

# Creating a Safer Industry

**OSHA AND THE ELECTRICAL TRANSMISSION  
AND DISTRIBUTION CONSTRUCTION CONTRACTORS,  
THE IBEW AND TRADE ASSOCIATIONS**



***A Strategic Partnership***

Creating a Safer Industry: OSHA AND THE ELECTRICAL TRANSMISSION AND DISTRIBUTION CONSTRUCTION CONTRACTORS, THE IBEW AND TRADE ASSOCIATIONS STRATEGIC PARTNERSHIP





***The OSHA strategic partnership is the most amazing combination of the CEOs of all major Transmission and Distribution contractors, OSHA, the IBEW, and industry trade groups. This group came together over 12 years ago to set aside competitive differences in the name of safety for all employees. The results speak for themselves with dramatic reductions in fatalities and serious injuries across the country.***



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## **ORIGIN AND HISTORY OF THE PARTNERSHIP**

Electrical line workers construct and maintain the national energy infrastructure that delivers electricity to our homes, factories, and businesses. These men and women are highly skilled workers who work in hazardous environments each day to ensure reliable and safe electricity service for all Americans.

“The OSHA strategic partnership is the most amazing combination of the CEOs of all major Transmission and Distribution contractors, OSHA, the IBEW, and industry trade groups,” said J. Eric Pike, chairman and CEO of Pike Corporation. “This group came together over 12 years ago to set aside competitive differences in the name

of safety for all employees. The results speak for themselves with dramatic reductions in fatalities and serious injuries across the country.”

The unprecedented collaboration to which Pike referred came together in 2004, signaling a call to action to reduce injury and fatality rates across the industry.

The alliance included five companies - Henkels & McCoy, Inc., MDU Construction Services Group, Inc., MYR Group Inc., Pike Electric, inc., Quanta Services, Inc. - and the National Electrical Contractors Association (NECA), the International Brotherhood of Electrical Workers (IBEW),

Edison Electric Institute (EEI), and the Occupational Safety and Health Administration (OSHA) working together on the first-ever industry-specific safety initiative.

Today the Electrical Transmission & Distribution (ET&D) Partnership is a formal collaboration of industry stakeholders that sets new best practices for safety excellence for our nation's line workers. It is one of only a few national partnerships between employers and OSHA.

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***“We faced many challenges early in this partnership,” said Wilson Yancey, Vice President of Safety, Health, and Environment for Quanta Services, Inc. “They included getting industry leaders to set aside generations of competitive training to collaborate; building the trust required to share such sensitive data; and helping OSHA see the value of the first-ever industry-specific safety initiative.”***

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Bill Koertner, chairman of MYR Group, added that parties across the collaboration were skeptical of its viability. “There was considerable doubt when the OSHA Strategic Partnership (OSP) was organized that the various parties could put aside their differences and unite around the goal of making our industry a safer place to work.”

Ultimately, though, the focus on protecting the men and women who keep electrical services growing and functioning outstripped any competitive resistance. “After many months of discussions, we decided to stop blaming others and started solving safety problems as an industry, not individually,” said Koertner.

Bill Donovan, Deputy Regional Administrator of OSHA's Region V, recalls the collaborative environment as it came together. “We had utility owners and their reps at the table, we had the biggest line contractors at the table, we had IBEW and NECA at the table, we had the CEOs of the companies committed. We had five years of data with OSHA and we just rolled up our sleeves and all started working.”

With the determination and dedication of those involved, the ET&D Partnership has grown year after year. Today the Partnership includes 13 ET&D construction contractors and covers the vast majority of total workers in the line construction industry. The Partnership is a collaboration in the truest sense of the word—including government, industry, union, non-union, and trade association safety and health professionals—and is in effect until December 31, 2018.

“While much work remains,” said Koertner, “we can all take pride that we have made a meaningful difference in reducing the number of serious injuries and fatalities in our industry.”

## **GOALS OF THIS PARTNERSHIP INCLUDE:**

- Perform data collection and analysis to establish causes of fatalities, injuries and illnesses for electrical work in the industry.
- Developing and evaluating the effectiveness of the Best Practices to reduce the number of fatalities, injuries and illnesses and any other significant hazards identified by the industry partners.
- Ensuring that the partners' employees are effectively trained to follow safety and health rules, to utilize the established Best Practices and to change safety culture.
- Communicating information to improve the safety and health culture within the electrical transmission and distribution industry.

According to the partner companies, the impact of this effort has reached more than 239,000 workers between 2005 and 2016, a majority of the electrical transmission and distribution (ET&D) industry.

## **PARTNERS AS OF NOVEMBER 2016:**

Aldridge Electric, Inc.  
Asplundh Tree Expert Co.  
Davis H. Elliot Company, Inc.  
Edison Electric Institute (EEI)  
The Goldfield Corporation  
Henkels & McCoy Group, Inc.  
International Brotherhood of Electrical Workers (IBEW)  
Intren, Inc.  
MasTec  
MDU Construction Services Group, Inc.  
Michels Corporation  
MYR Group Inc.  
National Electrical Contractors Association (NECA)  
Occupational Safety and Health Administration (OSHA)  
Pike Electric, LLC  
PLH Group, Inc.  
Quanta Services, Inc.



## PARTNERSHIP STRUCTURE AND MANAGEMENT

Though the initial members were executives, owners, and high-level reps, the Partnership has diversified into a unique structure that involves workers at all levels of the organizations, from CEOs to line workers. A multi-tiered approach, with management teams and task teams, has proven to be the foundation for the successes of this Partnership. An Executive Team, Steering Team and multiple Task Teams have been assigned specific roles and responsibilities to guide and manage the Partnership:



The **Executive Team** leads the subordinate teams and provides direction for the Partnership. The Executive Team, made up of CEO-level management, meets as needed, approximately three times per year to review progress and determine next steps. Since its inception the CEO's of the member companies have remained committed to work as a team to effectively lead the partnership.

The **Steering Team** provides guidance to each of the Task Teams and is made up of partners' safety and health leads. The Steering Team meets quarterly, manages day-to-day partner operations and serves as the liaison between the Executive Team and the Task Teams.

Four **Task Teams** are comprised of employees from member companies who meet as needed to focus on specific Partnership goals. The Task Teams have focus areas for: Data, Training, Best Practices and Communications.

The level of collaboration that was required to deliver such a unique and inclusive structure was exemplified when insulated rubber gloves and sleeves were proposed as a Best Practice. Companies that used a live line tool or "hot sticking" method of working on power lines spoke up in frustration, believing that their methodology was simply not understood.



Steve Cavanaugh, Vice President of Corporate Safety for the MYR Group, Inc., was chairman of the Best Practices Task Team at the time, and recalls it this way:

***“We thought maybe there was something there we didn’t know so we asked for a demonstration of live line tool methods. Two partner companies donated equipment and crews and we set up time at the Northwest Line JATC Training Center in Oregon. The turn-out was huge, industry and Partnership people, union and senior leadership all came out to witness the demo and review the tape we made. The discussion was thorough and intense and, at the end, everyone agreed that insulated rubber gloves and sleeves would be value added to the safety of the workers.”***

As a result, the partnership members collaborated to create consistent best practices for live line tool work methods.

This type of curiosity-driven, open-minded exploration of opinions and best practices has been key to building trusting relationships among competitors across the industry. As a result, occupational deaths for line workers have been reduced dramatically. Rates continue to decline and remain at an all-time industry low.

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## **SUCCESSFUL IMPACT:**

### **Reduced Injuries and Illnesses**

Each of our nation’s line workers makes a vital contribution to public safety, working at great heights and in sometimes dangerous conditions to ensure that all Americans have access to safe and reliable electricity. Fewer occupational injuries and fatalities mean that more hardworking, dedicated line workers can be active members of their workplaces, families, and communities. In addition, partner organizations suffer from fewer work stoppages and fewer workers’ compensation expenses.

Common goals, the analysis of incident and injury data for causal factors, and implementing Best Practices have all been critical in the notable decrease in injury and illness rates. The contractor partners’ Days Away, Restricted and Transferred (DART) rate decreased dramatically from 3.21 in 2005, the first full year of the Partnership, to 1.15 in 2013. In addition, the contractor partners’ Total Case Incidence Rate (TCIR) also decreased from 5.18 in 2005 to 2.19 in 2013.



The chart below reflects the contractor partners' average TCIR and DART rates from 2005 to 2015 in comparison to the Bureau of Labor Statistics (BLS) rates for the electrical transmission and distribution industry (NAICS 237130) (SIC 1623):

YEAR	HOURS	TOTAL CASES	TCIR	# of DAYS AWAY FROM WORK RESTRICTED & TRANSFERRED ACTIVITY CASES	DART
2005	52,395,866	1,357	5.18	840	3.21
2006	55,907,278	1,419	5.08	812	2.90
2007	57,026,819	1,236	4.33	626	2.20
2008	56,474,272	1,142	4.04	511	1.81
2009	44,504,692	658	2.96	313	1.41
2010	42,634,700	676	3.17	310	1.45
2011	52,146,134	673	2.58	364	1.40
2012	64,344,895	832	2.59	445	1.38
2013	69,561,958	763	2.19	401	1.15
2014	64,492,853	753	2.34	429	1.33
2015	69,395,665	657	1.89	344	0.99
<b>OSP's FIVE YEAR RATE (2009-2015)</b>			<b>2.70</b>		<b>1.36</b>
<b>BLS AVERAGE for YEAR: 2015 NAICS: 2371XX**</b>			<b>2.9</b>		<b>1.7</b>



## Reduced Fatalities

Through analysis of incident data and causal factors, the partners focused on reducing fatalities caused by electrocution from contact. The number of fatalities between 2004 and 2013 declined from a high of 11 in 2004 to one (electrocution) in 2013.

As we move forward, our goal is to always be moving toward zero.

## Partnership-Developed Training Courses

The focus on collaboration also led to the successful development and implementation of OSHA's first industry-specific 10-hour training program for line workers. With a continued focus on eliminating injuries and illness, this 10-hour program is available to all line workers at IBEW training centers and is required training in California. Those who successfully complete the program receive an OSHA 10-Hour Construction card with the Partnership logo.

Partnership Training Summary 2005-2013	
Training sessions conducted by the partners	8,052
Employees trained – 10-hour	78,202
Training hours provided to employees	874,474
Supervisors or managers trained	11,352
Training hours provided to supervisors, managers, foremen and general foremen	241,871

Noting the critical role of supervisors and management in creating and sustaining safer teams, the Partnership also collaborated with OSHA on an ET&D 20-hour supervisory leadership program. With a focus on the latest knowledge and skills development as well as the importance of management support as it relates to implementation, the Partnership also offers quarterly refresher training programs.



## Best Practices

To achieve the Partnership's goals of reducing injuries, illnesses and fatalities, and to raise safety awareness throughout the ET&D industry, the partners developed 14 Best Practices. A Best Practice is a process or method that can be applied throughout the electrical industry that will assist the Partnership companies in reducing the frequency of incidents.

### Best Practice #1: Administrative Controls

In order to address injuries due to improper job planning and risk assessment, this Best Practice requires pre-planning to begin at the pre-bid meeting and preliminary job site analysis to include the gathering of all relevant information needed to make a full risk assessment. This also suggests working on de-energized conductors and equipment whenever possible.

### Best Practice #2: Pre-Use Inspection of Rubber Protective Equipment

To avoid injuries due to worn, damaged or contaminated insulating equipment, all uniform components are to be inspected prior to use and removed from service if any defect is found.

### **Best Practice #3: Job Briefings**

Held at the project location at the beginning of each work shift, as work tasks or conditions change, and as additional personnel arrive on the job site, this Best Practice provides a standard methodology for sharing key information including hazards, protective equipment to be used, emergency response information and more.

### **Best Practice #4: Qualified Observer**

Injuries caused by unrecognized hazards and changes in work conditions can be offset or eliminated by the use of a qualified observer. These well-informed crew members ensure clearances are maintained, proper equipment is used, and effective cover-up is installed. This Best Practice also outlines the criteria of a Qualified Observer.

### **Best Practice #5: Insulate & Isolate Safety Performance Check**

To ensure compliance with Isolate and Insulate procedures, this Best Practice requires a safety review process that includes assurances that company safety rules and proper cover-up procedures are being followed.

### **Best Practice #6: Cradle-to-Cradle Use of Insulating Rubber Gloves and Sleeves**

Insulated gloves and sleeves are proven methods for reducing electrical contact injuries and fatalities. This Best Practice details the use of such PPE including when it is to be used and the requirements for the gloves and sleeves utilized while working from an aerial platform.

### **Best Practice #7: Lock-to-Lock Use of Insulating Rubber Gloves and Sleeves**

As with the Cradle-to-Cradle use of insulated gloves and sleeves, the same equipment used while working on pad mounted equipment from prior to unlocking until relocking has been proven to reduce electrical contact injuries and fatalities.

### **Best Practice #8: Insulate & Isolate for the Live Line Tool Method on Distribution Lines**

When working on energized lines, it's critical that workers are qualified and using proper equipment from insulated gloves and sleeves to rubber blankets, line hose, hoods and more. Moreover, remaining physically separated, electrically and mechanically, from the lines and at a safe perimeter to avoid the effects of induction can eliminate contact and electric arc flash injuries.



### **Best Practice #9: Rubber Insulating PPE for the Live Line Tool Method on Distribution Lines**

Specific to workers utilizing the “live line tool work method” or “hot sticking,” this Best Practice details the use of purpose-built insulating tools to avoid direct contact with energized equipment.

### **Best Practice #10: Safety at Heights – Lattice Towers**

When working on lattice structures, it is critical that fall hazards are assessed, including a full identification of the tasks to be performed as well as suitable anchorage points for those tasks; that proper 100 percent Fall Protection Equipment from ascent to descent and throughout the job is utilized; and that rescue procedures are proactively addressed.

### **Best Practice #11: Safety at Heights – Wood Poles**

This Best Practice outlines the use of 100 percent Fall Protection Equipment from ascending to descending and all points between such that an employee cannot fall more than two feet. It is also important that each structure be inspected prior to climbing and that rescue procedures are proactively addressed.

### **Best Practice #12: Insulate & Isolate Techniques for the Rubber Glove Method**

Through the use of protective equipment and appropriate I&I procedures, this Best Practice ensures the safety of qualified line workers using the rubber glove method while working on energized lines and equipment.

### **Best Practice #13: Rubber Insulating PPE – for Live Line Tool Method on Distribution Lines**

Addressing the safety of power-line workers using the “live line tool work method” or “hot sticking,” maintaining a Minimum Approach Distance (MAD) will prevent electrical contact injuries and fatalities. This Best Practice also details when it is safe for a worker to remove rubber insulating gloves and sleeves.

### **Best Practice #14: Information Transfer**

Not all hazards are anticipated. By sharing information between Contractors and Host Employers, we can ensure that the most up-to-date information about a work site is known to all who might come into contact with it.

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## **COMMUNICATIONS TOOLS**

### **Partnership Safety Video**

The Communications Task Force created a two-minute video promoting the value of safe and healthful workplaces, and the partners’ commitment to worker safety across the ET&D industry, regardless of their participation in the Partnership. Find the video at [www.powerlinesafety.org](http://www.powerlinesafety.org).

### **Best Practices Mobile App**

Taking advantage of the ubiquitous smart phones, the ET&D Partnership launched an app in 2016 which features the 14 Partnership-developed Best Practices, ET&D Partnership news updates, and other relevant topics. The app is available through the ET&D Partnership Website, Apple’s Store and Google Play.



## National Safety Stand Down

In 2012, the partners established a national Electrical Safety Stand Down, a time when electrical transmission and distribution industry employees participated in safety education activities at locations across the nation. 40,000 wallet cards displaying the Best Practices were distributed to stand down attendees.

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## INTO THE FUTURE

The Partnership continues to meet and thrive, not just to share the Best Practices already created, but to continue exploring ways to make the industry even safer. New strategies were added to the renewal agreement that will enable the Partnership to better identify the effectiveness of Best Practices implementation and use by workers.

“In our connected world, the electric transmission and distribution industry is only getting more complex with higher expectations of improved reliability, new energy sources and expanding technology that the electrical workers must safely operate,” said Robert S. Coates, Jr., Vice President of Safety at Eversource Energy, representing EEI. “The foundation of knowledge sharing and innovations with our industry partners, be they competitors, regulators, labor or industry associations, has enabled us to shape industry safety regulations and practices to prevent injuries while sustaining and improving reliability for the customers we serve. We truly are safer and stronger as one than individual competitors or companies.”

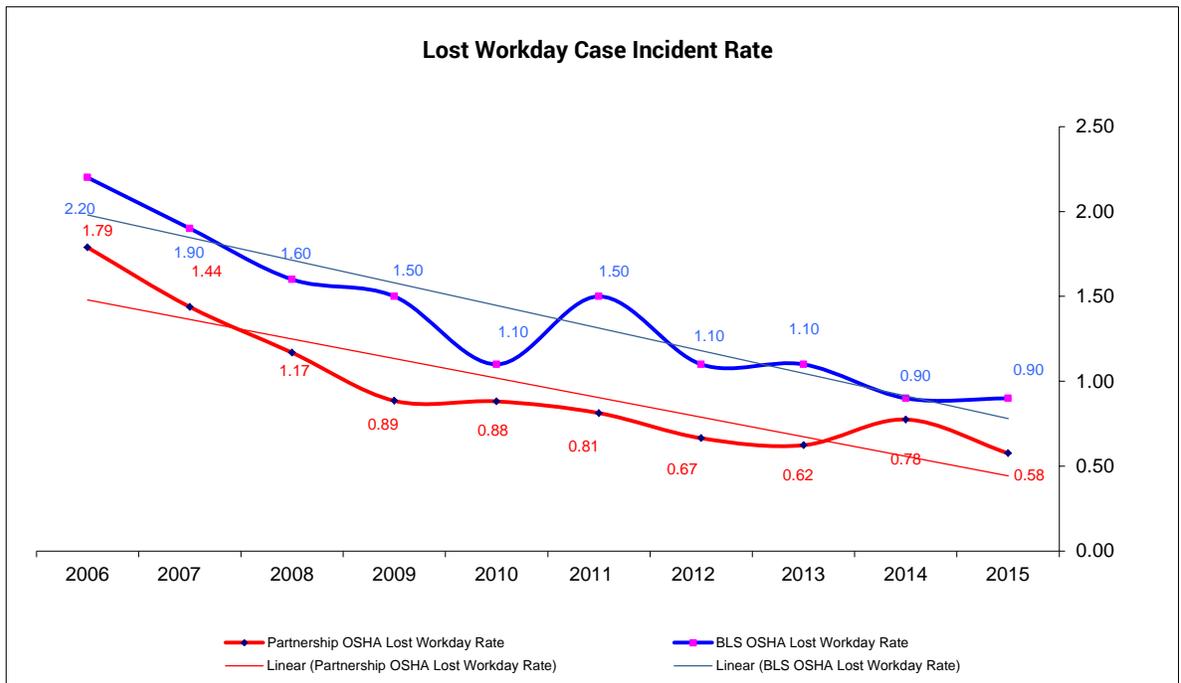
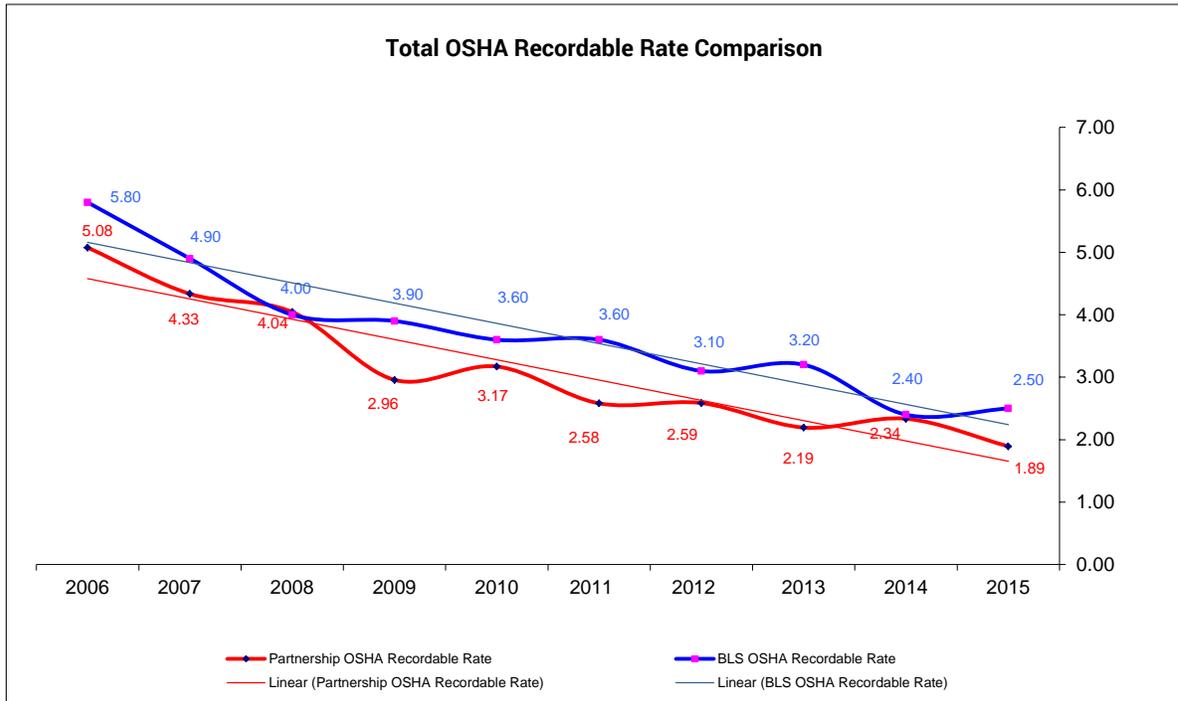
Other projects in consideration include creating a reporting system to capture near misses in the field and translating training materials into languages more familiar to non-native speakers. There is also movement toward creating information and safety training for OSHA field personnel in the ET&D industry with topics including power restoration and storm work.

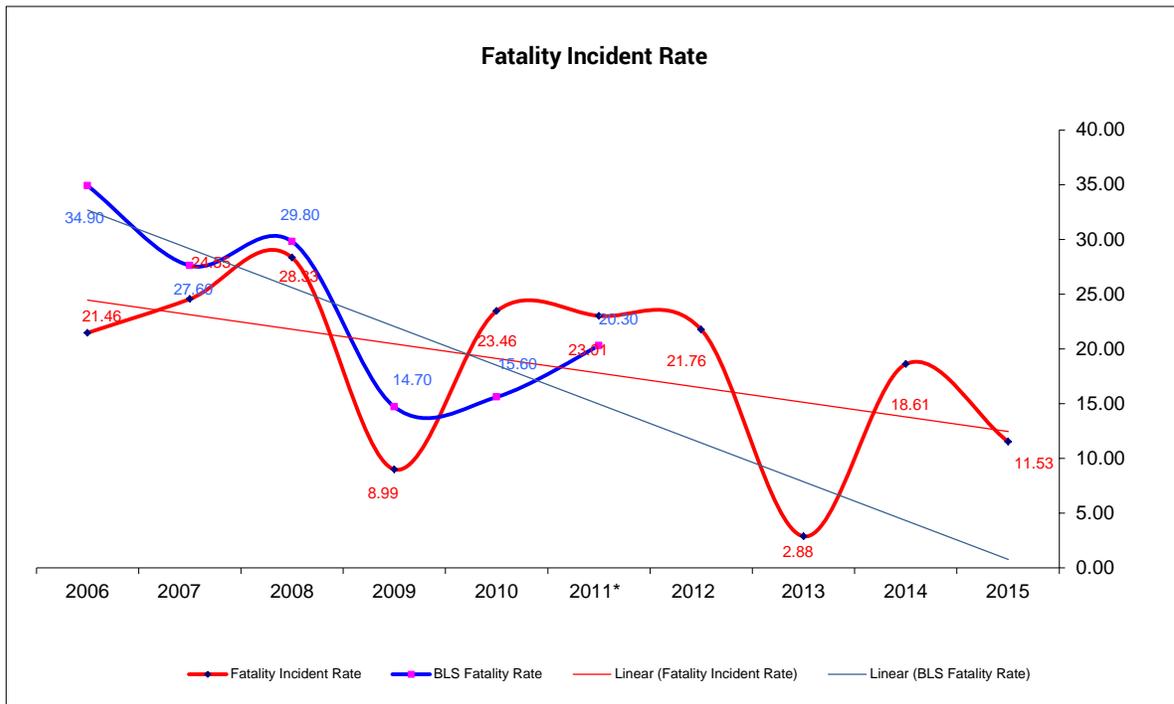
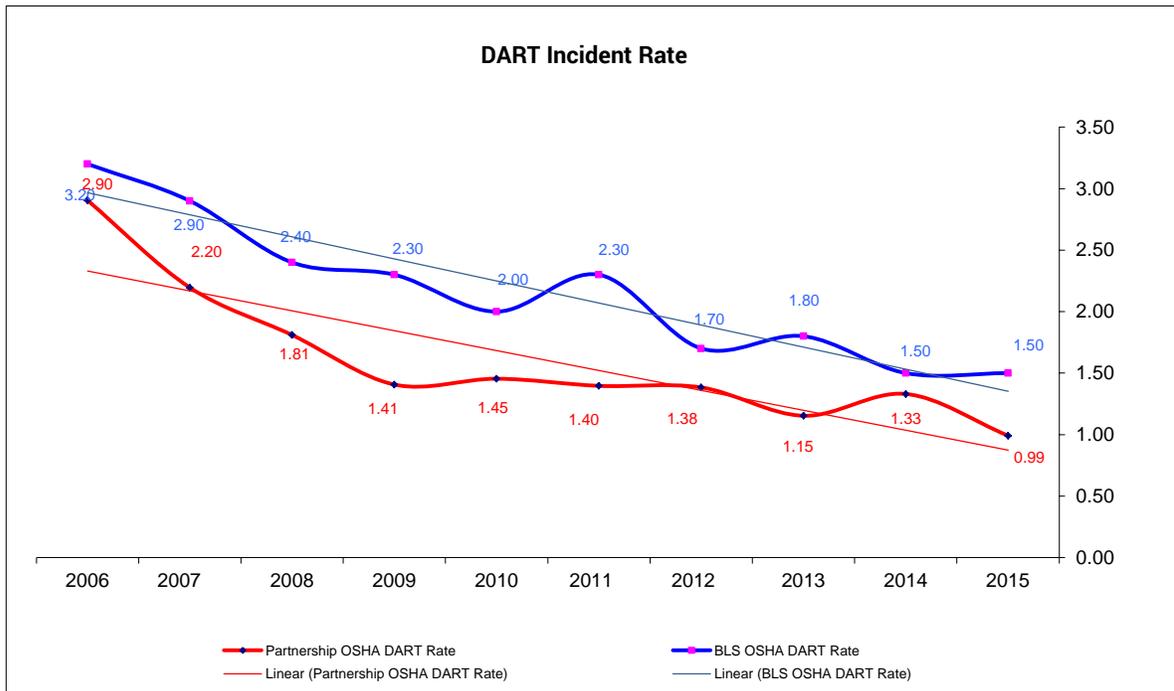


All of this was achieved with the help of focus groups of line workers from around the country who were working for contractors in the Partnership. With the input of these focus groups, successful training programs and best practices were developed and implemented and an attitude towards increased safety on the job took precedence.

With our social media presence and coverage in industry publications, the Partnership continues to expand awareness of safety practices and training opportunities. By combining awareness, accessibility, and informed buy-in across the industry, the Partnership is confident that its significant progress over the last 12 years will not only continue, but be an inspiration to other industries seeking innovative ways to keep their workers safe and healthy.

# Injury and Illness Rate Reduction





\*BLS Incident Rates means the information is either "not available" or is not an accurate comparison to the partnership