



Assessment for Cable Splicer Progression (ACSP)

Preparation Guide

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Overview

Introduction	The assessment for cable splicer progression is designed to let persons who desire to be apprentice cable splicers demonstrate basic aptitude in common cable splicer activities that are required for the cable splicer craft.
Experience Working in Confined Spaces	During the assessment, you will be required to climb ladders to simulate climbing into and out of manholes and other confined spaces. If you cannot work in confined spaces for any reason, you should reconsider entering the cable splicer craft. The majority of PG&E cable splicer work requires physical activity climbing into and out of confined spaces.
Physical Strength	Cable splicing work is construction work that requires the ability to perform strenuous activities without assistance. You will have several opportunities to show that you can perform common tasks unaided.
Following Instructions	Working close to energized, high-voltage equipment is quite safe, provided you know and practice the work procedures and safety rules and provided that you can follow detailed instructions or work plans. The inability to recall instructions will put you and the people you work with at risk. One component of the assessment requires that you demonstrate the ability to follow precise instructions.
Practice	<p>Five individual events comprise the assessment. Before performing the assessment, you will watch a video that shows each event in the assessment and how it is properly executed.</p> <p>You will be allowed to practice a total of six times. It will be up to you to decide which events you wish to practice and how many times you wish to practice each one. The total number of practices may not exceed six.</p> <p>For example, you might choose to practice events one through five one time each, and then practice event one a second time. That would be a total of six practices. Or, you could practice event one three times, events two through four one time each, and decide to skip practicing event five altogether. Again, the total number of practices is limited to six attempts.</p> <p>Before the assessment, the evaluator will explain the events and then you can choose the practices that you feel you need. You should choose wisely.</p> <p>It is important to remember that a <i>practice</i> session is just that—practice. Successfully completing a practice does <i>not</i> count toward successfully completing an event.</p>

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Overview, Continued

Standards

Safety is the most important component of the assessment. You must follow directions carefully. You can ask for clarification **before** you begin if you do not understand the task at hand. You should work carefully, as disregard for safety will cause disqualification.

The assessment is not a race against the clock. Ample time has been provided for you to complete the required tasks. Faster times will **not** improve your score. It is more important that you complete a task correctly than it is to complete it quickly.

It is important, however, that you complete all the required tasks within the time allowed. Time is an essential component of each task and those who take too long will be disqualified.

To receive a qualifying score on the Assessment for Cable Splicer Progression, you must meet the standards of achievement for **all** five events that comprise the assessment.

Failure to Meet Standards

You are allowed to complete all five events. Although failure to pass one or more events will prevent you from becoming an apprentice cable splicer at this time, in most cases, you will be permitted to participate in all the events. If you do not qualify in all five events, a PG&E Human Resources representative will be available to discuss next steps and answer any questions you may have.

All protests and disputes will be discussed and resolved in the classroom, not in the evaluation area.

Weight Limit

The maximum body weight limit of PG&E safety equipment and safety restraints is 300 pounds. The equipment may not operate safely for candidates who weigh more than 300 pounds. For safety reasons, we need to weigh each candidate before beginning the test, if we haven't already done so.

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Overview, Continued

Stretch and Flex

Prior to doing the assessment, make sure to take the time to warm up muscles by performing some stretch and flex exercises.

First, warm up the body with 5 minutes of brisk walking or jogging in place to increase blood flow to muscles and joints and reduce the risk of exertional injury. Follow with your choice of stretches below:

For each stretch, hold for 15–30 seconds, and repeat on each side.

- Neck Stretch: Tilt your head sideways using one hand to reach across your head and move ear toward the opposite shoulder.
- Hip Stretch: Lift one leg and grasp with your arm to pull up on your leg at the ankle to stretch the thigh. Brace against a stable object if needed.
- Calf Stretch: Get into a lunge position bending your back knee, and lift the toes on your front leg.
- Inner Thigh Stretch: Stand with feet pointed straight ahead and greater than shoulder-width apart. Brace your right hand on your right knee, bend and reach the left hand to touch the inside arch of your right foot, reverse and repeat 10 times.
- Chest Pull: Lace your fingers together behind your back, and roll your shoulders back while pulling your hands away from your back a few inches.
- Forearms and Wrist Stretch: Extend one arm forward keeping the elbow straight. Bend the wrist upward, and use the other hand to gently pull fingers back toward body. Then release and bend the same wrist downward.
- Shoulder and Upper Arm Stretch: Stand and place your right hand on the back of your left shoulder. With your left hand, pull your right elbow toward your left shoulder and hold.

Ability to Perform the Assessment

Some of the assessment activities may require unfamiliar and/or strenuous physical activity. If an accommodation is needed, you must bring this request to the attention of the evaluator before beginning any assessment activity.

You will be asked to self-identify any needs for a reasonable accommodation one week prior, if needed to participate in the assessment. These requests will be appropriately screened by the accommodations team and line-of-business (LOB) representative.

Clothing Requirements

For safety, you must wear hard-soled boots with square-cut heels that extend at least ½-inch beyond the sole (see examples on the following page).

Long pants and a long-sleeve shirt are also required.

PG&E will provide all safety equipment, including a hard hat, gauntlet gloves, and protective eyewear.

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Overview, Continued

Footwear Examples

 <p>Required Style Hard sole, ankle support, heel extends at least ½ inch beyond sole. Heel must be clearly defined with a sharp angle (square cut).</p>	 <p>Unacceptable Insufficient heel. Tapered angle on heel may cause slipping when climbing ladders.</p>
 <p>Unacceptable Insufficient heel, open toe, no back, no ankle support.</p>	 <p>Unacceptable Insufficient heel, soft sole, no ankle support.</p>

Assessment Events

Five individual events comprise the assessment.

They are:

- Climbing a Ladder
- Lifting and Carrying Cable
- Racking Cable
- Lowering with a Handline
- Following Directions

Climbing a Ladder

Introduction

Much of a cable splicer's work requires climbing down to underground spaces. All cable splicers must be able to descend and climb up ladders. The purpose of this event is to assess your ability to transition from surface level to a ladder and from a ladder to surface level, and perform a basic task within an enclosed space.

In this event, you will demonstrate that you can follow simple instructions and safely descend a ladder, perform a basic task in an enclosure, and climb up a ladder.

Safety

During this event, you will use personal protective equipment to ensure your safety. The school will provide the following safety items:

- Gauntlet, leather gloves
 - Hard hat
 - Safety glasses
 - Full body harness
 - Fall arrest lanyard
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Climbing Technique

PG&E follows ladder safety rules for all work done with ladders. You must use the 3-point climbing technique when climbing a ladder. The 3-point climb means that you always have three body points in contact with the body facing the ladder at any given time. For example, two feet and one hand, or two hands and one foot.

Grasping the side rails is the preferred method for climbing a ladder. Always hold on to the side rail with one hand while you reach for the next hand hold. When you climb onto a ladder to go down, your first step should be the first rung below the edge of the landing. The bottom rung should be your last step before the ground. Look to see where you are going to step before you get off the ladder. Never jump off. When you start up a ladder, begin with the bottom rung. Climb deliberately, keeping a firm hold on the side rails as you go. Never skip steps.

Always face the ladder, both when ascending and descending. Facing the ladder gives you better control of your weight and balance.

You are not qualified personnel, so you will need to be fitted with a harness and fall arrest lanyard in case of a fall.

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Climbing a Ladder, Continued

Procedure

You have 3 minutes to complete this event. The following procedure will apply:

Step	Action
1	The instructor will help with fitting the harness and attaching to fall arrest protection.
2	Put on all personal protective equipment. Gloves must be worn at all times.
3	Place both hands on the barricade.
4	Step on the first rung, facing the ladder.
5	Maintain 3 points of contact with hands on the barricade and feet on the ladder.
6	Descend the ladder.
7	When your hands reach the bottom of the barricade, transition your hands to the side rail of the ladder.
8	Continue to descend to the last rung.
9	Step off the ladder and remove your hands from the ladder.
10	Stay at the bottom for 30 seconds.
11	Wait for the evaluator to instruct you to ascend the ladder.
12	Face the ladder and place both hands on the side rail of the ladder.
13	Climb up the ladder, maintaining 3 points of contact with your hands on the side rail and feet on the ladder.
14	When your hands reach the bottom of the barricade, transition your hands to the barricade.
15	When you reach the top of the enclosure, climb out of the enclosure.

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Climbing a Ladder, Continued

Scoring

Although this is a timed event, you must descend and climb at a pace that is consistent with safety and control. To receive a qualifying score on this event:

- You must descend, move the lead bars between the pots, and ascend the ladder before the 3-minute time limit expires.
 - You must maintain 3 points of contact at all times while on the ladder.
 - You must descend and climb without losing your grip on the ladder.
 - You must not slip or jump from the ladder.
 - All 5 lead bars must be moved from one pot to the other pot at the bottom of the enclosure.
-

Lifting and Carrying Cable

Introduction

PG&E cable splicers must be able to lift and carry heavy cables on a routine basis. The purpose of this event is to assess your ability to lift and move heavy lengths of cable.

In this event, you will demonstrate that you can follow simple instructions and safely lift and carry a cable.

Safety

During the event, you will use personal protective equipment to ensure your safety. The school will provide the following safety items:

- Gauntlet, leather gloves
 - Hard hat
 - Safety glasses
-

Lifting and Carrying Technique

You will be lifting and placing a length of cable weighing 50 pounds from the ground onto rack pins at standard height for the splicing stations, and then removing and returning that same cable back to its starting location on the ground.

You must use proper ergonomics for lifting items when performing this task. Get as close to the cable as possible. Use a wide stance with one foot forward and to the side of the cable for good balance. Keep your back straight, push your buttocks out, and use your legs and hips to lower yourself down to the cable.

Grasp the cable firmly with both hands. Prepare for the lift, tighten your core muscles, look forward and upward, keep a straight and strong back. Lift slowly using your legs and follow with your head and shoulders. Hold the cable close to your body. Lift by extending your legs with your back straight, and breathe out as you lift.

Holding the cable at waist height, turn the toe and go. Or if carrying the cable on your shoulders, squat low, lift one end, tip it on end, stand up, lower it to the shoulder, looking forward, and steady the load.

Walk forward to the splicing station and offload the cable onto the pins as instructed. Cinch down tight. Wait 15 seconds, pick the cable off of the pins, and return it to the starting position.

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Lifting and Carrying Cable, Continued

Explain the Procedure

You have 4 minutes to complete this event. The following procedure will apply:

Step	Action
1	Put on all personal protective equipment. Gloves must be worn at all times.
2	Lift the cable off the ground, using proper ergonomics (as described in the lifting and carrying technique).
3	Raise the cable to waist height.
4	Carry the cable 50 feet to the splicing station.
5	Place the cable on top of the rack pins.
6	Use the zip-ties to cinch the cable down tightly.
7	Wait 15 seconds.
8	When instructed, lift the cable off of the rack pins.
9	Carry the cable 50 feet back to the starting point.
10	Lower the cable to the ground without dropping, using proper ergonomics (as described in the lifting and carrying technique).

Scoring

Although this is a timed event, you must perform the steps at a pace that is consistent with safety and control. To receive a qualifying score on this event:

- You must lift, lower, and carry the cable with proper ergonomics (as described in the lifting and carrying technique).
- The cable must be placed securely on the rack pins.
- The cable must not fall off the rack pins.
- You must carry the cable the full 50 feet to the splicing station, and the full 50 feet back to the start of the event.
- You must not drop the cable at any time.
- The cable must not be dragged.
- You must complete the event before the 4-minute time limit expires.

Racking a Cable

Introduction

In many cases, cable splicers need to reshape cable to fit enclosures and around equipment. The purpose of this event is to assess the upper body strength required to reshape cable.

In this event, you will demonstrate that you can follow simple instructions and safely rack a cable.

Safety

During the event, you will use personal protective equipment to ensure your safety. The school will provide the following safety items:

- Gauntlet, leather gloves
 - Hard hat
 - Safety glasses
-

Technique

You will be taking a 12' length of 1000MCM EPRN 600-volt copper cable, bending it to stretch over a set of rack pins, and tying the cable to the pins. This will require the ability to push and pull the cable into the proper shape.

The cable is placed in a splicing station and secured to the bottom rack pins against one of the walls. You will bend the cable as needed to curve over the top rack pins on the wall (top rack pins placed at 36–40 inches from the ground) so that the cable lies on the top pins. You will then tie the cable to the top rack pins using the pre-attached cable ties.

Procedure

You have 5 minutes to complete this event. The following procedure will apply:

Step	Action
1	Put on all personal protective equipment. Gloves must be worn at all times.
2	Pick up the end of the cable not attached to the rack pins.
3	Hold the cable in both hands.
4	Bend the cable up and over the top rack pins so that the cable lies flat on the top of the pins.
5	Close the cable ties around the cable so the cable is attached to the top rack pins.

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Racking a Cable, Continued

Scoring

Although this is a timed event, you must perform the steps at a pace that is consistent with safety and control. To receive a qualifying score on this event:

- The cable must be attached with cable ties to the top rack pins.
 - You must not drop the cable.
 - You must complete the event before the 5-minute time limit expires.
-

Lowering with a Handline

Introduction

The cable splicer is a construction worker and must be able to perform work that requires physical strength and endurance for your safety and that of the others on the crew. You will be required to use a rope to lower a metal pot and hold it there for 20 seconds (to simulate it being worked on), and then lift it back up under control. The purpose of this event is to assess the ability to work with materials in a controlled way.

In this event, you will demonstrate that you can follow simple instructions and safely lower a metal pot using a handline.

Safety

During the event, you will use personal protective equipment to ensure your safety. The school will provide the following safety items:

- Gauntlet, leather gloves
 - Hard hat
 - Safety glasses
-

Technique

You will be preparing a heavy metal pot to lower into a manhole. From a standing position, you will lower the metal pot into an enclosure, hold it at the bottom of the enclosure for 20 seconds, and then raise it back out of the enclosure. When lowering a pot, it is best practice to use a technique that allows the rope to slowly slide through your gloved hands in a controlled way. When raising a pot, use a technique of raising it slowly and steadily so as to not spill the contents of the pot.

Metal pots normally contain molten lead. Because you are not a trained cable splicer, you will be using the metal pot with the contents in a solid state. You will prepare the pot for lowering, including placing the ladles normally used with this pot to pour and catch the molten lead. This is part of the normal procedure for using these pots and will demonstrate that you can maintain control of all the required equipment when lowering and raising objects into enclosed spaces.

For safety, you will use a handline to lower the pot and to better support the weight of the pot. When lowering equipment to workers in a manhole, the use of a handline also prevents the person in the manhole from having to lift or reach overhead to grab and use the object. Lowering objects into a manhole is performed from a standing position as it offers the best control.

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Lowering with a Handline, Continued

Procedure

You have 3 minutes to complete this event. The following procedure will apply:

Step	Action
1	Put on all personal protective equipment. Gloves must be worn at all times.
2	Pick up the pot hook in one hand.
3	Pick up the pot by the handle with the pot hook.
4	Attach the handline hook to the pot hook.
5	While holding the handline, place ladles onto the handline hook.
6	Position the pot over the enclosure.
7	From a standing position, lower the pot to floor level (sliding slowly through your gloved hands in a controlled way) without touching the pot to the ground.
8	Hold the pot for 20 second at this level.
9	Raise the pot out of the enclosure (slowly and steadily).
10	Remove ladles from the handline hook.
11	Remove the handline hook from the pot hook.
12	Using the pot hook, place the pot back on the pot ring.

Scoring

Although this is a timed event, you must perform the steps at a pace that is consistent with safety and control.

To receive a qualifying score on this event:

- You must place the ladles correctly on the handline hook.
- The ladles must stay connected to the hook/pot at all times.
- You must not drop the pot or the ladles at any time.
- You must hold the pot at the bottom for 20 seconds.
- You must complete the event before the 3-minute time limit expires.

Following Directions

Introduction

Before cable splicers begin a job, the foreman on the job gives the work group a briefing that covers the day's work. At PG&E, this is called a "tailboard briefing," and it covers all of the important aspects of the work that will be accomplished. Each cable splicer must understand, remember, and perform his specific duties as described in the tailboard briefing.

In this event, you will be given instructions to do simple tasks with common items. The specific tasks will be selected at random. You must complete the tasks correctly in the time allowed.

Safety

During the event, you will use personal protective equipment to ensure your safety. The school will provide the following safety items:

- Gauntlet, leather gloves
 - Hard hat
 - Safety glasses
-

Technique

The event begins with 16 common items that are placed on four tables (four items per table). You will be required to move three items in the order given from their initial locations to the specified locations.

The evaluator will mix the order of the cards (shuffle) so they have no specific order. You will be assigned the items to move and their destinations by selecting a card from a mixed deck.

This is an oral briefing. You may not read or study the cards.

One at a time, the evaluator will name each item and tell you its destination. After you have been told the names of all three items and their destinations, you have up to 60 seconds to ask any questions about what you are supposed to move and where. At the end of the 60 seconds, you may not ask any more questions. When told to begin, you must find and move the specified items to their specific destinations in the correct sequence. Once you are told to begin, you will have two minutes to find and move all items.

You must move the items in the exact order given to receive a qualifying score on that event. Allowing any item to hit the ground will cause disqualification.

Safety is the first consideration. Do not run.

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Following Directions, Continued

Procedure

You have 2 minutes to complete this event. The following procedure will apply:

Step	Action
1	Put on all personal protective equipment. Gloves must be worn at all times.
2	Receive the job tailboard.
3	Ask clarifying questions (up to 60 seconds maximum).
4	Begin to move items when instructed to start.
5	Move the items in the order they were given.
6	Complete moving the items within two minutes.
7	Do not drop any item or cause it to hit the ground.
8	Do not cause a safety hazard.

Scoring

To receive a qualifying score on this event:

- You must move all three items to the specified destinations before the 2-minute time limit expires.
- You must move the items in the order they were given.
- You may not drop any item.
- None of the items on the tables may hit the ground.
- You may not ask questions or receive help once you are instructed to begin moving items.
- You must move safely (i.e., no running, slipping, tripping, etc.).