



Electrical Transmission & Distribution Partnership

Continuing Education Training

Presenter Guide – Q1 – Fall Protection – Safety at Heights Best Practice

Introduction:

This **Fall Protection – Safety at Heights** Refresher course is a presenter lead (supervisor, safety professional) process. The presenter may choose to augment the material with videos, handouts, or other media to enhance the learning experience. The presenter may want to incorporate visual aids to enhance the presentation.

Using this material in combination with practical experience, good presentation skills and knowledge of adult learning techniques, the presenter has a greater opportunity to deliver the information.

Edgar Dale stated that 2 weeks after a learning event, adult learners remember:

- 10% of what they read
- 20% of what they hear
- 30% of what they see
- 50% of what they see and hear
- 70% of what they say
- 90% of what they say while performing a task

Microsoft® PowerPoint® combined with good instructional skills and instructor/student dialogue work strongly in the fifty to seventy percent range. PowerPoint® presents the information to the attendee, and the instructor summarizes the content of the slides. It is critical to engage and involve the attendee in the process. Ask open-ended questions that will elicit conversation and discussion but be cautious to maintain control of the discussion.

Conversation and scenarios are good but can cause the discussion to run long. If it seems like the group is losing focus during the course, the presenter can direct the group back on track by using comments like "Good discussion, but let's get back to the subject at hand".

Another tool is the "Parking Lot" which is simply a newsprint chart or dry erase board or note pad where the presenter records questions/discussion points not answered or addressed during the meeting and that may require more research. It is vital to capture any ongoing discussions or questions on the "Parking Lot" and follow up when the information is known.

Deliver this refresher during the first quarter of 2026. Delivery time is approximately 45 minutes to 1 hour, in one setting or divided- up into three, 15-to-twenty-minute settings. The presenter may deliver the topic in a formalized meeting room setting using the PowerPoint slide deck or by using the three, key point sheets (located at the end of each session) as in a tailgate safety talk. **It is critical that the facilitator makes him or herself familiar with the material prior to delivery.**



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP

Fall Protection Safety at Heights Best Practice

PARTNERSHIP
An OSHA Educational Program

1st Quarter 2026

CELEBRATING 20 YEARS OF PARTNERSHIP
TO NEW HEIGHTS IN SAFETY

CONTINUING EDUCATION

Introduce the module. Explain to the group that this module will discuss some general fall protection requirements and requirements for employees engaged in power transmission and distribution work.

Why This Matters?

OSHA Partnership 300 Log Analysis for Calendar Year 2024

- Of the 52 total SIF events recorded in 2024, 14 were identified as having an applicable Partnership Best Practices.
- 13 SIF Events related to Falls From Elevations
- 25% of all recorded 2024 SIF Events resulted from Falls From Elevations
 - 5 Equipment
 - 3 Bucket Truck Access/Egress
 - 3 Poles
 - 2 Aloft in and Aerial Lift

Table 5 – SIF Fractures by Injury Classification

SIF Type	Injury Classification	2020	2021	2022	2023	2024
65 Fractured bones	Fall From Elevation	N/A	N/A	1	4	13
	Caught Between	7	15	24	0	12
	Struck By	6	16	14	11	11
	Electric Contact/Arc Flash	0	0	1	0	11
	Slip/Trip/Falls	16	11	24	2	3
	Motor Vehicle	1	7	4	1	2
	Cuts/Punctures	0	0	7	0	0
	Strains/Sprains	1	0	2	0	0
	Misc./Other	1	0	0	0	0
	Laceration	0	0	1	0	0
Grand Total		32	49	78	18	52

Data collected from the OSHA Partnership 300 Log Analysis for Calendar Year 2024

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Explain to the group the “WHY” behind the importance of this topic. Each year the Electrical Transmission and Distribution Partnership collects injury data from the partner companies. This data is then tabulated to determine how injuries are occurring within the partner companies. Of the 52 reported Serious Injury and Fatality (SIFs) events, 14 were identified as having an applicable Partnership Best Practice associated with that task. 13 SIF events were related to Falls from Elevations. That’s 25% of all recorded 2024 SIF’s events resulted from Falls from Elevations. Over the next few slides, we will review the OSHA ET&D Safety at Heights Best Practice.



Course Objectives

- ☑ Understand the Safety At Heights Best Practice
- ☑ Understand that protection from falls in an employer requirement
- ☑ List the inspection requirements for Fall Protection Equipment (FPE) & Work Positioning Equipment (WPE)
- ☑ Identify training requirements related to fall protection
- ☑ Identify inspection requirements for Wood and Steel Structures
- ☑ Describe the elements required in a Rescue Plan



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP

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The objectives of this course is to gain an understanding of the following topics:

1. Understand the Safety at Heights Best Practice
2. Understand that protection from fall is an employer requirement
3. List the inspection requirements for Fall Protection Equipment (FPE) and Worker Positioning Equipment (WPE)
4. Identify training requirements related to fall protection
5. Identify inspection requirements for Wood and Steel Structures
6. Describe the elements required in a Resue Plan

Elements of OSHA's Fall Protection Duty Requirements

Ensure the use of fall protection systems as follows:

- ✓ Each employee working from an aerial lift shall use a fall restraint system or a personal fall arrest system.
- ✓ Each employee more than 4 feet above the ground on poles, towers, or similar structures shall use a personal fall arrest system, work-positioning equipment, or fall restraint system
- ✓ Determine if the surfaces on which its employees are to work have the strength and structural integrity to support employees safely
- ✓ Ensure employees are trained in the use, care and inspection of equipment/systems



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP

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OSHA requires employers to protect workers working at heights from falls. This includes working from an aerial lift, 4 feet above the ground on poles, towers or similar structures. Employers are also required to determine the structural integrity of the walking/working surfaces, as well as provide training to employees who are working at heights.

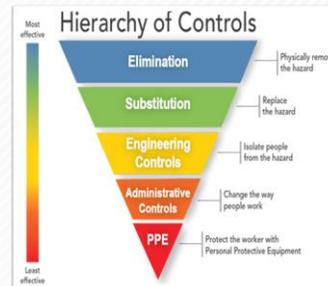


ET&D Safety at Heights Best Practice

The Partnership is committed to the practice of Safety at Heights wherever the potential exists for personnel falling from heights.

This Best Practice:

- Addresses fall hazards associated with but not limited to aerial tasks performed on wood/steel poles and metal lattice structures.
- Uses the Hierarchy of Controls to eliminate or control fall hazards.



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 5

The Electrical Transmission and Distribution Partnership developed the Safety at Heights Best Practice. This Best Practice was developed as a guide for Employer's and Employee's to follow to mitigate/eliminate the hazards associated with working at heights in the industry. This Best Practice addresses the fall hazards associated with but not limited to aerial tasks performed on wood/steel poles and metal lattice structures. Employers and Employees should always utilize the Hierarchy of Controls when controlling all hazards.

Safety at Heights – Best Practice

Practice Statement:

Fall Protection Equipment (FPE) shall be used above 4 feet **on poles, towers, or similar structures** when:

- ✓ Ascending
- ✓ While in the working position
- ✓ When changing positions
- ✓ Descending
- ✓ And/or Performing Rescue Operations



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 6

The Practice Statement of the Safety at Heights Best Practice states that: Fall protection equipment (FPE) shall be used above 4 feet on poles, towers, or similar structures when:

- Ascending – going up the pole or structure
- While in the working position
- When changing positions on the pole or structure
- Descending – coming down the pole or structure
- And/or performing rescue operations



Safety at Heights – Best Practice

Practice Description

Fall hazards associated with aerial work shall be assessed and fall hazard mitigation plans developed. Fall Protection Devices shall be “engaged” ground-to-ground



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 7

Explain that prior to ascending the pole or structure, the fall hazards associated with aerial work shall be assessed and fall hazard mitigation plans developed. Fall Protection Devices shall be “engaged” ground-to-ground.

Safety at Heights – Best Practice

Fall Protection Plan – Job Briefing

- ✓ Identify tasks to be performed while working aloft.
- ✓ Client/Owner Fall Protection policies, procedures and hazard analysis documentation as applicable.
- ✓ Identify suitable anchorage points that are going to be used for the task to be performed.
- ✓ Employers shall address rescue considerations and develop appropriate procedures that will allow successful performance of a given rescue technique for varied field conditions.
- ✓ Determine/Identify necessary Fall Protection Equipment (FPE) and/or Work Positioning Equipment (WPE).
- ✓ Determine climber qualification in the use of FPE and/or WPE.

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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 8

The Best Practice requires that a Fall Protection Plan be developed prior to starting the work. The fall plan must address the following:

- Identify the tasks to be performed while working aloft.
- Client/Owner Fall Protection policies, procedures and hazard analysis documentation as applicable.
- Identify suitable anchorage points that are going to be used for the task to be performed.
- Employers shall address rescue considerations and develop appropriate procedures that will allow successful performance of a given rescue technique for varied field conditions.
- Determine/identify necessary Fall Protection Equipment (FPE) and/or Working Positioning Equipment (WPE).
- Determine climber qualification in the use of FPE and/or WPE



Safety at Heights – Best Practice

Qualified Climber

Until the employer ensures that employees are proficient in climbing and the use of fall protection the employees are not considered qualified employees



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 9

Explain that Employers are required to ensure that employees engaged in aerial work are qualified in the application of all necessary fall protection methods used for the fall hazard mitigation of the task that will be performed. These individuals also need to show proficiency in rescue operations.

Safety at Heights – Best Practice

Inspection of Equipment

FPE/WPE shall be inspected before each use and used in accordance with the manufacturer's instructions and guidelines.



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 10

Explain that all protective equipment must be inspected prior to use.

1926.954(b)(3): Care and use of personal fall protection equipment.

1926.954(b)(3)(i): Work-positioning equipment shall be inspected before use each day to determine that the equipment is in safe working condition. Work-positioning equipment that is not in safe working condition may not be used.

Visual Inspections shall be performed prior to, and during climbing, to ensure that the structure is in an acceptable condition for the safe execution of the tasks to be performed.

The following specific items of the worker's body belt shall be inspected to determine that: hardware has no cracks, distortion or corrosion; no loose or worn rivets are present; waist strap has no loose grommets; no worn materials that could affect the safety of the user are present; d-rings are compatible with the snap hooks which they are used; and no non-approved modifications have been made to carry tools or materials. Not all d-rings are compatible with all snap hooks. This is why it is important that equipment from the same manufacturer is used. The incompatibility may cause roll-out or unintentional disengagement of the snap hook from the d-ring.



Safety at Heights – Best Practice

Inspecting FPE

- Manufacturer's markings
- Missing pieces
- Defects or damage
- Alteration
- UV exposure
- Chemical exposure
- Frayed webbing



Q1 – 2026 – Fall Protection – Safety at Heights

OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 11

The following specific items of the harness shall be inspected to determine:

- ✓ Absence or illegibility of manufacturer's markings.
- ✓ Absence of any elements affecting the equipment
- ✓ Form, fit or function.
- ✓ Evidence of defects or damage to hardware elements including:
 - cracks,
 - sharp edges,
 - deformation,
 - corrosion,
 - chemical attack,
 - excessive heating,
 - alteration and excessive wear
- ✓ Evidence of defects or damage to straps or ropes including:
 - fraying,
 - misplacing,
 - inlaying,
 - kinking,
 - knotting,
 - broken or pulled stitches,
 - excessive elongation,
 - chemical attack,
 - excessive soiling,
 - abrasion,
 - alteration,
 - needed or excessive lubrication,
 - excessive aging and excessive wear
 - alteration, or absence of parts,
 - evidence of defects in, damage to or improper function of mechanical devices and connectors.



Safety at Heights – Best Practice



Inspecting WPE

- The hardware has no cracks, nicks, distortion, or corrosion
- No loose or worn rivets are present
- The waist strap has no loose grommets
- D-rings are compatible with the snap hooks.
- No worn materials that could affect the safety of the user are present
- Ensure proper adjustment to limit free-fall two (2) feet



Q1 – 2026 – Fall Protection – Safety at Heights
OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 12

The following specific items of the worker’s body belt shall be inspected to determine that: hardware has no cracks, distortion or corrosion; no loose or worn rivets are present; waist strap has no loose grommets; no worn materials that could affect the safety of the user are present; d-rings are compatible with the snap hooks which they are used; and no non-approved modifications have been made to carry tools or materials. Not all d-rings are compatible with all snap hooks. This is why it is important that equipment from the same manufacturer is used. The incompatibility may cause roll-out or unintentional disengagement of the snap hook from the d-ring. Employers and employees also need to ensure fitment and adjustment of WPE’s. WPE’s shall be adjusted to limit free fall to two (2) feet. If the WPE is improperly adjusted employees may fall more than two (2) feet causing additional injuries to the employees.

Safety at Heights – Best Practices

Training Requirements

Who is Trained?	On What?	By Whom?
<ul style="list-style-type: none"> ✓ Each employee who will be exposed to fall hazards 	<ul style="list-style-type: none"> ✓ Care, Use and Inspection of FPE / WPE ✓ Selection and Safe use of the Equipment/System ✓ Rescue procedures 	<ul style="list-style-type: none"> ✓ Qualified Trainers



Q1 – 2026 – Fall Protection – Safety at Heights
OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 13

Explain that the Employer is responsible for conducting the following training requirements:

- Who is Trained?
 - Each employee who will be exposed to fall hazards
- On What
 - Care, Use and Inspection of FPE/ WPE
 - Selection and Safe Use of the Equipment/System
 - Rescue Procedures
- By Whom
 - Qualified Trainers (Trainers who have the experience and knowledge of the subject matter)



Safety at Heights – Best Practice

Retraining

Changes in:

- ✓ Workplace
- ✓ Types of fall protection or equipment

Inadequacies in employee's

- ✓ Knowledge
- ✓ And/or Use of FPE / WPE



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 14

Explain that retraining of employees is required when there are changes in the workplace and in types of fall protection equipment. Retraining is also required when there are inadequacies in employee's knowledge of Fall Protection Requirement or a miss-use or failure to utilize Fall Protective Equipment.

Safety at Heights – Best Practice

Lattice Tower Structure Inspection

At a minimum, a visual inspection shall be performed prior to, and during climbing, to ensure that the structure is in an acceptable condition for the safe execution of the task to be performed.



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 15

Explain that at a minimum, a visual inspection shall be performed prior to, and during climbing, to ensure that the structure is in an acceptable condition for the safe execution of the task to be performed.



Safety at Heights – Best Practice

Wood Pole Inspection

What to inspect:

- Working Pole: Pole being worked on
- Adjacent Pole(s): Pole connecting working pole with wires, cables, phone, fiber optic, etc.....
- Load Change: Any task that will alter the weight or strain on a pole



Q1 – 2026 – Fall Protection – Safety at Heights OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 16

Explain that prior to climbing wood poles the Employer shall ensure that employees inspect the wood pole prior to climbing. Employees should not only inspect the pole they are going to climb, but they should also inspect the adjacent pole(s) connected by wires, cables, phone, fiber optic etc.... for integrity. It is important to consider changing loads on poles i.e., removing or installing conductor. These types of load changes can have an impact on multiple poles or structures.

Safety at Heights – Best Practice

Wood Pole Inspection

What to inspect for:

- General condition of the pole
- Cracks – Horizontal / Vertical
- Holes
- Shell rot and decay
- Knots
- Depth of setting
- Soil conditions
- Burn Marks



Q1 – 2026 – Fall Protection – Safety at Heights OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 17

When visually inspection wood poles look for:

- General condition of the pole
- Cracks – Horizontal / Vertical
- Holes
- Shell rot and decay
- Knots
- Depth of setting
- Soil conditions
- Burn Marks



Safety at Heights – Best Practice

Wood Pole Inspection

How to Inspect

- Sounding with a hammer
 - Strike the pole with a 3lb hammer every 2-3 ft upward to a height of 6ft.
 - A sturdy pole should give a solid sound, and the hammer should rebound sharply
- Probe/Prod Test
 - Probe the pole downward at a 45° angle from the groundline to 6” below grade using a pole prod or a screwdriver with a 5” blade.
 - If the probing tool penetrates with little pressure, there may be decay below the ground.
 - **If there is any doubt about the condition of pole or a Probe/Prod Test cannot be completed, dig approximately 12” down and probe the pole**



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 18

Other industry preferred methods of testing wood poles in the Hammer Test and Probe/Prode Test. These tests should be completed prior to climbing any wood pole.

Sounding with a Hammer

- Hit the pole sharply with a 3-pound hammer, starting near the ground line and continuing upwards circumferentially around the pole to a height of approximately 6 feet. The hammer will produce a clear sound and rebound sharply when striking sound wood. Decay pockets will be indicated by a dull sound or a less pronounced hammer rebound

Probe/Prod Test

- For determining the integrity of the pole below ground, probe the pole using screwdriver with at least a 5” blade. Probe the pole downward at a 45-degree angle from the ground line along multiple sides of the pole. If the screwdriver or similar tool penetrates the pole with little pressure, there may be decay.
- **If there is any doubt about the condition of pole or a Probe/Prod Test cannot be completed, dig approximately 12” down and probe the pole.**

Safety at Heights – Best Practice

Rescue Plan Requirements

Rescue Plan shall be discussed by all crew members, and be specific to the work location

- ✓ Self Rescue
- ✓ Assisted Rescue

Plan must be clearly communicated and understood

RESCUE PLAN CHECKLIST	
What are you at? (Location, Site, and Position) Consider the level of the rescue? Would you have been caught? (If not, how would you be caught?)	
Following are some important components of a rescue plan.	
<input type="checkbox"/>	Gain an understanding of the physical environment you will be working in.
<input type="checkbox"/>	Determine the proximity of a professional rescue team.
<input type="checkbox"/>	Determine if you can rescue from the area where you would be working.
<input type="checkbox"/>	Determine appropriate rescue time for 911 response.
<input type="checkbox"/>	Understand the type of rescue that may be necessary (rescue a victim from a ladder, platform or scaffold, etc.).
<input type="checkbox"/>	Determine who is trained to do the rescue.
<input type="checkbox"/>	Decide if the rescue will be assisted or stand-by. If stand-by, determine the response time.
<input type="checkbox"/>	Perform a job safety analysis of the rescue.
<input type="checkbox"/>	Is the rescue plan of assistance (who is to be rescued)?
<input type="checkbox"/>	How the victim might escape?
<input type="checkbox"/>	Is the victim trapped?
<input type="checkbox"/>	Can you see the victim throughout the entire rescue operation?
In addition to having a plan, it is also important to have rescue equipment well supplied and well ready to be used.	
<input type="checkbox"/>	Rescue devices that are used on ladders or towers, such as a controlled descender.
<input type="checkbox"/>	Rescue and retrieval methods for rescue and maintenance.
<input type="checkbox"/>	Building edge protection or technology provisions to protect the edge from being caught and arrested.
<input type="checkbox"/>	Designated anchor points for rescue equipment (used at least 1000 pounds).
<input type="checkbox"/>	Active steps and provisions for making an anchor point when one is not available or available.
<input type="checkbox"/>	Force and for use distribution.

Explain the Requirement of having a rescue plan.

Self-Rescue

Sometimes when an employee takes a fall, he/she can rescue him/herself. Depending on how far he/she fell, it might be as simple as pulling him/herself back onto the platform or equipment. Employees who use SRL's are typically able to rescue themselves. Self-retracting lifelines, or SRL's, are supposed to stop a fall within a maximum of 3.5 feet. But because SRL's can be extended up to 50 feet or more, employees need to account for **swing radius**. If an employee has an SRL extended out to 20 feet, he/she could end up falling much further than 3.5 feet.

Assisted Rescue

When an employee is unable to pull him/herself to safety, others working nearby must jump to action. They just must be trained. Depending on the severity of the situation, you might want to call 911 anyway. But don't wait for them to arrive -- remember, you need to get the employee down as quickly as possible.

Safety at Heights – Best Practice

Suspension Trauma

- Perform rescue and treatment as quickly as possible
- Recognize signs and symptoms of suspension trauma
- Minimize suspension time

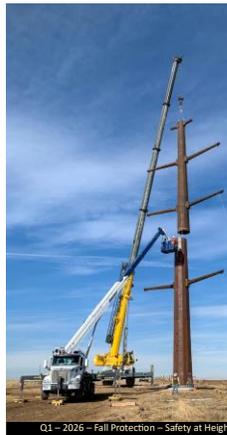


Suspension trauma is a deadly condition brought on by an extended period of orthostatic intolerance. Orthostatic intolerance happens when a person remains in a sedentary position for a prolonged period. Blood accumulates in the veins and interferes with proper blood flow.

When blood cannot circulate throughout the body, vital organs do not get enough oxygen. Without an adequate supply of oxygen to the brain, fainting will occur. Kidney failure can also happen, as the kidneys require oxygen-rich blood to function properly

If not addressed quickly, these conditions could be fatal.

Prolonged suspension from fall arrest systems could cause orthostatic intolerance. The suspension trauma that employees can experience will result in unconsciousness first, potentially followed by death. This can all occur within 20-30 minutes.



Safety at Heights – Best Practice

Alternative Work Methods

“Company policies shall apply when the conditions of this Best Practice cannot be met. Alternative work methods ensuring climber safety shall be identified, communicated to all affected climbers, implemented, and documented as a part of the Job Briefing process”.



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OSHA ELECTRICAL TRANSMISSION & DISTRIBUTION PARTNERSHIP 21

Explain that the Electrical Transmission and Distribution Partnership developed the Safety at Heights Best Practice. This Best Practice was developed as a guide for Employer’s and Employee’s to follow to mitigate/eliminate the hazards associated with working at heights in the industry. This Best Practice addresses the fall hazards associated with but not limited to aerial tasks performed on wood/steel poles and metal lattice structures. There may be work situations where the requirements of this Best Practice cannot be met. In those situations, refer to additional company policies or reach out to Fall Protection Specialist for guidance.

Thank You!

