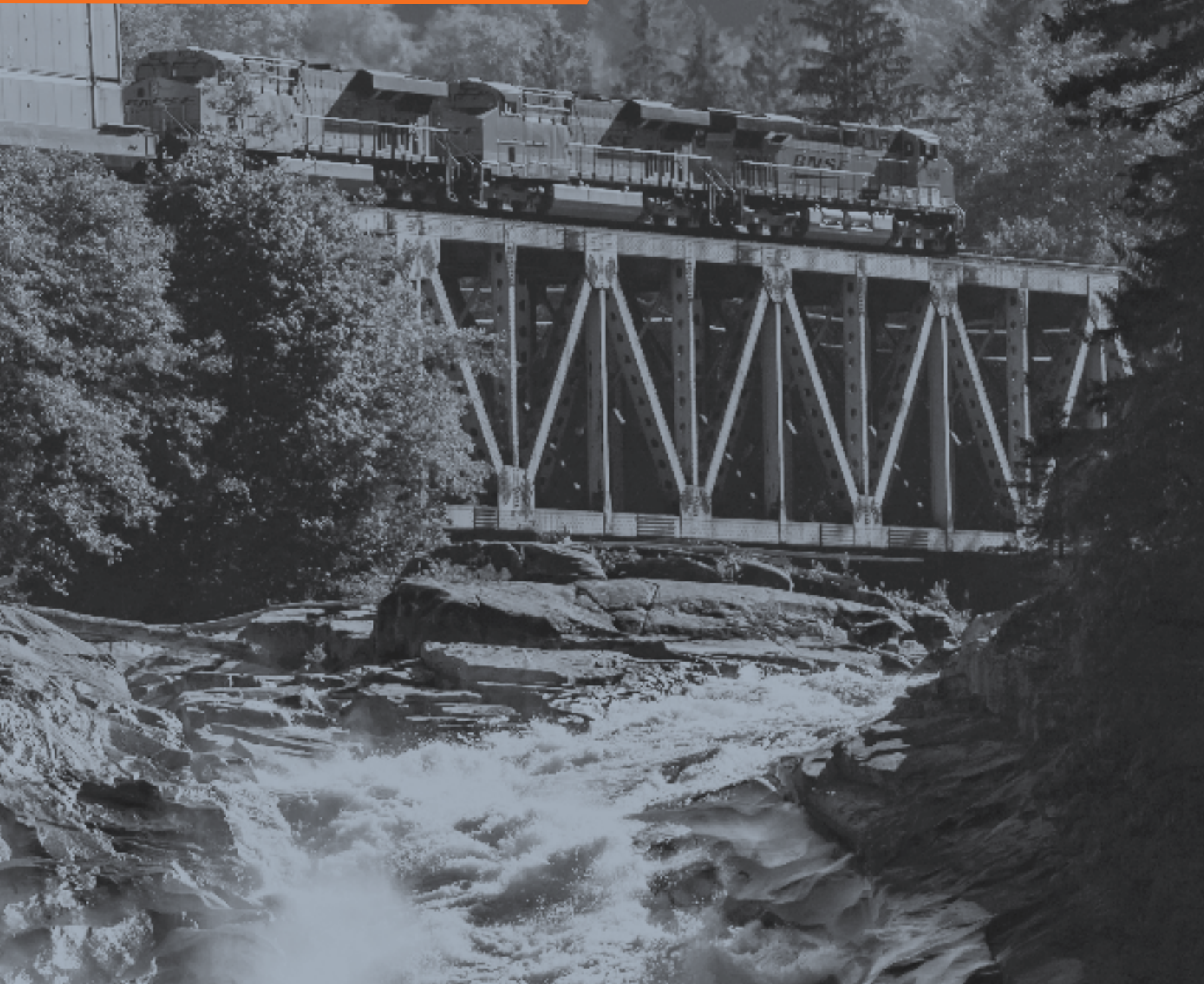
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***BNSF***  
RAILWAY



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## A MESSAGE FROM CARL ICE



At BNSF Railway, we know that being a good corporate citizen makes good business sense. With a history that spans more than 160 years we are proud of the vital role our company plays in our nation's supply chain. We offer the most sustainable land freight option, and we are focused on moving millions of tons of freight from where it is to where it needs to go, safely and reliably.

BNSF is a part of a community, whether that's the community of people that make up our team or our neighbors in the locations where we run our trains. This drives our commitment to achieve our safety vision, to continue to invest in our network and to support the communities where we operate.

In all we do, safety is paramount. We continue to pursue a safety vision of eliminating all accidents and injuries. Our injury rate was higher year-over-year in 2017, however, we were pleased to see a reduction in injury severity, particularly in the final months of the year. This confirms our commitment and belief that we have the right processes in place to operate free of incident and injuries.

To enhance the safety and fluidity of our network, BNSF made a \$3.3 billion capital investment in 2017. A significant amount of our investments were primarily focused on maintenance projects that help ensure our network remains in top condition and that we continue to operate a safe and reliable network. Advanced technologies, including more than 4,000 trackside detectors, give us the information we need to operate safely and discover issues before they become problems.

We also continue to focus on minimizing our impact on the environment. BNSF has upgraded the majority of our locomotive fleet to more energy-efficient technologies over the last decade, helping us make advances in increasing fuel efficiency and decreasing CO2 and particulate emissions.

Contributing to the well-being of our communities is a longstanding tradition. In 2017, the BNSF Railway Foundation donated more than \$10 million to worthy community causes.

In 2017 we conducted a materiality assessment, which helped guide the development of this Corporate Responsibility and Sustainability Report. During that assessment we asked for feedback from numerous stakeholders, both internal and external, as a way to help us focus on the most impactful areas when it comes to BNSF operating in a safe, responsible and sustainable manner.

In the pages that follow, we'll share our progress on key initiatives in the areas of Our Operations, Our Customers, Our Employees and Our Communities. We always look for opportunities to run our railroad more safely, more efficiently and with less impact. In this Corporate Responsibility and Sustainability Report, we'll share where we are on our journey of continuous improvement at BNSF.



**Carl Ice**  
*President and  
Chief Executive Officer*

# BNSF'S APPROACH TO SUSTAINABILITY

**At BNSF we know that our customers and communities today need the value and efficiency of our railroad more than ever before. Every day the nation counts on our network to continue to provide safe and reliable freight transportation.**

**Year after year, we invest billions in our network as part of our commitment to continually operate a safe and reliable rail network that meets our customers' current and future needs and runs more efficiently to minimize our impact on the environment.**

**No other form of land freight transportation is by its very nature more fuel- and resource-efficient than rail. Rail also provides tremendous benefits by reducing our country's overall transportation emissions and carbon footprint.**

**As we look to the future, BNSF will continue to partner with our customers and communities to become ever more sustainable while remaining focused on operating safely and building a better tomorrow.**

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## *About the Report*

BNSF's Corporate Responsibility and Sustainability Report details our progress in the following key areas:

- > **Sustaining Our Operations**
- > **Creating Value for Our Customers**
- > **Engaging With Our Employees**
- > **Connecting With Our Communities**

We used the Global Reporting Initiative's (GRI) G4 Guidelines to inform reporting on our most material sustainability-related issues. This publication focuses on initiatives and accomplishments from the 2017 calendar year and includes 2017 data, unless noted.

GRI is an international independent organization that helps businesses, governments and other organizations understand and communicate the impact of business on critical sustainability issues.





**SUSTAINING OUR  
OPERATIONS**





**BNSF's operational efficiency helps move our customers' supply chains toward greater sustainability.**



## **Our Role in the Economy**

Rail is an essential component for our economy's supply chain, and BNSF plays a vital role in moving freight across our nation. BNSF helps get consumer goods to store shelves, moves grain that becomes the food we eat and transports energy resources that heat and cool the homes and offices where we live and work.


With each of these moves, the environmental impacts of the commodities we move are reduced thanks to rail's efficiency over other surface transportation modes. Steel wheels on steel rail means less friction is generated and less fuel is needed compared with other over-the-road options.

BNSF remains focused on strengthening our railway to serve our customers and prepare for future growth. Our customers are counting on us to continue being there with them in their journeys, and we remain committed to meeting their needs.



## 2017 Financial Performance

In 2017, we saw some positive economic trends that resulted in our performance improving over 2016. Our volumes increased five percent, reflecting a strengthening economy as well as our success in capturing additional business in many of the commodities we haul.



For the full year 2017, BNSF averaged approximately **197,000** units per week and had 22 weeks over **200,000**. In terms of total revenue, BNSF experienced an increase of 8 percent compared with 2016 revenue.

### 2017 Financial Highlights (\$ in millions)

	2017	2016	% change
Revenues	<b>\$20,747</b>	\$19,278	+8%
Operating expenses	<b>\$13,451</b>	\$12,641	+6%
Operating income	<b>\$ 7,296</b>	\$ 6,637	+10%
Total volumes (in thousands)	<b>10,277</b>	9,758	+5%

For more information see our financial reports and filings on our website at the following links:  
<https://www.bnsf.com/about-bnsf/financial-information/form-10-k-filings/>  
<http://www.bnsf.com/about-bnsf/bnsf-review/2017/>



# Moving Our Customers' Freight

Our customers – and the overall economy – depend on us to deliver their freight reliably and efficiently every day. Our customers ship consumer products, industrial products, agricultural products and coal. And since rail is the most environmentally friendly mode of land transport, the more freight we take off the road, the lower the impact is on the environment.

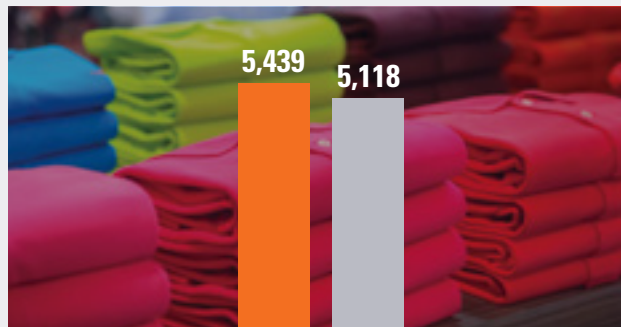
## What We Haul

### Year-over-year Trends in Units Transported

Number of units transported, in 1000's

#### Consumer Products

Y/Y Change +6%



#### Industrial Products

Y/Y Change +5%



#### Coal

Y/Y Change +6%



#### Agricultural Products

Y/Y Change 0%

## Investing in Our Rail Network

At BNSF we continuously invest in our rail network, to increase the safety and efficiency of our network today and to prepare for the demands of tomorrow.

In fact, through the end of 2017 BNSF had invested more than \$60 billion in infrastructure, equipment and technology since 2000.

Significant capital investment is necessary because, unlike other forms of transportation, railroads in the United States own and maintain their rights of way. Prudent capital investments help ensure we maintain the railroad in optimal operating conditions and help prepare us to meet the increasing freight capacity demands of our customers.

These investments demonstrate our commitment to continuing to operate a safe and reliable rail network that meets our customers' current and future needs and runs more efficiently to minimize our impact on the environment.

### *2017 Capital Investment Highlights*

In 2017, BNSF made \$3.3 billion in capital investments. The 2017 capital plan ensures we continue to operate a safe and reliable rail network while capturing the new opportunities our customers present to us. The strength and condition of our railroad today gives us the confidence that we will operate safely in the communities we serve and meet our customers' expectations of reliable and consistent service.

The majority – 73 percent – of infrastructure investment was devoted to our core network and existing assets, with \$2.4 billion going toward maintaining and upgrading existing track and improving facility efficiency.

Our investments continued to transform our Southern and Northern Transcon routes, connecting Southern California with Chicago and the Pacific

Northwest to Upper Midwest respectively, adding to our capacity to serve key agricultural, consumer and industrial markets.

We also devoted significant resources to the implementation of Centralized Traffic Control (CTC) to enhance fluidity across our network.

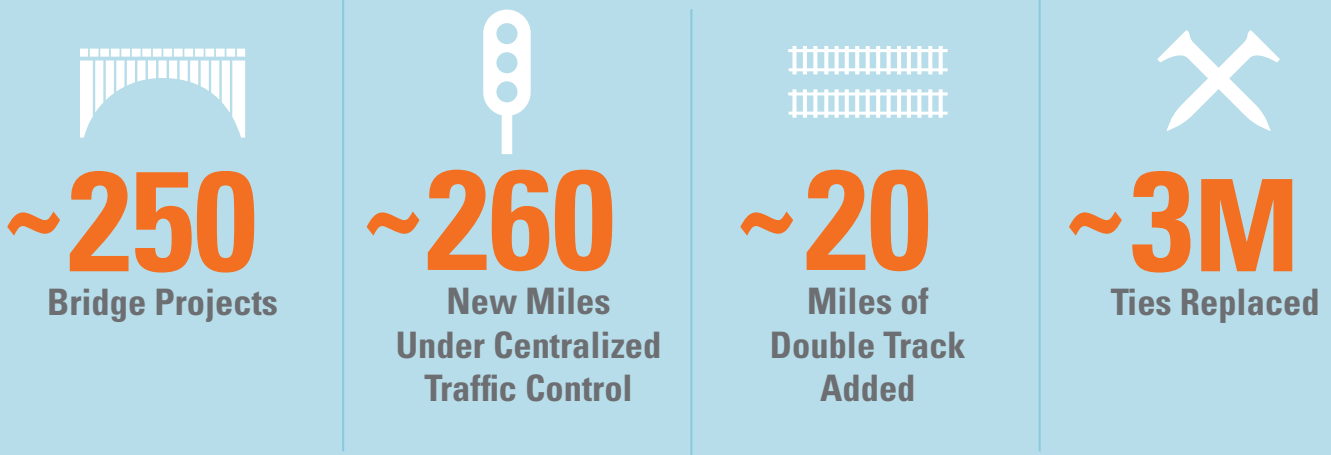
Additionally, each year we focus on condition-based maintenance by replacing assets when it makes sense to do so as opposed to a set replacement schedule. Keeping the railroad well maintained ensures trains can run safely and helps limit the need for unscheduled service outages that can slow down the rail network and reduce capacity.



## 2017 Capital Investments



## Results of Investments





## Leading the Way in PTC

BNSF is leading the North American freight rail industry in the implementation of Positive Train Control (PTC) technology. We will invest approximately \$2 billion in PTC implementation (including \$100 million in 2017).

In 2017, BNSF was the first Class I railroad to complete installation of all federally mandated PTC infrastructure on our network. We are running more than a thousand trains daily with PTC as we test operating in revenue service across our entire mandated territory. As per the federal mandate, BNSF has installed the PTC infrastructure on all 88 required subdivisions, covering more than 11,500 route miles and 80 percent of our freight volume. We are also installing PTC technology on subdivisions beyond the mandate.

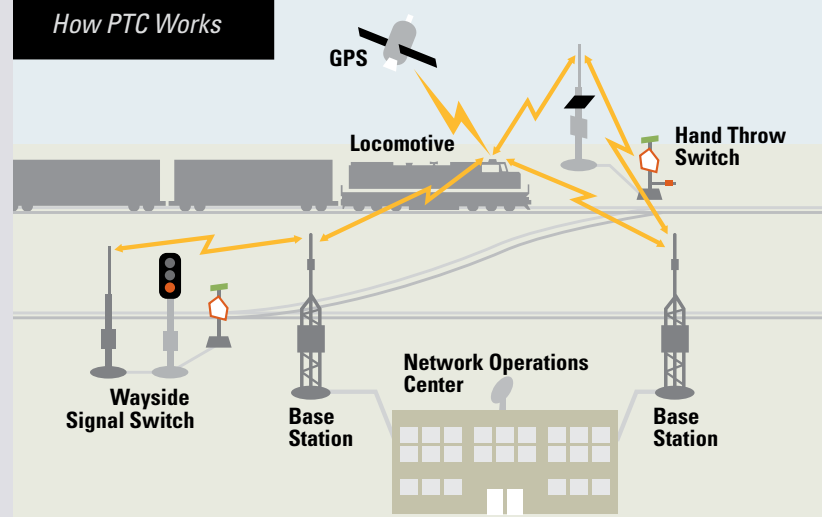
We will continue to test and refine this highly complex system that must work as designed to support safe and efficient train operations. PTC cannot be considered fully implemented until all railroads' PTC systems are interoperable. This means another railroad's locomotive can access another railroad's network and still have PTC protection. Interoperability of PTC systems between Class I, commuter and short line rail carriers is a vital concern. BNSF looks forward to working with other railways to expand interoperability and with the Federal Railroad Administration (FRA) to ensure PTC enhances rail safety wherever it operates.

### What is PTC?

As mandated by federal law, PTC is a set of advanced technologies that overlays train hardware and software intended to prevent:

- > Train-to-train collisions.
- > Derailments caused by excessive speed.
- > Unauthorized incursions by trains onto sections of track where maintenance activities are taking place.
- > Movement of a train through a track switch left in the wrong position.

### How PTC Works





## Leveraging Technology

From unmanned aerial vehicles (UAVs) to groundbreaking apps, BNSF deploys advanced technology to improve the safety and enhance the efficiency of our operations.

### *Wayside Detectors and Data Analytics*

BNSF deploys an extensive and strategic distribution of wayside detectors across our network that work in conjunction with our sophisticated predictive analytics tools to evaluate and act upon vast amounts of data, making our operations safer and more efficient.

More than 4,000 wayside detectors, equipped with multiple types of sensors, are positioned along the BNSF network, collecting data 24/7, year-round. These systems can identify potential safety issues – such as high-impact wheels, overheated bearings and damaged or worn components – in equipment in motion, day or night, rain or shine.

Our wayside detector placement strategy is focused on system and route coverage versus on the pure number of detectors installed.

### Data Analytics Approach to Safety

#### DETECTORS

Thermal/Acoustics/  
Pressure/Vision

Wheels/Axles/  
Bearings/Brakes/  
Trucks/Couplers



#### PREDICTIVE ANALYTICS

Rules and  
Self Learning  
Composite Alarms



#### SAFETY & VELOCITY

Derailment  
Prevention

## Rail Equipment Health Detector Examples



### Acoustic Bearing Detector

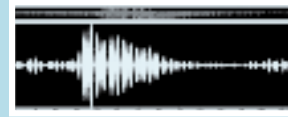
Acoustic systems used to evaluate sounds generated by specific bearing component defects.



### Hot Box Detector

Evaluates bearing temperature history for statistical outliers, brake issues and burned off journals.

### Known Standard



### Cracked Wheel



### Cracked Wheel/Axle Detector

Rail-mounted sensors capable of detecting the difference between tones generated by normal vs. flawed wheels and axles.

## Analyzing Wayside Detector Data

BNSF wayside detectors generate more than 35 million equipment readings per day, producing massive amounts of data. By accessing our sophisticated data and predictive analytics capabilities, BNSF can create alerts, which help us proactively identify poorly performing equipment for preventive maintenance before it may lead to a service interruption or incident. We utilize big data to associate readings from one detector with readings of another to provide a cohesive picture of overall equipment health.

BNSF captures more than **35 million** readings per day.





## Locomotive Upgrades

In 2017, BNSF upgraded more than 460 locomotives with technology focused on increasing fuel efficiency. More than 60 percent of our active road fleet locomotives utilize an energy management system to maximize fuel efficiency and train handling by optimizing throttle and brake use. Approximately 98 percent of our locomotives are equipped with automatic engine start/stop devices, which prevent unnecessary idling.

### Locomotive Upgrade Trends

	2017	2016
<b>Number of line-haul locomotives upgraded during routine rebuilding</b>	460+	450+
<b>Number of switching locomotives upgraded during routine rebuilding</b>	110+	100+

## Unmanned Aerial Vehicles (UAVs)

BNSF continues to break ground in the use of UAVs – or drones – in the rail industry. We are becoming more involved in edge machine processing through which algorithms process data collected via drones in the field and then transfer it back to headquarters. In addition, camera systems installed on UAVs are helping to assess the condition of various assets such as our concrete ties, rail and right-of-way. UAVs also help BNSF prepare for and respond to adverse weather events. During Hurricane Harvey, for instance, UAVs were able to provide critical information on network conditions in places that would have been unreachable or unsafe to send out BNSF crews.

## Wide-Span Cranes

As the first U.S. rail carrier to deploy wide-span electric cranes, BNSF continues to use them at our intermodal facilities in Chicago, Kansas City, Memphis and Seattle. These cranes produce zero emissions on-site. In addition, wide-span electric cranes significantly reduce the number of trucks needed to move containers within an intermodal facility, improving overall operational efficiency while reducing emissions.



### *Automated Gate Systems (AGS) & RailPASS Mobile App*

Improved processes and technological innovations also go a long way toward improving efficiency. In 2017, we completed the installation of AGS at our Phoenix, Houston (Pearland) and St. Paul, Minnesota, intermodal facilities. The addition of AGS at these facilities means that more than 85 percent of the freight that moves in and out of our intermodal facilities will go through an automated gate. When used in conjunction with the BNSF RailPASS mobile app, drivers can pass through the AGS in as little as 30 seconds, making it easier and faster for them to move freight in and out of our facilities.





## *Assessing Disruptive Technologies*

BNSF has a team that assesses technologies that have the potential to disrupt the industry, creating opportunities or threats. This team helps us understand and prioritize these issues.

## *Partnering in Predictive Maintenance Strategy*

BNSF is engaged in partnerships with original equipment manufacturers (OEMs) of locomotives that help us determine how often purchased locomotive parts need to be replaced and assist us in predicting when maintenance is needed throughout the asset's lifecycle. In general, the period between overhauls for the long haul fleet is eight to ten years. Keeping these lifecycles in mind helps us in our predictive maintenance strategy for our fleets.

## *Additional Technology Measures*

### *Machine Vision*

Increases productivity by utilizing smart cameras at BNSF intermodal facilities to help optimize container movement and assist crews in identifying the placement and retrieval of containers.

### *Materials Science*

Predicts maintenance costs and potential safety issues by considering the use of alternative material around key weak points of trains (i.e., knuckles and joints).



## Safely Moving Hazardous Materials

Under federal law BNSF has a Common Carriage responsibility, requiring us to make reasonable accommodations to transport any commodity as long as government standards are met, including hazardous materials. BNSF is committed to safely and reliably moving all our customers' freight.

We transported more than 1.3 million customer hazmat shipments in 2017 and 99.999 percent were delivered without incident.

In 2017, **99.999** percent of all BNSF customer hazmat shipments were delivered without incident.

### *Safety Measures*

We understand it is imperative that we develop and implement protocols and processes to ensure hazardous materials are being handled properly to safeguard our employees and the communities through which we operate. Our approach focuses on prevention, mitigation and response.

Risk reduction measures include (but are not limited to) wayside detectors, track inspections, reduced speeds, positive train control (PTC) and the use of stronger tank cars (DOT117 and CPC1232).

### *Safely Shipping Crude Oil*

For the transportation of crude oil in particular, BNSF and the rail industry – in cooperation with local and federal governmental agencies, suppliers and customers – have implemented extensive measures to reduce risk. These include speed restrictions for crude and ethanol shipments. For example, we require all key trains – trains which carry a certain amount of hazardous materials including crude and ethanol – to observe a speed limit of 50 mph. We go even further for key trains transporting crude oil, limiting their speed since March 2015 to just 35 mph when passing through municipalities of 100,000 or more. This is more restrictive than the regulatory requirement. BNSF also has a geographic-based crude oil safety program in place that takes additional prevention steps near large bodies of water, such as more closely spaced detectors.

## Preparing for Emergencies

BNSF is committed to being prepared for any and all potential incidents on our system through comprehensive emergency preparedness and response programs.

Any hazardous material that we transport receives special identification and handling that includes tracking of all sensitive shipments, in-train placement checks and emergency response information. And we work to ensure compliance with U.S. Department of Transportation placarding requirements.



In 2017, BNSF helped train more than **8,000** first responders in communities across our network.



In the unlikely event of an emergency involving our railroad, trained first responders are essential. Throughout our 32,500-mile network, BNSF has created an extensive system of internal emergency responders who are trained to respond to situations from small non-accident releases to major releases. BNSF helped provide training for more than 8,000 first responders across our network in 2017. BNSF and railroad industry partners provide this training through the Transportation Community Awareness and Emergency Response (TRANSCAER) program. BNSF received the 2017 TRANSCAER National Achievement Award, this is the 18th year we have received this distinction.

We also have strategically placed response equipment across our network. In 2017, we had a total of 32 hazmat trailers ready along routes where we carry hazardous materials should an incident occur.

### Hazmat-related Metrics

	2017	2016
<b>Total industrial hazmat trailers spread across network along crude and ethanol routes</b>	<b>32</b>	<b>31</b>
<b>Total hazmat responders</b>	<b>245</b>	<b>224</b>
<b>Total locations with hazmat responders</b>	<b>71</b>	<b>65</b>



## Complying with Environmental Regulations

BNSF proactively and willingly complies with applicable environmental laws and regulations that govern the nation's railroads issued through federal agencies as well as applicable state and local laws and regulations.

BNSF's environmental management systems help support regulatory compliance, risk management and much more.

For details on BNSF's environmental remediation reserves, liabilities and related information, please see the **Responsibly Managing Properties** section of this report.



## Decreasing Environmental Impact

BNSF is focused on measures that improve the fuel efficiency of our locomotives and reduce the emissions that affect our environment.

### *Realizing the Advantages of Intermodal*

BNSF is a leader in intermodal transport, the moving of freight in containers and trailers efficiently between different modes of transportation – trucks, ships, planes and trains.

Intermodal shipments carrying consumer goods account for approximately half of all BNSF freight volumes.

Intermodal shipping with trains and trucks offers significant environmental benefits versus shipping exclusively over the road.

On average, rail is more than three times as fuel efficient as transportation by truck, a key reason rail is by far the most environmentally preferred mode of long distance land freight transportation.

Our motor-carrier partners are realizing the cost and environmental advantages of allowing BNSF to handle the long-haul distances, while trucks handle local pickups and deliveries. Intermodal shipments allow motor carriers to reduce fuel costs and handle growing demand, while also reducing carbon emissions and relieving congestion and wear and tear on U.S. highways.



### **Reducing Highway Congestion**

**One BNSF intermodal train removes up to several hundred long-haul trucks from our nation's highways.**

BNSF customers reduced their total carbon emissions by **37.5M** metric tons in 2017 by shipping with BNSF instead of moving freight entirely over the road.

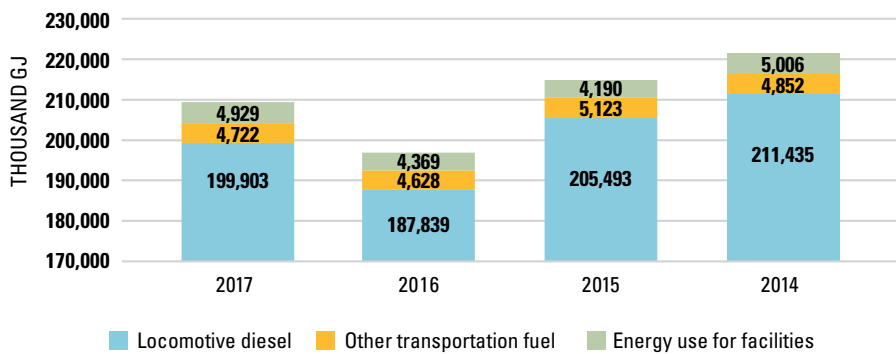


# Cutting Energy Consumption and Emissions

BNSF is committed to improving the energy efficiency of our locomotives and facilities. Increased energy efficiency allows us to reduce our carbon footprint and operating costs, as well as enhances our ability to serve our customers and compete in a complex, dynamic market.

BNSF's total energy use has been reduced by 5.3 percent since 2014, with major reductions seen in locomotive diesel consumption.

## Energy Use Breakdown





## Increasing Locomotive Fuel Efficiency

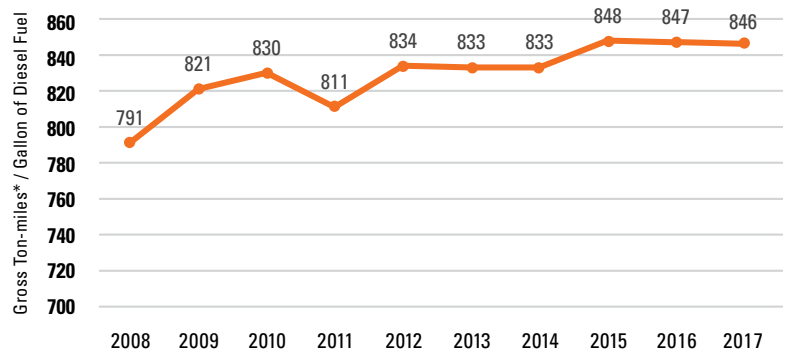
In 2017, BNSF spent nearly \$2.4 billion on locomotive diesel fuel and its use accounts for approximately 95 percent of our carbon footprint. Accordingly, we remain focused on measures to upgrade locomotives and improve fuel efficiency.

We have the newest and cleanest-burning locomotive fleet in North America. For more information on locomotive upgrades, see the **Leveraging Technology** section of this report.



In 2017, our fuel efficiency averaged **846** gross ton-miles per gallon of diesel, an approximate **7.0** percent improvement over 2008, when gross ton-miles per gallon were **791**.

### Fuel Efficiency



\*Gross ton miles (GTMs) are the weight of the train (minus the locomotive) multiplied by the miles traveled.

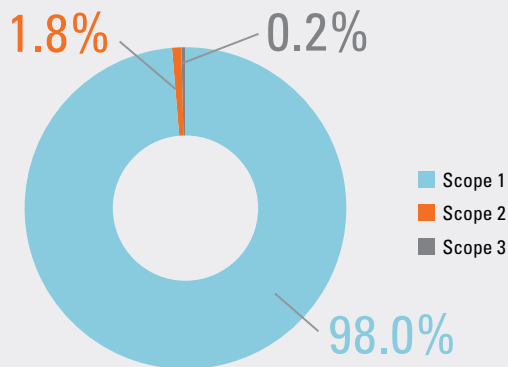
## Lowering Emissions

Increased fuel efficiency helps BNSF reduce greenhouse gas (GHG) emissions into the environment, decreasing our carbon footprint. We continue to evaluate and implement new operational changes to reduce emissions, such as anti-idling practices and energy management software.

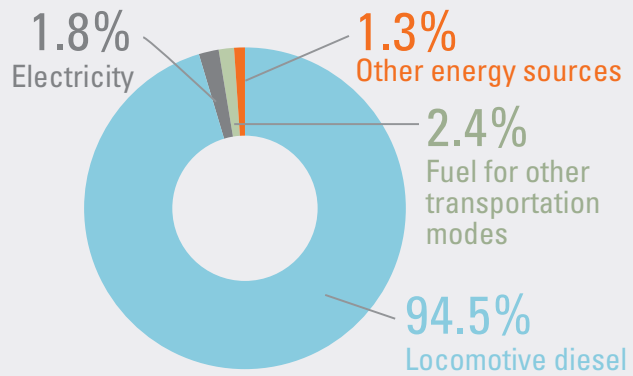
### Scope 1, 2 and 3 Emissions

Emission type	Source
<b>Scope 1</b>	<b>Stationary and mobile sources</b> (burning oil, diesel fuel oil, natural gas, propane, liquefied natural gas (LNG), gasoline, aviation fuel and coal)
<b>Scope 2</b>	<b>Electricity consumed at our facilities</b>
<b>Scope 3</b>	<b>Company business travel by air and car</b>

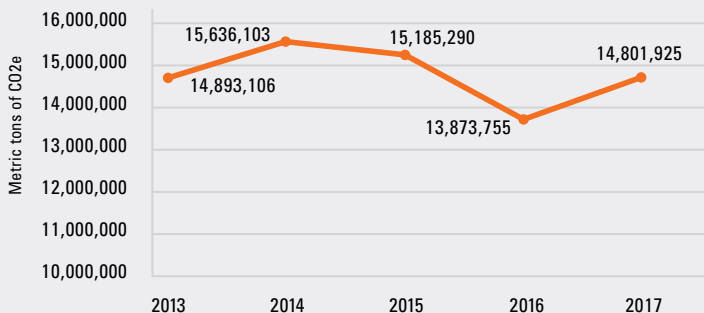
2017 GHG Emissions Distribution by Scope



2017 GHG Emissions by Source



Total Emissions

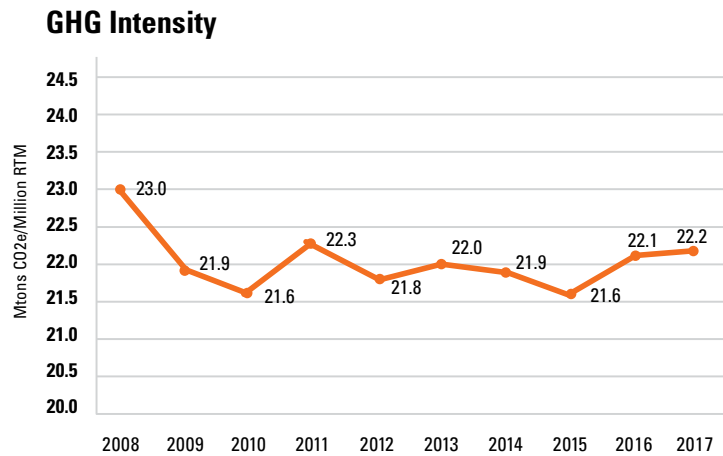


Reported GHG values for 2017 calendar year were adjusted based on revised GWP values from the Intergovernmental Panel on Climate Change (IPCC), as provided in their Fifth Assessment Report (AR5), as well as revised emission conversion factors from eGRID, as provided in v11.

## Decreasing GHG Intensity

To help measure the success of BNSF energy conservation endeavors, we monitor locomotive GHG intensity values, measured in metric tons CO<sub>2</sub>e per millions of revenue ton miles (MtonsCO<sub>2</sub>e/Million RTM). This allows us to understand how GHG emissions are being managed without bias from changes in business volumes and operations.

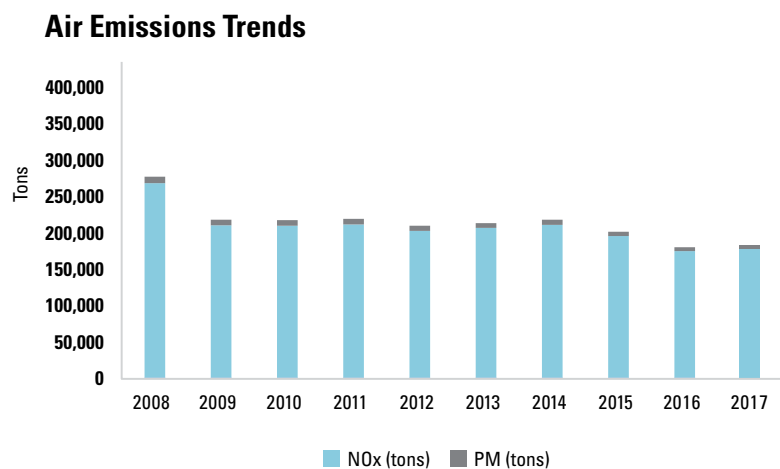
Over the past decade, BNSF has decreased GHG intensity by approximately 3.5 percent, which reflects our success in energy and carbon reduction efforts. Our GHG intensity did slightly increase from 2016 to 2017 by 0.5 percent. This is mainly due to a change in business mix and consumer trends.



## Reducing Other Air Emissions

The locomotive purchases, upgrades, fuel efficiency and emissions reduction measures BNSF has implemented have made a difference: we have reduced our fleet's average emission rate of nitrogen oxides (NO<sub>x</sub>) and particulate matter (PM) over the past decade. After a marked decrease in 2016, our NO<sub>x</sub> and PM emissions levels were essentially flat in 2017.

Between 2008 and 2017, we achieved a **34** percent reduction in tons of NO<sub>x</sub> and a **45** percent reduction in tons of PM.





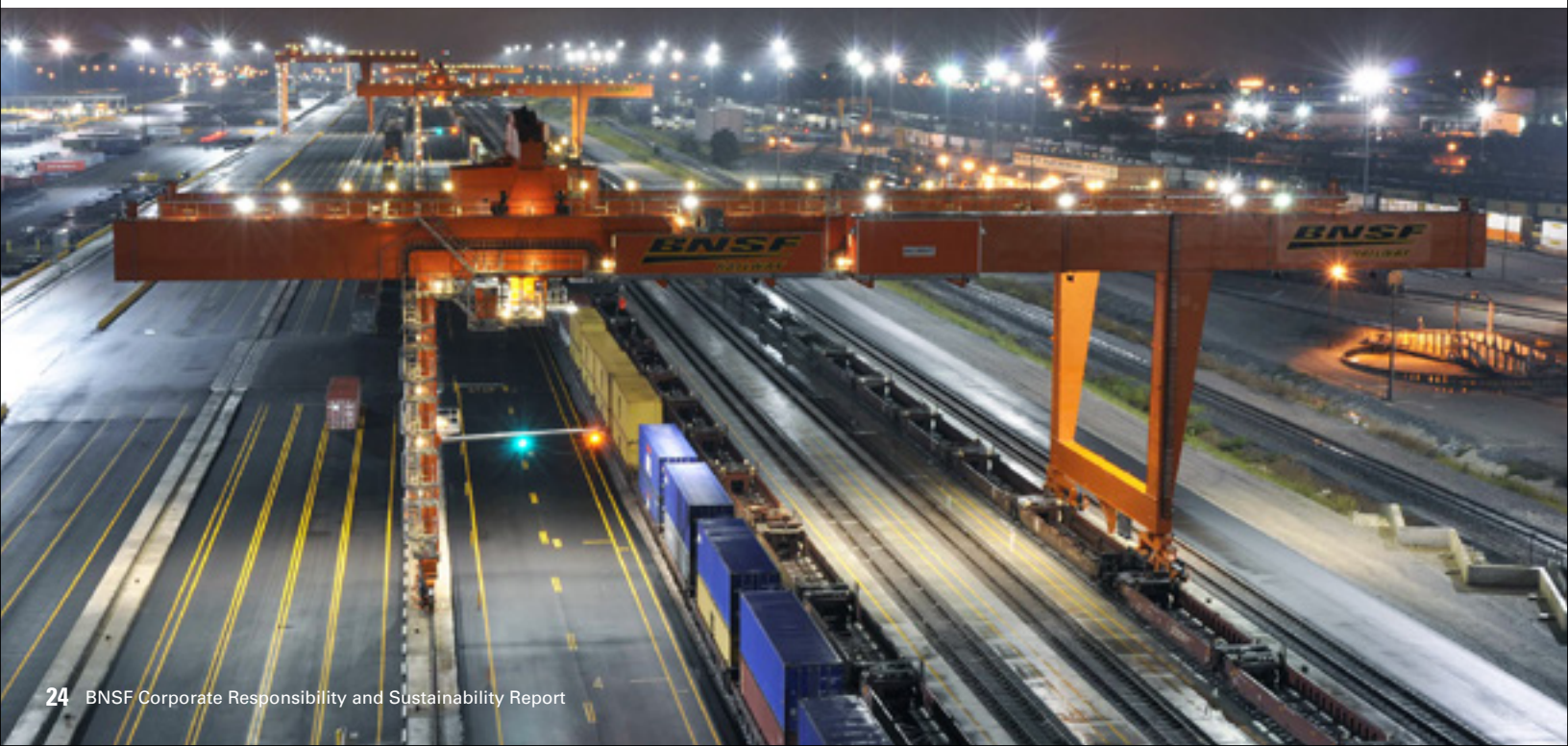
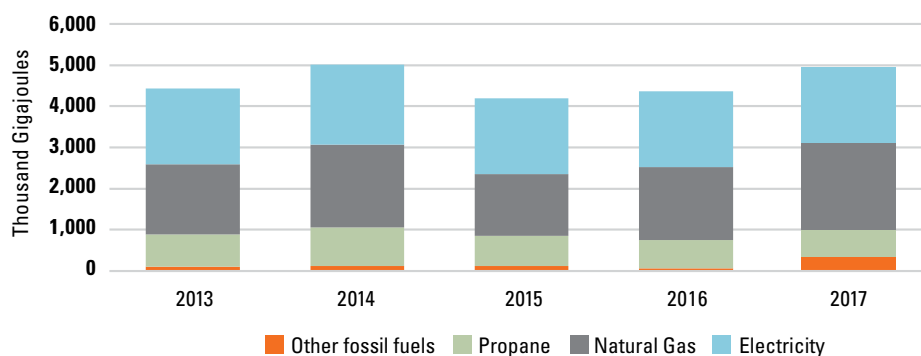
## Enhancing Energy Efficiency at BNSF Facilities

BNSF is committed to effectively managing energy consumption in our offices, rail yards, intermodal hubs and other facilities. Electricity is the main component of energy use at our facilities, followed by natural gas and propane. In 2017, the three accounted for more than 99 percent of the total energy used at BNSF facilities, with other fossil fuels burned in boilers, generators and space heaters accounting for the remainder.

This energy profile has been fairly consistent in recent years, with minor fluctuations due to weather, climatic conditions, volume and other factors such as the installation of more efficient energy systems and using equipment more efficiently.

BNSF continues to actively look for ways to reduce our energy consumption.

### Breakdown of Energy Use for Facilities



# Recycling Waste Materials

Effective recycling decreases BNSF's environmental impact, lowers our disposal costs and reduces operational risk.

Some of the largest volumes of waste material we generate include railroad ties, batteries, lube oil, scrap metal, brake shoes and motor brushes. We have been tracking our performance on the recycling and diversion of spent batteries, railroad ties and used lube oil for several years and have developed sustainable recycling, re-use and recovery programs for these materials.

## Key Recycling Metrics Year-over-year Trends

	2017	2016
<b>Total railroad ties recycled</b>	<b>2.5</b>	<b>1.1</b>
<b>Total gallons of lube oil recycled</b>	<b>5.8</b>	<b>4.3</b>
<b>Total pounds of batteries recycled</b>	<b>1.0</b>	<b>1.4</b>

*Key Performance Indicator (KPI), in Millions*







**CREATING VALUE FOR  
OUR CUSTOMERS**



**BNSF knows our customers rely on us to help them operate their supply chains efficiently, maintain their inventory levels strategically and support their successful growth.**

## **Improving Network Efficiency and Resiliency**

By keeping our 32,500-mile network well maintained, BNSF is able to offer our customers the velocity and capacity they need to make rail a key element of their supply chains. The ability to move goods more reliably through our network, and our network's resiliency in response to service interruptions, translates into our ability to recover quickly during adverse weather conditions and moving more products. We continuously manage our network's reliability with an eye toward improving fluidity and our ability to serve customers.

### *Investing in Our Network*

BNSF continually invests in our network. In 2017, \$2.4 billion was spent on our core network and related assets to maintain and upgrade existing track and equipment and enhance reliability at BNSF facilities. For more information on capital investments, see the **Investing in Our Rail Network** section of this report.



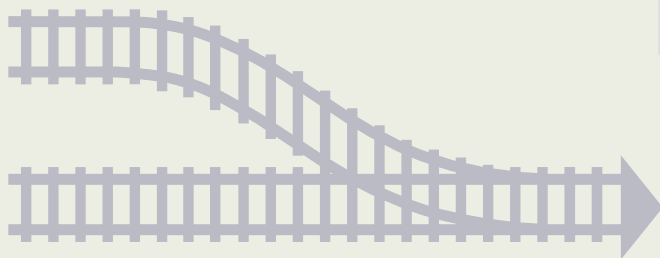
### *Inspecting Our Network*

BNSF regularly and rigorously conducts track, weather event, bridge and rail defect inspections to ensure the safety and efficiency of our operations. On key routes that carry a greater number of shipments and include hazardous materials, we conduct inspections that exceed Federal Railroad Administration requirements.



## Focusing On Efficiency

The primary function of the BNSF Network Operations Center (NOC) facility at our headquarters in Fort Worth, Texas is to dispatch trains and measure operational performance of the network, including optimizing crew and track availability. Our experts leverage data analytics to enhance decision making and deploy preventative maintenance. We utilize GPS monitoring devices in locomotives to promote efficiency and identify trains that may be “outliers,” moving too slowly, or experiencing a mechanical issue, so that we can allocate resources to support safe operations and fix any issues. For more information on our use of Data Analytics, see the **Leveraging Technology** section of this report.



## Listening to Our Customers

To understand and respond to their needs, BNSF has been regularly surveying our customers for more than a decade.

In 2017 we surveyed 54,000 customers, and since 2011, we have organized 180 customer focus groups. The feedback we receive from customers helps us improve the parts of our business that directly impact them, with the goal of making their experience of doing business with BNSF easier and more beneficial to their companies.

We also regularly communicate with customers, providing them with timely network updates, service advisories, marketing news, pricing and facility updates.

### Customer Satisfaction Metrics

	2017	2016
<b>Total customers surveyed</b>	<b>54,000</b>	<b>30,000</b>
<b>Total customer focus groups since 2011</b>	<b>180</b>	<b>130</b>

*KPI*

## Improving the Planning & Permitting Process

A significant undertaking for BNSF and our customers is siting new facilities or the expansion of existing infrastructure. Difficulty in permitting infrastructure serves as a constraint on our ability to grow, serve our customers and meet market demand. To facilitate permitting, BNSF has an internal team with legal, engineering, environmental and economic development expertise to help reduce the impact of our facilities on the environment from the outset. Our project planning process incorporates early engagement and collaboration from stakeholders across BNSF and looks to create effective partnerships with external agencies and customers.

BNSF uses numerous processes to help identify, analyze and forecast potential permitting constraints and opportunities. This helps us better assess potential constraints earlier in the process and provide the opportunity to plan and collaborate to avoid, minimize or mitigate impacts, thereby ensuring the most informed and effective permitting approach. We also work with local, state and federal permitting authorities to help make sure there is a fair, practical and efficient process.

### *Our Focus On Process Improvement*

Efforts to improve the planning and permitting process include:

- Further integrating permitting and design.
- Proactively working with authorities to establish memorandums of understanding that create consistent permitting approaches.
- Supporting permit and regulatory reform.
- Creating tools and apps for employees and contractors, including a web-based Interactive Permitting Playbook.
- Developing a performance dashboard.





## Working with Suppliers

BNSF expects our suppliers to deliver high-quality products and services, to demonstrate integrity and to be committed to the highest legal and ethical standards. Our supplier contracts include policies and/or clauses around environmental and social performance requiring suppliers to comply with all applicable regulations. These clauses, with regards to BNSF property, include the treatment, storage and disposal of hazardous waste according to the law. Our Supplier Guide explains BNSF's Code of Conduct and procurement standards and is circulated periodically to all of BNSF's suppliers to remind them of our expectations.

### *Using Our Environmental Operations Scorecard*

BNSF employs an environmental operations scorecard, which assesses our preferred

environmental consulting providers according to various criteria across the following categories:

- Safety
- Service and support
- Flexibility and ease of doing business
- Partnership and innovation
- Quality
- Cost
- Risk and compliance

The Safety criteria contains Key Performance Indicators (KPIs) relating to project safety, such as number of accidents and training provided. The "Partnership and innovation" and "Risk and compliance" criteria cover KPIs relating to awareness of sustainable business practices and response to environmental incidents. Suppliers are assigned a rating based on their scoring across all of the criteria, and the rating impacts how BNSF engages with that supplier in the future.



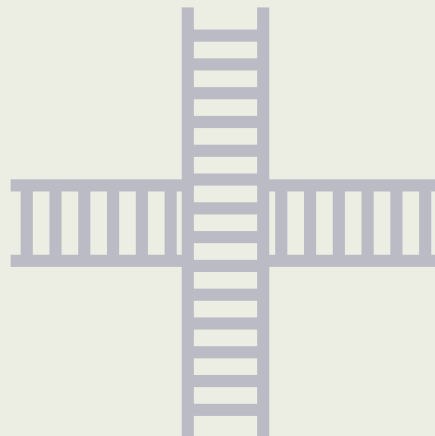


## Forming Partnerships

BNSF forms partnerships with third parties to collaborate on and understand environmental, social and industry-specific issues.

BNSF is a member of various trade and industry organizations including:

- American Association of Occupational Health Nurses
- American College of Occupational and Environmental Medicine
- American Railway Development Association
- American Railway Engineers Maintenance of Way Association
- Association of American Railroads
- Business Roundtable
- GreenBiz Executive Network
- Health Transformation Alliance
- National Association for Environmental Management
- National Safety Council via The Campbell Institute
- Transportation Technology Center, Inc.





**ENGAGING WITH  
OUR EMPLOYEES**





**BNSF strives to provide a healthy and safe working environment and the best training and career development for our people.**



## **Keeping Our People Safe**

At BNSF, the safety of our people is paramount. We continuously pursue a safety vision of a workplace free of injuries and incidents. We train employees on a comprehensive set of safety rules and practices, including federal regulations, rail industry recommendations and BNSF-specific initiatives.

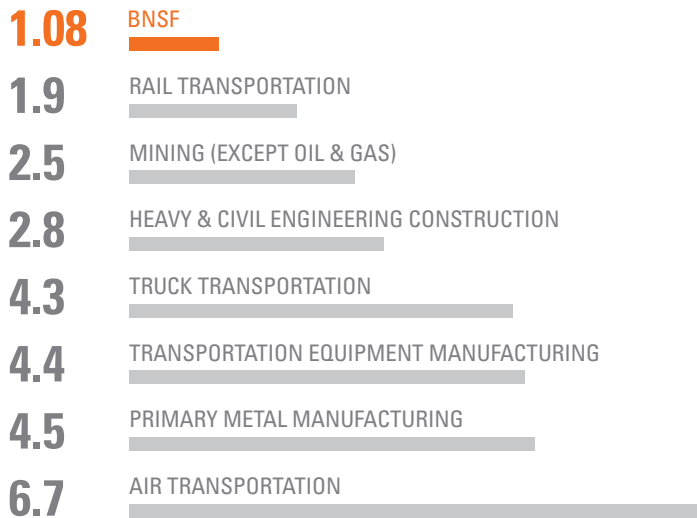
Some of this training happens at the BNSF Technical Training Center (TTC) in Overland Park, Kansas. There, employees take courses and utilize simulation and lab tools that are representative of equipment used in railroad operations, including locomotives, cranes and crossing gates. In 2017, we trained more than 4,500 employees at TTC and close to 20,000 in the field, as well as more than 500 rail industry employees.

One way BNSF is enhancing our safety strategy is by looking at rules and operations testing to improve near-miss reporting. Based on industry practices, we expect improved near-miss reporting to improve corrective actions, with the idea that those corrective actions will prevent future incidents and fatalities. Such near-miss tracking goes above and beyond existing incident reporting on the job.

The U.S. rail industry has made significant gains in safety over the years, and BNSF is a leader in this area. In 2017, our injury-frequency ratio fell short of our goal, but we remain focused on continuing to identify and mitigate exposures in our workplace. We do that by coming to work every day with the expectation and mindset that we will work injury-free and that we will speak up about safety so that every employee is able to return home safely.

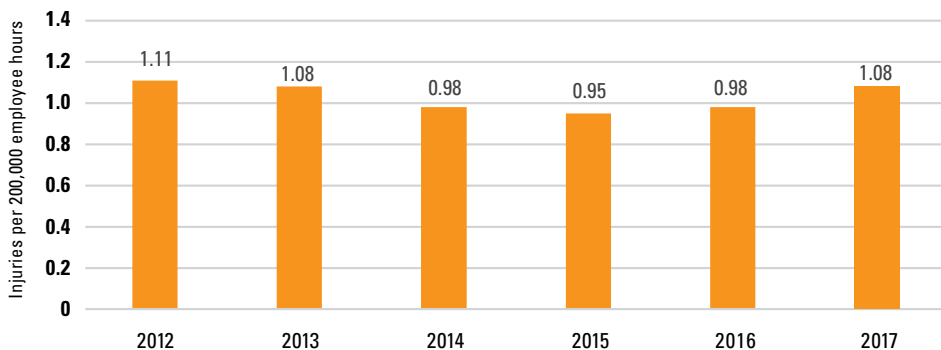


### 2017 BNSF Injury Rates Compared to Other Industries



Injury rates for BNSF and the rail industry are quoted based on Federal Railroad Administration 2017 year-end data. All other data is from the year 2016 from the Bureau of Labor Statistics.

### Reportable Injury Frequency Rate





## *Approaching Others About Safety*

BNSF's Approaching Others About Safety initiative was designed to address the exposures that result in 97 percent of the fatalities and serious injuries in the railroad industry from working with and around heavy machinery and rail network assets. Approaching Others About Safety spurs thousands of conversations every day among BNSF team members as we look for ways to minimize risk and eliminate injuries for ourselves and our work teams.

In 2017, our Approaching Others About Safety initiative helped more than **20,000** team members improve how we talk to one another about safety.





## Labor Management and Relations

BNSF union employees work under collective bargaining agreements with various labor organizations. Industry-wide negotiations have traditionally addressed employment specifications such as wages, health and welfare benefits, and work rules. These negotiations have generally taken place over an extended period of time and have not previously resulted in extended work stoppages.

Approximately **86** percent of BNSF's employees are represented by a union (approximately **35,000** people).



## Acquiring and Retaining Talent

BNSF realizes that the rail industry is expected to continue undergoing significant changes in workforce demographics in the coming years. Consequently, we are working to attract new, skilled employees with the capabilities to address the rapidly changing needs of our business environment, even as we continue building the skills of our existing employees for the BNSF jobs of the future.



In 2017, we maintained a retention rate of more than **90** percent.

BNSF is also proud to have an average employee tenure of **13** years.

### Retention Rate and Average Employee Tenure

	2017	2016
% retention rate in reporting year	94	92
Average employee tenure	13 years	13 years



### Providing Competitive Benefits

BNSF offers wages, benefits and services that help attract and retain reliable and dedicated team members. While our competitive benefit programs differ for union and salaried employees, all of our people are afforded access to quality medical and retirement benefits.

Because we believe in investing in our people, we offer numerous learning and development opportunities, including tuition reimbursement for job-related degree programs and courses.

## *Developing Our Talent*

One of BNSF's key focus areas is to effectively develop and transition our workforce. Our business needs and corporate culture are such that we hire the majority of our people into entry-level positions and develop them into future leaders.

We are focused on developing our bench of leadership talent, and we have a track record of success in doing so, with the vast majority of our senior leadership positions filled with internal talent.

BNSF's strategy of leveraging our existing talent pool helps us to address a potential institutional "knowledge gap" that could be approaching as the current employee base retires. While advances in technology, as well as training, help to mitigate this gap, succession planning with our younger employees remains a key tactic for BNSF.

**BNSF fills more than 97 percent of our senior leadership positions with internal talent.**

## *People Leader Training*

Established in 2001, our People Leader Training (PLT) program is sponsored by our executive team, with each session introduced by one of BNSF's top 100 leaders. Every year, more than 5,100 of our employees attend PLT for a focused discussion on one of the five BNSF Leadership Model tenets. In 2017, it was "Make Development a Priority."

For additional information about BNSF's recruiting efforts, please visit these webpages at BNSF.com:

- > Community support
- > Members of the military
- > Recent college graduates
- > General recruiting

Explore employee benefits on our Careers page.

## **Encouraging Diversity and Equal Opportunity**

Diversity is as critical to the strength of our railroad as it is to the communities in which we operate. We are proud of the fact that 36 percent of BNSF teammates hired in 2017 were minorities or women.

## *Supporting Veterans*

For many years, BNSF has been one of the nation's top employers of military veterans. BNSF currently employs more than 7,300 military veterans\* (approximately 18 percent of our workforce). In 2017, approximately 8 percent of all newly hired employees were men and women who have served our country in the armed forces. BNSF supports reservists as well, enabling time off for training and deployment.

\*Veteran status is self-reported by employees.





**CONNECTING WITH  
OUR COMMUNITIES**





**BNSF believes in maintaining a strong connection to the communities in which we live and work, through public safety efforts and support for the causes we believe in.**



## **Promoting Public Safety**

BNSF recognizes that a safe and secure rail network is essential to our nation's future and important to our stakeholders. One of the areas we focus our safety efforts is on grade crossing safety. Grade crossings are places where roadways and railroad tracks intersect. To educate the public on the danger of grade crossings, BNSF partners with Operation Lifesaver, an independent non-profit organization.

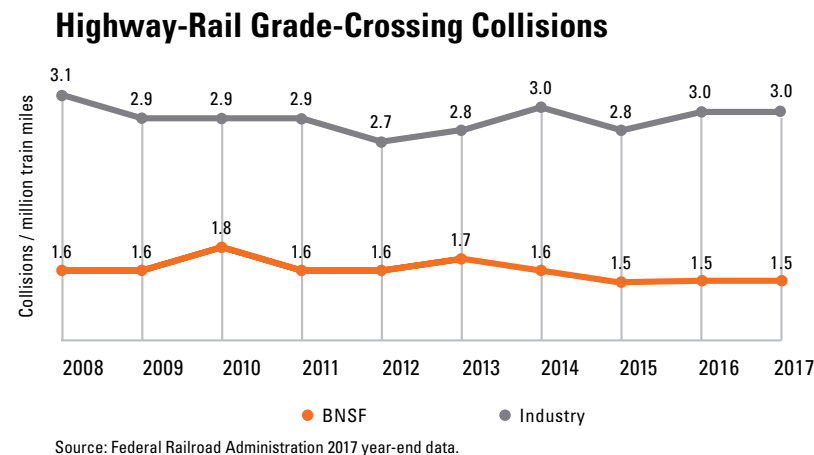
In 2017, BNSF participated in International Level Crossing Awareness Day activities in communities across our network. BNSF conducts trainings regularly with local communities.

Working with communities and landowners, we have been able to close more than **6,300** grade crossings since 2000.



BNSF also invests an average of \$120 million a year on grade-crossing maintenance, improvement and safety programs.

To further enhance public safety, BNSF is also a member of the Campbell Institute. Through this membership, we work with companies in other sectors to understand safety and behavior studies and how these insights can be applied to increasing the safety of our operations.



## Giving Back to Our Communities

BNSF team members get personally involved in contributing to their communities. We regularly provide volunteers and other assistance to local non-profit agencies. These efforts benefit organizations such as the Special Olympics, local community food banks, the National Fish and Wildlife Foundation and many others.

The BNSF Railway Foundation serves as a key vehicle for BNSF to support worthy causes in local communities. In 2017, the Foundation donated in excess of \$10 million through scholarships, sponsorships and funding for community groups. The Foundation's Employee Matching Gifts Program encourages team member giving by matching 100 percent of every dollar contributed by our team members to nonprofit and educational organizations, as long as the contribution falls within the guidelines of the program.

## First Responder Express

The First Responders Express train ride honors and entertains police officers, firefighters and other first responders and support personnel and their families in communities across our network. In 2017, the First Responders Express made stops in Galena, Illinois and Fort Worth, Texas. While there, the BNSF Railway Foundation awarded grants to local organizations that support these communities and their first responders.

## Holiday Express

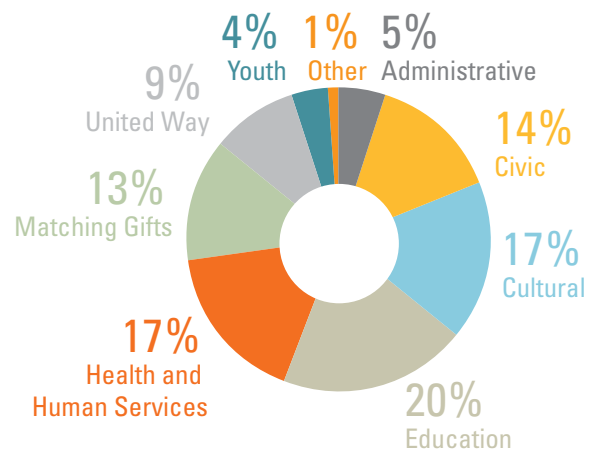
In 2017, the BNSF Holiday Express train ride delighted more than 2,200 military personnel and their family members. Since 2008, the BNSF Railway Foundation has awarded approximately \$675,000 to local charities that support military families.

In 2017, BNSF donated more than **\$10 million** to charitable causes.

## Heritage Community Awards

Every year, BNSF honors communities along our network that embrace their past, present and future ties to freight rail with the BNSF Railway Heritage Community Award. Festivities typically include dinner and a reception, with donations from the BNSF Railway Foundation to local non-profit organizations. Award winners in 2017 included: Galesburg, Illinois; Havre, Montana; and Temple, Texas.

### 2017 Distribution of Charitable Giving





## *Strengthening Tribal Relations*

BNSF operates in or adjacent to 86 tribal lands. Since its inception in 2014, the Tribal Relations team has connected with more than 55 tribal communities – through direct meetings with tribal leaders and tribal citizens about rail safety, economic development opportunities and cultural and environmental issues. The Tribal Relations team is also working to establish and refine processes and education for BNSF employees about tribal issues, including developing protocols and guidance related to the protection of cultural sites.

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## **Responsibly Managing Properties**

BNSF is addressing environmental impacts at legacy sites, where predecessor railroads and others may have conducted operations for up to a century. We cooperate with regulatory agencies and other stakeholders, and actively manage and track our performance to ensure the effectiveness of our efforts. In the last 10 years, BNSF has invested approximately \$520 million toward remediation of legacy sites.

We have reduced our environmental reserve by approximately one-third over the past five years by employing a continuous improvement program that utilizes multiple tools including probabilistic modeling, strategic site planning, value engineering and site transitioning processes to ensure sites are effectively managed.

In the past 10 years, we have rehabilitated and/or closed approximately 210 sites.

We continue to enhance our approach of using our land in ways that will benefit local communities and economies, and we are developing further metrics to measure our progress.



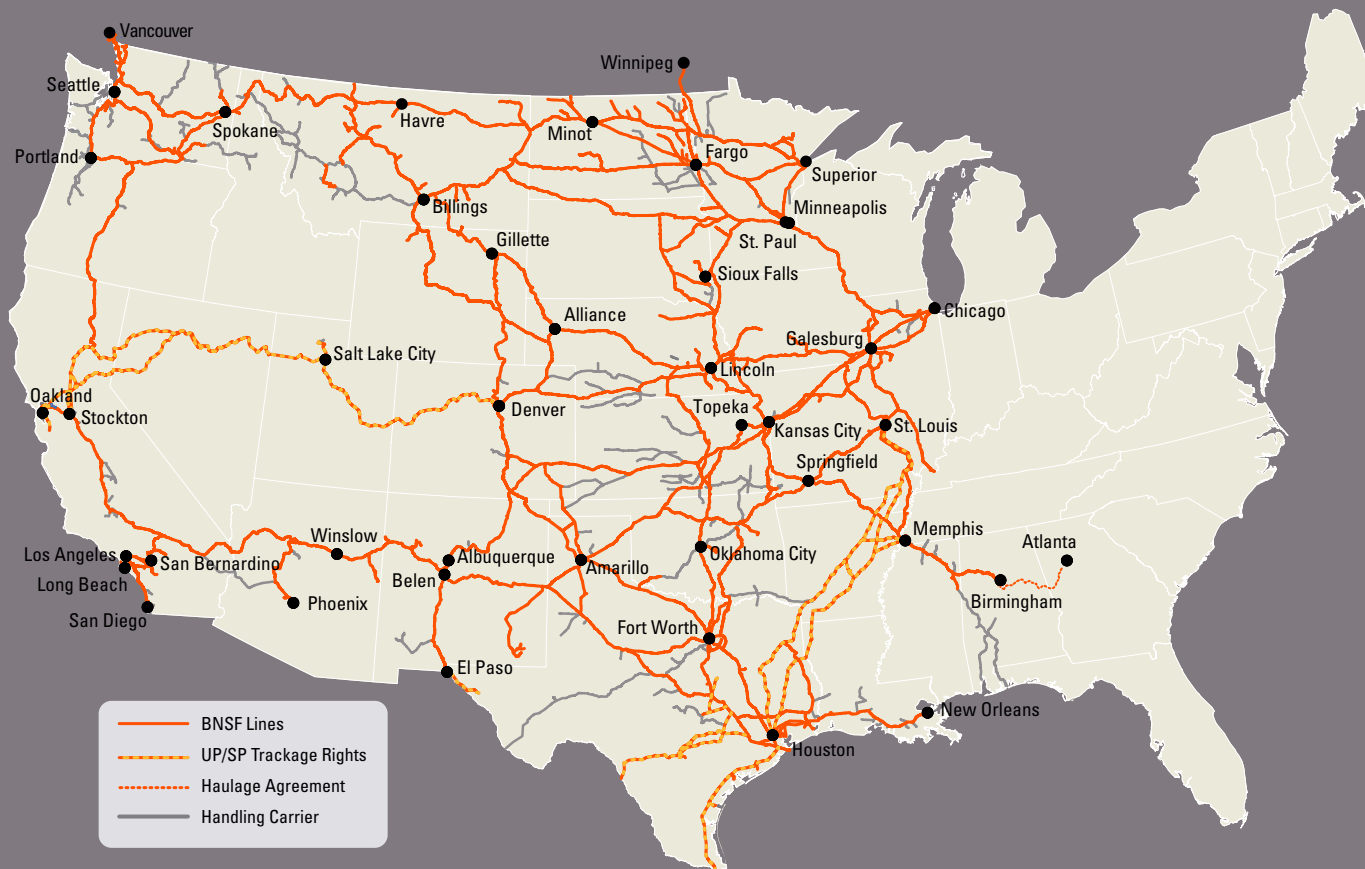
# ABOUT BNSF

BNSF moves with a sense of purpose, which comes from our vision and values. We're dedicated to being the reliable constant that our customers, employees and communities count on. We invite you to learn more about BNSF, who we are, and what propels us forward.

## *Company Activities, Services, and Markets Served*

BNSF Railway Company (BNSF Railway, BNSF) is one of the top transporters of products and materials that help feed, clothe, supply and power communities throughout the United States and the world. In 2017, there were no significant changes to our business. We operate and serve markets in 28 U.S. states and three Canadian provinces

## THE BNSF NETWORK



During the past year, we served customers in the consumer, industrial, agricultural and coal markets in the following ways:



- Our **Consumer Products** freight business moved 5.4 million shipments, and consisted of the following business sectors: Domestic Intermodal (including Truckload/Intermodal Marketing Companies and Expedited Truckload/Less-than-Truckload/Parcel), International Intermodal and Automotive.



- Our **Industrial Products** freight business moved 1.8 million carloads, and consisted of the following five business areas: Construction Products, Petroleum Products, Building Products, Chemicals and Plastics and Food and Beverages.



- Our transportation of **Agricultural Products** moved 1.1 million carloads. These products include corn, wheat, soybeans, ethanol, fertilizer, bulk foods, feeds, oil seeds and meals, milo, oils, barley, oats, and rye, flour and mill products, specialty grains and malt.



- The transportation of **coal**, 1.9 million shipments, with more than 90 percent of all BNSF's coal tons originating from the Powder River Basin of Wyoming and Montana.

### *Ownership and Legal Form*

BNSF Railway Company is a wholly-owned subsidiary of Burlington Northern Santa Fe, LLC, successor company to Burlington Northern Santa Fe Corporation. Burlington Northern Santa Fe Corporation is owned by Berkshire Hathaway Inc., a Delaware Corporation (Berkshire). On February 12, 2010, Berkshire acquired 100 percent of the outstanding shares of Burlington Northern Santa Fe Corporation common stock that it did not already own. The acquisition was completed through the merger of a Berkshire wholly-owned merger subsidiary and Burlington Northern Santa Fe Corporation with the surviving entity renamed Burlington Northern Santa Fe, LLC. Further information on ownership structure can be found in the annual 10-K filing on BNSF's website.

Source: 10-K

### *BNSF by the Numbers*



**32,500**  
Route Miles



**28**  
States



**3**  
Canadian Provinces



**25**  
Intermodal Facilities



**40+**  
Ports



**~8,000**  
Locomotives



**41,000**  
Employees





### *Scale of Organization*

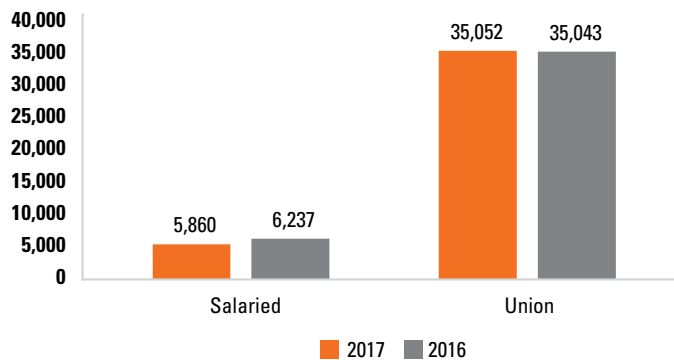
BNSF operates approximately 32,500 route miles of track in 28 states and also operates in three Canadian provinces. We own more than 23,000 route miles, including easements, and operate on over 9,000 route miles of trackage rights that permit us to operate our trains with our crews over other railroads' tracks.

Our company operates various facilities and equipment to support our transportation system, including our infrastructure and locomotives and freight cars. As of December 31, 2017, BNSF owned or held under non-cancelable leases exceeding one year approximately 8,000 locomotives and 71,000 freight cars. We also own or lease other equipment to support rail operations, such as vehicles. Support facilities for rail operations include yards and terminals throughout our rail network, system locomotive shops to perform locomotive servicing and maintenance, a centralized network operations center for train dispatching and network operations monitoring and management in Fort Worth, Texas, regional dispatching centers, computers, telecommunications equipment, signal systems and other support systems. Transfer facilities are maintained for rail-to-rail as well as intermodal transfer of containers, trailers and other freight traffic. These facilities include 25 intermodal hubs located across the system.

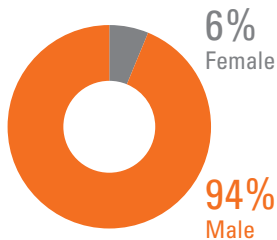
## Employees and Other Workers

At year-end 2017, we employed approximately 41,000 employees. Our total workforce is about 20 percent minority and six percent female. Our salaried workforce is about 22 percent minority and 20 percent female. In 2017, 36 percent of newly hired employees were minority or female. Approximately 86 percent of our employees are represented by a union. BNSF union employees work under collective bargaining agreements with various labor organizations.

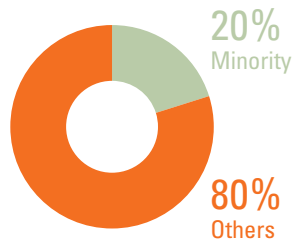
### Salaried and Union Represented Employees



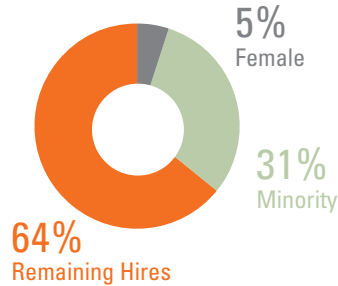
2017 Employees by Gender



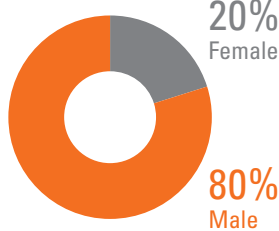
2017 Employees by Minority



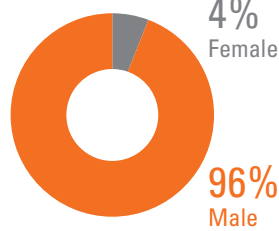
2017 Female and Minority Hires



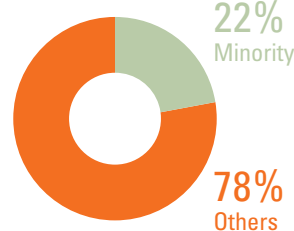
2017 Employees by Gender Salaried



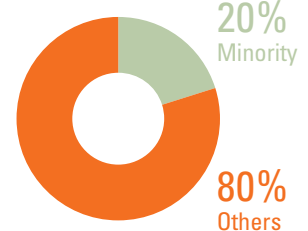
2017 Employees by Gender Union



2017 Employees by Minority Salaried



2017 Employees by Minority Union







### Employees by State

State	2017 Employee Count
AL	200
AR	88
AZ	867
CA	3,468
CO	1,179
DC	7
GA	3
IA	848
ID	123
IL	3,266
KS	3,602
LA	183
ME	2
MI	1
MN	1,614
MO	2,181
MS	66
MT	1,903
ND	1,172
NE	3,756
NM	1,164
OH	1
OK	1,043
OR	251
PA	3
SD	413
TN	455
TX	7,601
WA	3,565
WI	746
WY	1,055
Outside the U.S.	70
<b>Total BNSF Employees</b>	<b>40,896</b>



## Supply Chain

The BNSF supply chain is sourced with an extensive group of vendors. In our procurement practices, we strive to purchase the highest quality materials and services at the lowest total cost of ownership. Products or materials with the potential to adversely affect employee health or the environment are reviewed and approved before being brought onto BNSF property. The review process is performed by a multidisciplinary team made up of the Industrial Hygiene, Environmental, Technical Research and Development and Strategic Sourcing and Supply groups. We conduct these reviews to minimize employee and community risk of exposure to potentially dangerous chemicals and prevent environmental problems and damage to existing equipment.

BNSF's supply chain is managed by our Strategic Sourcing department.

As part of our commitment to high standards of ethical behavior and legal compliance, we developed the [BNSF Railway Supplier Guide](#) to remind suppliers of the standards that we expect in our business relationships. The Guide outlines key expectations from our Code of Conduct and also includes the standards BNSF Strategic Sourcing and Supply follows to acquire quality goods and services at the lowest total cost of ownership.

Supplier companies' adherence to these standards in all dealings with BNSF employees is essential. Failure to do so can result in a loss of business with BNSF. If a BNSF employee suggests conducting business in a manner inconsistent with the standards,

or if a supplier suspects fraud by an employee or other third party, that supplier is expected to immediately report the incident. At BNSF, we value all of our suppliers and believe this Guide enhances that relationship. There were no significant changes to our supply chain in 2017.

## Environmental Policy

Our Environmental Management Policy lays out our position regarding the protection of the environment, including BNSF's process for compliance with environmental laws; preventing and reducing environmental risks; reducing our environmental footprint; and developing and safely deploying sustainable business solutions and technologies that provide long-term environmental, economic and community benefits. This policy requires our employees and other persons acting on BNSF's behalf to perform their duties in a manner that:

- Complies with applicable environmental laws, regulations and requirements.
- Complies with BNSF's environmental risk management programs and procedures, including our focus on reducing pollution at its source.
- Supports our efforts to continuously improve environmental performance as measured and reported by key environmental performance objectives.

## *Political Contributions*

To see BNSF's reporting on political contributions, please visit the Federal Election Commission website:

<http://docquery.fec.gov/cgi-bin/fecimg/?C00235739>

## *External Initiatives*

At this time, BNSF does not endorse any externally-developed economic, environmental and social charters, principles, or other initiatives.

## *What the Report Covers*

This Corporate Responsibility and Sustainability report ("report") covers calendar year 2017 and is the fourth report published by the Company. The most recent report was published in 2015. BNSF publishes separate financial reports for Burlington Northern Santa Fe, LLC, and BNSF Railway Company. The information disclosed in this report addresses BNSF Railway Company, except where noted. You can view the individual financial filings: [www.bnsf.com/about-bnsf/financial-information](http://www.bnsf.com/about-bnsf/financial-information).

## *Reporting Boundaries*

This report covers BNSF activities as they relate to our corporate responsibility and sustainability strategy and performance. When we use the terms "BNSF," the "company," "we," "us" or "our" in this report, we mean BNSF Railway Company, on a consolidated basis, unless we state or the context implies otherwise.

The report provides qualitative and quantitative information on our approach to managing our corporate responsibility and sustainability issues in 2017. There have been no changes regarding the boundaries of the report since the previous reporting period.

## *Reporting Guidelines and Content*

In 2017, we conducted a materiality assessment in line with the Global Reporting Initiative (GRI) guidelines to identify significant corporate responsibility and sustainability issues for BNSF and external stakeholders. This process was a refresh to the 2014 materiality assessment we conducted. While the 2014 exercise was conducted internally, the 2017 exercise was done taking into account external stakeholders and was more collaborative in nature. The results of this assessment are described in the **Materiality Assessment** section of this report and, together with the GRI Standards reporting guidelines, informed the development and content of this report.

More information on the material issues can be found within the **Materiality Assessment** section of this report. Updates will be posted on the BNSF environmental website.

Please direct all questions or comments regarding this report to the Contact Us section of the BNSF website: <http://bnsf.com/about-bnsf/contact-us/>.

This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to risks and uncertainties. You can identify forward-looking statements by words such as “believe,” “expect,” “anticipate,” “intend,” “plan,” “aim,” “will,” “may,” “should,” “could,” “would,” “likely,” “estimate,” “predict,” “potential,” “continue” or other similar expressions. Actual results may differ from those set forth in the forward-looking statements due to a variety of factors, including those contained in our Annual Report on Form 10-K for the year ended December 31, 2017 and our other filings with the U.S. Securities and Exchange Commission. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date on which they are made. We undertake no obligation to update or revise any forward-looking statements.

This report includes trademarks, such as BNSF®, which are protected under applicable intellectual property laws and are the property of BNSF or its subsidiaries. Solely for convenience, our trademarks and trade names referred to in this report may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the right of the applicable licensor to these trademarks and trade names.

## *Code of Conduct*

Our Code of Conduct (Code) outlines the company’s expectations for work-related conduct. BNSF holds itself to the highest ethical standards and strives to make BNSF a company where employees are proud to work, and ethics and compliance are the foundation of everything we do. The Code is an integral part of our Vision & Values as a community. It includes topics such as ethical behavior, conflicts of interest, antitrust, anti-discrimination and harassment, and others. It also details methods to report any violations of the Code. Each salaried employee must certify to the Code annually. Additionally, newly hired salaried employees, employees returning from a leave of absence and employees that move from a union position into a salaried position must certify to the Code within 30 days of their effective date. The certification includes a question and answer section to verify employees understand the Code’s contents as well as a section for the disclosure of potential conflicts of interest. This process is used to identify targeted training opportunities and to help identify and prevent potential conflicts.



## *Our Vision and Values*

### **VALUES, PRINCIPLES, STANDARDS AND NORMS OF BEHAVIOR**

Our vision is to realize our tremendous potential by providing transportation services that consistently meet our customers' expectations. A vision statement is only as good as the people who bring it to life each day. To appropriately embody this vision, our employees embrace a set of shared values, which are described starting below.

#### **STYLE**

As a Community, we are:

- Tough-minded optimists
- Decisive yet thorough
- Open and supportive
- Confident and proud of our success

#### **SHARED VALUES**

As a Community, BNSF values:

- Listening to customers and doing what it takes to meet their expectations
- Empowering employees and showing concern for their well-being, and respect for their talent and achievements
- Continuously improving by striving to do the right thing safely and efficiently
- Celebrating our rich heritage and building on our success as we shape our promising future

#### **COMMUNITY**

BNSF is a Community of over 40,000 mutually dependent members. Each one of us depends upon BNSF for livelihood, and through our collective efforts, BNSF depends upon us to defend, sustain and strengthen our Community.

We are an effective Community when each of us:

- Believes in our Vision and embraces our Shared Values
- Knows our own role and strives to fulfill it
- Respects, trusts and openly communicates with others
- Is proud of our heritage and confident of our future

#### **LIBERTY**

As a member of the BNSF Community, each of us has the right to:

- A safe work environment for the sake of ourselves, our coworkers, our shippers and the communities we serve
- Feel the satisfaction that comes from a job well done by using our talent, judgment and initiative, and by performing to our fullest potential
- Express our individualism, ideas and concerns consistent with the Community's Vision and Shared Values, to anyone in the Community without fear of retribution
- Participate fully in life outside of work by enjoying the fruits of our labor

#### **EQUALITY**

As a member of the BNSF Community, I can expect:

- To be treated with dignity and respect
- To be given equal access to tools, training and development opportunities
- To have equal opportunity to achieve my full potential

#### **EFFICIENCY**

Efficiency is the best collective application of our resources to meet our customers' expectations. Each of us contributes to efficiency when we:

- Understand our customers' expectations and priorities
- Help develop business processes that best match BNSF resources with our customers' requirements
- Constantly monitor and measure our results in order to continuously improve
- Manage our Community's resources as if they were our own

Learn more:

Learn more about BNSF's values and community support:

- <http://www.bnsf.com/about-bnsf/our-people/>
- <http://www.bnsf.com/in-the-community/community-support/>

## Evidence of Success

Success in living our Vision & Values is evident when we fulfill the highest expectations of our four key stakeholder groups. We will know we have succeeded when:

- Our customers find it easy to do business with us, receive 100-percent-on-time, damage-free service, accurate and timely information regarding their shipments, and the best value for their transportation dollar.
- Our employees work in a safe environment free of accidents and injuries, are focused on continuous improvement, share the opportunity for personal and professional growth that is available to all members of our diverse work force and take pride in their association with BNSF.
- Our owners earn financial returns that exceed other railroads and the general market as a result of BNSF's superior revenue growth and operating ratio and a return on invested capital that is greater than our cost of capital.
- The communities we serve benefit from our sensitivity to their interests and to the environment in general, our adherence to the highest legal and ethical standards, and the participation of our company and our employees in community activities.



## Leadership Model

Our Vision & Values influence the way employees work together, even those who do not formally supervise others. Our Leadership Model is based on five tenets that challenge team members to grow as leaders and as individuals:

- Create a compelling vision. Set a vision and a strategy for the future and inspire others to follow your vision. Show passion for the vision. Build enthusiasm, optimism and ownership for both the journey and the destination. Motivate people to be pioneers and achieve the vision in spite of obstacles.
- Model the way. Build trust through competence, openness and integrity. Always show respect for others. See work as an adventure and enjoy the journey. Accept individual differences and find ways to build on them.
- Lead more, manage less. Leadership is situational. Rely more on coaching, teaching and enabling. Be directive in select situations and normally empowering. Know how things work. Tell people not only what needs to be done, but tell them why. Encourage leadership and innovation at all levels of your organization. Build strong teams and coach them to challenge the status quo, initiate solutions and act with a sense of urgency.
- Communicate, communicate, communicate. Listen and involve. Set high standards for performance and provide candid, constructive feedback. Recognize and celebrate successes frequently.
- Make development a priority. Develop the talents of your people. You are accountable for the success of your team. When people fail, we fail as leaders. Embrace and inspire lifelong development.

This Leadership Model has evolved into the cornerstone of how BNSF operates. It is part of every salaried employee's performance evaluation, and it represents the core of company-wide leadership training. Implementing this Leadership Model is a work in progress, just as BNSF continues to be a dynamic and growing company.

## Whom We Engage

### Stakeholder groups

BNSF engages with a variety of stakeholders, including but not limited to employees, customers, elected officials (at the federal, state and local level), nonprofit organizations, non-governmental organizations, labor organizations, community groups, environmental agencies, supplier organizations, trade associations, and the general public.

### Identification and selection of stakeholders

As detailed below, each BNSF department is responsible for identifying and engaging with relevant stakeholders.

### Stakeholder engagement

BNSF engages with stakeholders in many ways including community meetings, one-on-one meetings, customer events, trade shows, newsletters and other publications and social media as well as training events and internal communications tools that keep employees informed. BNSF conscientiously builds relationships with community members.

Our functional departments are strategically aligned with relevant stakeholders to educate and effectively manage relationships and respond quickly and efficiently to stakeholder questions, concerns or needs. The table below identifies key stakeholder groups and the BNSF department(s) responsible for managing that relationship.

### BNSF's General Stakeholder Groups by Responsible Department

Stakeholder Group	BNSF Department
Local elected officials	Community Affairs
State elected officials	State Government Affairs
Federal elected officials	Federal Government Affairs
Community residents	Operations, Community Affairs, Safety/Transportation Department
Emergency responders	Hazardous Materials
Native American tribes	Community Affairs, Tribal Relations
Not-for-profit organizations	Community Affairs, The BNSF Railway Foundation, Environmental
Military veterans	Human Resources - Veteran Recruitment
Prospective employees	Human Resources
Customers	Marketing and Customer Support
Environmental agencies and organizations	Environmental
Colleges/universities	Human Resources, The BNSF Railway Foundation
Community events/presentations	Operations, Community Affairs, Government Affairs
Vendors/suppliers	Strategic Sourcing
Employees	Human Resources, Corporate Relations
Media	Corporate Relations
Potential customers/development opportunities	Marketing and Economic Development
Unions	Labor Relations
Federal and state transportation agencies	Operations, Federal Government Affairs, State Government Affairs
Investors	Finance



## How We Operate

### Governance structure

BNSF is governed by its Board of Directors, listed below, which manages the business, property and affairs of the company. Our executive leaders meet regularly to discuss critical business concerns, establish policies and set the vision for BNSF.

#### BNSF Railway Company Board of Directors

Matthew K. Rose	Executive Chairman
Carl R. Ice	President and Chief Executive Officer
Stevan B. Bobb	Executive Vice President and Chief Marketing Officer
Kathryn M. Farmer	Executive Vice President – Operations
Dave L. Freeman	Executive Vice President
Roger Nober	Executive Vice President Law & Corporate Affairs and Chief Legal Officer
Julie A. Piggott	Executive Vice President and Chief Financial Officer

Our Environmental Health and Safety Committee has a responsibility to verify that environmental, health and safety concerns are evaluated in a timely and integrated manner and are addressed in alignment with BNSF's values and governing policies and procedures. The committee meets three to four times per year and is led by John Lovenburg, Vice President – Environmental, and consists of a steering committee comprised of other vice presidents with oversight from the core areas of Sustainability, Health, Safety, Transportation, Mechanical, Engineering, Real Estate, Finance and Human Resources. Through the Environmental Health and Safety Committee, BNSF leaders receive information and engage in cross-functional discussions on issues impacting the health and safety of our employees, the environment and the communities in which BNSF operates. Strategic topics of discussion include significant environmental, health and safety federal or state regulations, legal decisions, hotline complaints and compliance matters. The Vice President-Environmental reports relevant information from the Committee to the Board.

# Appendix

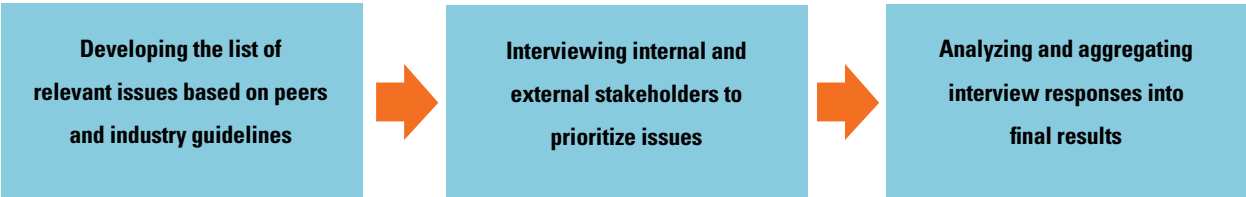
## Materiality assessment

A materiality assessment as it relates to sustainability seeks to prioritize sustainability issues that are significant or “material” to a business so that these issues can be measured, managed, and communicated to drive business value. In 2017, we refreshed the 2014 materiality assessment to identify the material issues (sustainability-related risks and opportunities). The results inform our corporate responsibility and sustainability disclosures and serve to inform our strategic direction and resource prioritization.

## Process

The materiality assessment process consisted of three steps – developing a list of relevant issues, interviewing internal and external stakeholders, and analyzing and aggregating interview responses.

## Materiality Assessment Process Overview



## Developing the list of relevant issues

To inform the scope of the materiality assessment, we developed a list of relevant sustainability issues based on industry standards and frameworks (such as Global Reporting Initiative (GRI)), business context, benchmarking peer disclosures and external research. We analyzed this list by reviewing peer sustainability reports and assessing the frequency and extent of reporting for each issue. Based on the analysis, we finalized a list of 20 relevant issues for internal and external stakeholders to prioritize in a set of interviews.

## Interviewing internal and external stakeholders

We then held a series of conversations with internal and external stakeholders to prioritize the list of issues identified. Internal stakeholders included 15 BNSF executives identified from across the operations of BNSF. External stakeholders included BNSF customers, partners and industry NGOs. During the interviews, stakeholders selected their top priorities, from the 20 relevant sustainability issues. More information on stakeholder engagement can be found within the **Stakeholder Engagement** section of this report.

## Analyzing and aggregating responses

The results of the internal and external stakeholder discussions were then analyzed and aggregated into three tiers of “Most Important,” “Very Important” and “Important.” The three tiers of categorization represent a hierarchy of prioritization, which informed the extent of disclosure in this report, as well as strategy and resource allocation to manage these issues.

## Material Issues



	Our Operations	Our Customers	Our Employees	Our Communities
MOST IMPORTANT	<ul style="list-style-type: none"> <li>Infrastructure Investment</li> <li>New Technologies</li> <li>Planning and Permitting</li> </ul>	<ul style="list-style-type: none"> <li>Network Efficiency and Resiliency</li> </ul>	<ul style="list-style-type: none"> <li>Occupational Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>Public Safety</li> </ul>
VERY IMPORTANT	<ul style="list-style-type: none"> <li>Cost Competitiveness</li> <li>Portfolio of Transported Materials</li> <li>Waste and Spills</li> <li>Regulations and Compliance</li> <li>Climate Change and Emissions</li> </ul>	<ul style="list-style-type: none"> <li>Customer Experience and Ease of Doing Business</li> </ul>	<ul style="list-style-type: none"> <li>Labor Management Relations</li> <li>Talent Acquisition and Retention</li> </ul>	<ul style="list-style-type: none"> <li>Local Community Engagement</li> </ul>
IMPORTANT	<ul style="list-style-type: none"> <li>Energy Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Supplier Social and Environmental Performance</li> <li>Collaboration and Partnerships</li> </ul>	<ul style="list-style-type: none"> <li>Diversity and Equal Opportunity</li> </ul>	<ul style="list-style-type: none"> <li>Land Use and Property Management</li> </ul>



# GRI Content Index

The report content was developed in alignment with the GRI Standards.

GRI Standard	Disclosure	Page Numbers	Comments
<b>General Disclosures</b>			
GRI 102: General Disclosures 2017	102-1 Name of the organization	43	
	102-2 Activities, brands, products, and services	44	
	102-3 Location of headquarters	2650 Lou Menk Drive, Fort Worth, TX 76131-2830	
	102-4 Location of operations	43	
	102-5 Ownership and legal form	44	
	102-6 Markets served	43	
	102-7 Scale of the organization	45	
	102-8 Information on employees and other workers	46, 47	
	102-9: Supply chain	48	
	102-10 Significant changes to the organization and its supply chain	43	
	102-11 Precautionary approach	48	
	102-12 External initiatives	49	
	102-13 Membership of associations	31	
	102-14 Statement from senior decision-maker	1	
102-18 Governance structure	54		

GRI Standard	Disclosure	Page Numbers	Comments
	102-40 List of stakeholder groups	53	
	102-41 Collective bargaining agreements	46	
	102-42 Identifying and selecting stakeholders	53	
	102-43 Approach to stakeholder engagement	53	
	102-44 Key topics and concerns raised	2, 55, 56	
	102-45 Entities included in the consolidated financial statements	49	More details can be found at <a href="http://www.bnsf.com/about-bnsf/financial-information">www.bnsf.com/about-bnsf/financial-information</a>
	102-46 Defining report content and topic Boundaries	49	
	102-47 List of material topics	2, 55, 56	
	102-48 Restatements of information	There have been no restatements of the information reported in the 2017 Corporate Responsibility and Sustainability report. Past reports can be found on the BNSF environmental website.	
<b>Topics</b>			
<b>Infrastructure investment and protection</b>			
<b>GRI related topic: Indirect economic impacts</b>			
GRI 103: Management Approach 2017	103-1 Explanation of the material topic and its Boundaries	5-8	The impacts of this material issue occur within the Company itself (our employees and network) and can also occur outside the Company (our communities and customers).
	103-2 The management approach and its components	8	

GRI Standard	Disclosure	Page Numbers	Comments
GRI 203: Topic Specific standard 2017	203-1 Infrastructure investments and services supported	8, 9	
<b>Portfolio of transported materials</b>			
<b>GRI related topic: Effluents and waste</b>			
GRI 306: Topic Specific standard 2017	306-3: Significant spills	16, 17	
<b>Network efficiency and resiliency</b>			
<b>GRI related topic: N/A (Custom disclosure)</b>			
GRI 103: Management Approach 2017	103-1 Explanation of the material topic and its Boundaries	27	The impacts of this material issue occur within the Company itself (our velocity and number of units transported) and can also occur outside the Company (our customers).
	103-2 The management approach and its components	27	
GRI Topic Specific standard 2017	Metrics reported: <ul style="list-style-type: none"> <li>• Total track inspectors</li> <li>• Total industrial hazmat trailers spread across network along crude and ethanol routes</li> <li>• Total hazmat responders</li> <li>• Total locations with hazmat responders</li> </ul>	27, 28	The GRI Topic Specific Standard is not applicable as network efficiency and resiliency was a custom disclosure.
<b>New technologies adopted</b>			
<b>GRI related disclosure: N/A (Custom disclosure)</b>			
GRI 103: Management Approach 2017	103-1 Explanation of the material topic and its Boundaries	11	The impacts of this material issue occur within the Company itself (our employees) and can also occur outside the Company (our customers and communities).
	103-2 The management approach and its components	11-15, 21	



GRI Standard	Disclosure	Page Numbers	Comments
GRI Topic Specific standard 2017	Metrics reported: <ul style="list-style-type: none"> <li>• Total wayside detectors installed</li> <li>• Total number of trains wayside detectors monitor per day</li> <li>• Wayside monitor readings per day</li> <li>• Intermodal facilities with automated gates</li> </ul>	11-15, 21	The GRI Topic Specific Standard is not applicable as new technologies adopted was a custom disclosure.
<b>Land use and property management</b>			
<b>GRI related disclosure: N/A (Custom disclosure)</b>			
GRI Topic Specific standard 2017	Metrics reported: <ul style="list-style-type: none"> <li>• Total environmental remediation expenditures in 2017</li> <li>• Total invested in remediation in last 10 years</li> <li>• Number of sites rehabilitated</li> </ul>	42	The GRI Topic Specific Standard is not applicable as land use and property management was a custom disclosure.
<b>Collaboration and partnerships</b>			
<b>GRI related disclosure: N/A (Custom disclosure)</b>			
GRI Topic Specific standard 2017	Metrics reported: List of active memberships, collaborations and partnerships	31	The GRI Topic Specific Standard is not applicable as collaboration and partnerships was a custom disclosure.

GRI Standard	Disclosure	Page Numbers	Comments
<b>Occupational health and safety</b>			
<b>GRI related topic: Occupational health and safety</b>			
GRI 103: Management Approach 2017	103-1 Explanation of the material topic and its Boundaries	33	The impacts of this material issue occur within the Company itself (our employees) and can also occur outside the Company (our employee families).
	103-2 The management approach and its components	33, 35	
GRI 403: Topic Specific standard 2017	403-2 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	33-35	Injury rates and number of work-related fatalities are reported by region but not by gender
<b>Climate change and emissions</b>			
<b>GRI related topic: Emissions</b>			
GRI 305: Topic Specific standard 2017	305-1 Direct (Scope 1) GHG emissions	22	
	305-2 Energy indirect (Scope 2) GHG emissions	22	
	305-3 Other indirect (Scope 3) GHG emissions	22	
	305-4 GHG emissions intensity	23	
	305-5 Reduction of GHG emissions	23	

GRI Standard	Disclosure	Page Numbers	Comments
<b>Energy efficiency</b>			
<b>GRI related topic: Energy</b>			
GRI 302: Topic Specific standard 2017	302-1 Energy consumption within the organization	20, 21, 24	
	302-3 Energy intensity	20, 21, 24	
	302-4 Reduction of energy consumption	20, 21, 24	
<b>Supplier social and environmental performance</b>			
<b>GRI related topic: Supplier social and environmental assessment</b>			
GRI 308: Topic Specific standard 2017	308-1 New suppliers that were screened using environmental criteria	30	
GRI 414: Topic Specific standard 2017	414-1 New suppliers that were screened using social criteria	30	
<b>Cost competitiveness</b>			
<b>GRI related topic: Economic performance</b>			
GRI 201: Topic Specific standard 2017	201-1 Direct economic value generated and distributed	6	
<b>Talent acquisition and retention</b>			
<b>GRI related topic: Employment, Training and Education</b>			
GRI 401: Topic Specific standard	401-1 New employee hires and employee turnover	36	
	401-2 Programs for upgrading employee skills and transition assistance programs	37	
<b>Public Safety</b>			
<b>GRI related topic: Customer health and safety</b>			
GRI 103: Management Approach 2017	103-1 Explanation of the material topic and its Boundaries	39	The impacts of this material issue occur within the Company itself (our loss of service, financial impact) and can also occur outside the Company (our communities).



GRI Standard	Disclosure	Page Numbers	Comments
	103-2 The management approach and its components	39	
GRI 416: Topic Specific standard 2017	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	40	
<b>Waste and spills</b>			
<b>GRI related topic: Effluents and Waste</b>			
GRI 306: Topic Specific standard 2017	306-2 Waste by type and disposal method	16, 25	
	306-3 Significant spills	16	
<b>Labor-management relations</b>			
<b>GRI related topic: Labor/management relations</b>			
GRI 402: Topic Specific standard 2017	402-1 Minimum notice periods regarding operational changes	36	
<b>Planning and permitting</b>			
<b>GRI related topic: N/A (Custom disclosure)</b>			
GRI 103: Management Approach 2017	103-1 Explanation of the material topic and its Boundaries	29	The impacts of this material issue occur within the Company itself (our investments) and can also occur outside the Company (new customers and communities, government partners).
	103-2 The management approach and its components	29	
GRI Topic Specific standard 2017	This is a new topic disclosed this year. In future reports we plan to report the performance results associated with these and other continuous improvement efforts underway.	29	The GRI Topic Specific Standard is not applicable as planning and permitting was a custom disclosure.

<b>GRI Standard</b>	<b>Disclosure</b>	<b>Page Numbers</b>	<b>Comments</b>
<b>Diversity and equal opportunity</b>			
<b>GRI related topic: Diversity and Equal Opportunity</b>			
GRI 405: Topic Specific standard 2017	405-1 Diversity of governance bodies and employees	37	
<b>Local community engagement</b>			
<b>GRI related topic: Local communities</b>			
GRI Topic 413: Specific standard 2017	413-1 Operations with local community engagement, impact assessments, and development programs	40-42	
<b>Regulations and compliance</b>			
<b>GRI related topic: Environmental compliance</b>			
GRI 307: Topic Specific standard 2017	307-1 Non-compliance with environmental laws and regulations	18	
<b>Customer experience and ease of doing business</b>			
<b>GRI related topic: N/A (Custom disclosure)</b>			
GRI Topic Specific standard 2017	Metrics reported: <ul style="list-style-type: none"> <li>• Total customers surveyed</li> <li>• Total customer focus groups since 2011</li> </ul>	28	The GRI Topic Specific Standard is not applicable as customer experience and ease of doing business was a custom disclosure.



