

ENGLISH FOR WORK / ENGLISH FOR ENERGY AND UTILITY TEAMS

Energy and Utilities English

Explain the status. Name the uncertainty. Make the measure clear.



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Eight practical lessons. Eleven extended conversations.

Vocabulary, phrase banks, guided speaking, and explained answers.

Revised 2026 edition / Upper-intermediate to advanced

Your route through the book

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Give a useful outage message while distinguishing affected scope, assessment status, and the next update.

02 Safety, Field Work, and Switching, page 17

Escalate conflicting equipment references and use exact repeat-back without creating an operational instruction.

03 Regulatory Affairs and Rate Cases, page 33

Explain a rate proposal and calculate a conditional bill example without implying approval.

04 Renewables Integration and Interconnection, page 45

Explain renewable-project review status without confusing capacity, application progress, and operating permission.

05 Asset Management and Maintenance, page 61

Compare a stated cost basis, test an assumption, and keep the purchase decision separate from partial arithmetic.

06 Emergency Preparedness and Storm Response, page 73

Hand over storm-response resources with exact counts, distinct statuses, and a clear receiving owner.

07 Customer Programs and Energy Efficiency, page 88

Report an observed energy reduction while separating measurement, explanation, and verified savings.

08 Executive Reliability and Investment Updates, page 101

Translate reliability indices, check a comparison, and distinguish a metric trend from an investment promise.

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Suggested study range: B2-C1. This is an editorial study range, not a certified proficiency assessment.

Translate the system without changing its meaning

Utility conversations move between specialist records and decisions that affect customers. Translate jargon into clear language while preserving the difference between an estimate, an authorization, a measured result, and an unresolved question.

Put status beside the number

A time may refer to restoration, a crew arrival, or the next information update. Name what it measures and whether it is verified, estimated, requested, or still unavailable.

"The next update is at 16:40; that is not a restoration estimate."

Make identifiers exact

Similar equipment labels are not interchangeable. Raise a mismatch through the authorized process and keep the operational restriction explicit; a plausible correction is not verification.

"The work package says Q27; the switching request says Q72. The discrepancy remains unresolved."

Show the comparison basis

Purchase price, energy use, and interruption counts answer different questions. State the period, units, included costs or events, and assumptions before drawing a conclusion.

"This is a ten-year purchase-and-maintenance comparison, not the complete life-cycle cost."

Translate without overpromising

Plain language should make a technical boundary easier to understand, not remove it. A queued application is not an approved connection, and a lower meter reading is not by itself verified program savings.

"The application is in review; permission to operate has not been issued."

Professional boundaries

All organizations, projects, figures, equipment identifiers, and local processes are fictional. This is English-language practice, not electrical, emergency, financial, regulatory, or engineering instruction. Only qualified personnel using applicable authorized procedures may make operational decisions. No dialogue authorizes switching, access, energization, or restoration.

A Read the situation

LESSON 01 / GRID RELIABILITY AND OUTAGE RESPONSE

Give a useful outage message while distinguishing affected scope, assessment status, and the next update.

An update time is not a restoration promise

At 16:10 local time, a verified operations update lists 420 affected service points in the Oak district. The cause and estimated restoration time remain under assessment. A crew is assigned, but its arrival has not been confirmed. A draft public message promises restoration by 18:00, although that figure is an unverified internal planning assumption. Communications officer Nia and operations liaison Paul must correct the draft. Paul will provide the next verified status at 16:40 local time, even if no restoration estimate is available. The affected count is a snapshot, not a prediction of the final scope.

People: Nia, Communications officer; Paul, Operations liaison.

Read the record

Choose one answer per question using the facts above.

1. What is verified at 16:10?

- A.** A confirmed equipment failure
- B.** Crew arrival at every affected location
- C.** 420 affected service points in the Oak district
- D.** Restoration by 18:00

2. What does 16:40 represent?

- A.** The next status update
- B.** Guaranteed restoration
- C.** Confirmed crew arrival
- D.** The start of the outage

3. Which crew statement is accurate?

- A.** A crew has completed the repair.
- B.** Every crew is on site.
- C.** No crew has been assigned.
- D.** A crew is assigned; arrival is unconfirmed.

[Answers and explanations, page 133](#)

B Vocabulary in use

CORE TERMS

electric grid

The interconnected infrastructure delivering electricity from sources to users.

maintain the electric grid

distribution

Delivery of electricity through the network serving end users.

restore distribution service

substation

A facility connecting, transforming, or controlling parts of an electrical network.

identify the supplying substation

outage

A loss or unavailability of electricity service or equipment function.

report an outage

estimated restoration time (ERT)

The current estimate of when interrupted service may be restored.

update the estimated restoration time

crew assignment

Allocation of a crew to an identified task or response.

confirm the crew assignment

transmission

Bulk movement of electricity over the relevant high-voltage network.

coordinate transmission operations

feeder

A circuit supplying a section of the distribution network.

identify the affected feeder

service point

A defined point at which service is supplied or measured.

count affected service points

outage footprint

The area or set of service points affected by an outage.

verify the outage footprint

damage assessment

Evaluation of damage and relevant conditions following an event.

coordinate damage assessment

crew arrival

The crew reaching the relevant location, distinct from being assigned.

verify crew arrival

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

electric grid ELECTRIC GRID

maintain the electric grid

Keep the meaning precise: The interconnected infrastructure delivering electricity from sources to users.

service point SERVICE POINT

count affected service points

Keep the meaning precise: A defined point at which service is supplied or measured.

B Precision and professional shorthand

EXTEND YOUR RANGE

dispatch

Coordination and direction of resources or operating activity.

contact dispatch

supervisory control and data acquisition (SCADA)

Systems used to monitor and control relevant industrial processes.

interpret SCADA information

load

Electrical demand placed on the system or equipment.

monitor system load

kilowatt (kW)

A unit of power equal to one thousand watts.

state demand in kilowatts

restoration sequence

The authorized order of activities or service recovery during restoration.

communicate the restoration sequence

outage management system (OMS)

A system supporting outage tracking, analysis, and response coordination.

update the outage management system

telemetry

Measurements or status information transmitted from remote equipment.

verify telemetry status

peak demand

The highest demand over a specified period and measurement basis.

assess peak demand

kilowatt-hour (kWh)

A unit of energy equal to one kilowatt sustained for one hour.

measure energy in kilowatt-hours

status snapshot

A report of conditions as known at a stated time.

timestamp the status snapshot

B Precision and professional shorthand / continued

planning assumption

An unverified condition or estimate used in developing a plan.

label a planning assumption

update commitment

A promise to provide new status information at a specified point.

keep the update commitment

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

crew arrival CREW ARRIVAL

verify crew arrival

Keep the meaning precise: The crew reaching the relevant location, distinct from being assigned.

load LOAD

monitor system load

Keep the meaning precise: Electrical demand placed on the system or equipment.

Phrases that move the work forward

Timestamp the message

This is the verified status as of 16:10 local time.

Limit the count

That is the current snapshot, not a final impact total.

Separate the estimate

A restoration estimate is not yet available.

Explain the source

That figure was an unverified planning assumption.

Make a clear commitment

Our next status update will be at 16:40 local time.

Acknowledge disruption

I understand that the uncertainty makes planning difficult.

Coordinate the channels

Correct the website and customer-service message together.

Maintain contact

We will update you even if the estimate remains unavailable.

Name the scope

The update lists 420 affected service points in the Oak district.

State the assessment

The cause remains under assessment.

Correct unsupported certainty

We cannot publish 18:00 as a confirmed restoration time.

Describe crew status

A crew is assigned; arrival is not yet confirmed.

Preserve the distinction

The update time is not a promise of restored service.

Avoid a guessed cause

We will not name a cause before it is verified.

Keep the clock basis

Use local time consistently in the public update.

Close accurately

Share the confirmed facts and the questions still under assessment.

Precision in real exchanges

Purpose: State the assessment

Useful wording: The cause remains under assessment.

Purpose: Separate the estimate

Useful wording: A restoration estimate is not yet available.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which public update matches the record?

- A.** Crews have arrived everywhere; repair is complete.
- B.** The cause is known because a crew is assigned.
- C.** At 16:10, 420 service points are affected; restoration timing is under assessment; next update 16:40.
- D.** All 420 people will have power at 18:00.

2. Which phrase wrongly strengthens the crew status?

- A.** Crews are on site.
- B.** A crew is assigned.
- C.** Arrival is unconfirmed.
- D.** We are checking the arrival status.

3. A colleague needs the term for this meaning: A circuit supplying a section of the distribution network. Which term fits?

- A.** feeder
- B.** restoration sequence
- C.** supervisory control and data acquisition (SCADA)
- D.** estimated restoration time (ERT)

D Choose the response that fits / continued

4. Rebuild the exchange from "An update time is not a restoration promise". Nia: "I will retain service points rather than replace that with residents. Customers also want to know whether anybody is working on the problem right now." Paul: [missing response] Nia: "Customer service is already saying on site. I will ask them to change that to assigned, with arrival unconfirmed." Which response belongs in the gap?

- A.** Those are the verified figures in the status snapshot. Keep the timestamp attached. The number may change as information improves, and it is not a count of individual people.
- B.** Exactly. The outage management system supports tracking, but we still need to communicate the actual verified status. A populated field does not justify a stronger statement than its source.
- C.** Agreed. Describe the outage footprint consistently as well. We have a verified Oak district snapshot, not evidence that every nearby district or every person in that area is affected.
- D.** We can confirm the crew assignment. Arrival has not been verified, so do not say crews are on site. Assignment and physical arrival are different stages in the response.

[Answers and explanations, page 133](#)

One useful distinction

A service-point count is not necessarily a count of individual people. The 420 figure describes the verified snapshot at 16:10. Do not turn it into a final impact total or silently change the population being counted.

E Conversation

An update time is not a restoration promise

An update time is not a restoration promise

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

planning assumption / update commitment / crew arrival / estimated restoration time /
restoration sequence / status snapshot / Damage assessment /
outage management system / crew assignment / outage footprint

- 01 **Nia:** The draft promises restoration by eighteen hundred. Before publishing, can you confirm that time's source and whether it is verified?
- 02 **Paul:** It is a ¹ _____, not a confirmed estimate. Remove the promise. As of sixteen ten local time, operations still has the cause and restoration timing under assessment.
- 03 **Nia:** What can I say confidently? The draft also mentions the Oak district and four hundred twenty affected service points, but I want the exact scope.
- 04 **Paul:** Those are the verified figures in the ² _____. Keep the timestamp attached. The number may change as information improves, and it is not a count of individual people.
- 05 **Nia:** I will retain service points rather than replace that with residents. Customers also want to know whether anybody is working on the problem right now.
- 06 **Paul:** We can confirm the ³ _____. Arrival has not been verified, so do not say crews are on site. Assignment and physical arrival are different stages in the response.

E Conversation / continued

- 07 **Nia:** Customer service is already saying on site. I will ask them to change that to assigned, with arrival unconfirmed.
- 08 **Paul:** Exactly. The ⁴ _____ supports tracking, but we still need to communicate the actual verified status. A populated field does not justify a stronger statement than its source.
- 09 **Nia:** Can we at least promise another update? Saying the estimate is unavailable without a next contact point sounds as though we have nothing further to offer.
- 10 **Paul:** Yes. Make an ⁵ _____ for sixteen forty local time. I will provide the verified position then, even if the restoration estimate remains unavailable and we need to say so.

Conversation continues on the next page.

An update time is not a restoration promise

CONVERSATION / CONTINUED

- 11 **Nia:** I will put the update time on its own line and label it clearly. It must not look like a deadline for the lights to come back on.
- 12 **Paul:** Keep it separate from ⁶ _____. Customers may scan only the number. The label must make clear that sixteen forty is our next communication, not an expected restoration or crew arrival.
- 13 **Nia:** The draft also guesses that a failed transformer caused the outage. Our record does not verify that cause.
- 14 **Paul:** Remove that diagnosis. ⁷ _____ and other relevant checks remain with qualified operations personnel. We should not turn a plausible equipment explanation into a finding because it sounds more informative.
- 15 **Nia:** I will correct the website and customer-service script together. Leaving the eighteen hundred promise in either channel would continue the confusion.
- 16 **Paul:** Agreed. Describe the ⁸ _____ consistently as well. We have a verified Oak district snapshot, not evidence that every nearby district or every person in that area is affected.
- 17 **Nia:** The draft also says the affected equipment is safe because service is off. I will remove that; the outage record does not establish safety.
- 18 **Paul:** Preserve that boundary without improvising instructions. The ⁹ _____ and equipment safety remain governed by authorized procedures. This message reports customer-service status; it does not authorize anyone to approach or operate equipment.

An update time is not a restoration promise / continued

- 19 **Nia:** The revised message will give the timestamp, affected service points, unresolved cause and timing, assigned crew with arrival unconfirmed, and the sixteen forty update.
- 20 **Paul:** That is accurate. If ¹⁰ _____ or restoration information is confirmed before the next update, we can communicate the verified change. Until then, keep the difference between known status and expectation visible.

CHECK THE GAPS

1. planning assumption / 2. status snapshot / 3. crew assignment / 4. outage management system / 5. update commitment / 6. estimated restoration time / 7. Damage assessment / 8. outage footprint / 9. restoration sequence / 10. crew arrival

[Why these answers fit, page 134](#)

F Check accuracy and scope

An update time is not a restoration promise

Return to the case

At 16:10 local time, a verified operations update lists 420 affected service points in the Oak district. The cause and estimated restoration time remain under assessment. A crew is assigned, but its arrival has not been confirmed. A draft public message promises restoration by 18:00, although that figure is an unverified internal planning assumption. Communications officer Nia and operations liaison Paul must correct the draft. Paul will provide the next verified status at 16:40 local time, even if no restoration estimate is available. The affected count is a snapshot, not a prediction of the final scope.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. What should happen if no estimate exists at 16:40?

- A. Cancel all communication without explanation.
- B. Invent a restoration time to meet the commitment.
- C. Repeat 18:00 as if it had been verified.
- D. Provide the promised update and state that timing remains under assessment.

2. What does the 420 figure count?

- A. Service points in the verified snapshot
- B. Every person experiencing disruption
- C. Every network asset needing replacement
- D. The guaranteed final number affected

[Answers and explanations, page 136](#)

Listen for the distinction

Switch roles; emphasize assigned versus arrived and 16:40 as an information update, not restoration.

Uncertainty needs a useful next step

Customers can hear we do not know as abandonment if the message stops there. Give the confirmed scope, explain what remains under assessment, and state the next update commitment. Do not manufacture confidence by converting a planning assumption into a promise.

F Say it / transfer to a new case

Correct a second outage message

At 09:20 local time, 180 service points are affected in Pine district. Restoration timing is under assessment. The next information update is 09:50.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

09:50 / 180 / Pine / assessment

- 01 **Officer:** The verified affected count is ¹ _____ service points.
- 02 **Liaison:** The affected district is ² _____.
- 03 **Officer:** The next information update is at ³ _____.
- 04 **Liaison:** Restoration timing remains under ⁴ _____.

CHECK THE GAPS

1. 180 / 2. Pine / 3. 09:50 / 4. assessment

[Why these answers fit, page 136](#)

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "An update time is not a restoration promise". Nia: "The draft also guesses that a failed transformer caused the outage. Our record does not verify that cause." Paul: [missing response] Nia: "I will correct the website and customer-service script together. Leaving the eighteen hundred promise in either channel would continue the confusion." Which response belongs in the gap?

- A.** Yes. Make an update commitment for sixteen forty local time. I will provide the verified position then, even if the restoration estimate remains unavailable and we need to say so.
- B.** Those are the verified figures in the status snapshot. Keep the timestamp attached. The number may change as information improves, and it is not a count of individual people.
- C.** Remove that diagnosis. Damage assessment and other relevant checks remain with qualified operations personnel. We should not turn a plausible equipment explanation into a finding because it sounds more informative.
- D.** We can confirm the crew assignment. Arrival has not been verified, so do not say crews are on site. Assignment and physical arrival are different stages in the response.

[Answers and explanations, page 137](#)

A Read the situation

LESSON 02 / SAFETY, FIELD WORK, AND SWITCHING

Escalate conflicting equipment references and use exact repeat-back without creating an operational instruction.

Two identifiers must not be treated as interchangeable

A fictional field work package identifies equipment Q27, while its associated switching request identifies Q72. The team has not established which identifier is correct. Field lead Luis has placed the affected task on hold under the local process; no operational action is authorized from these conflicting documents. System operator Farah will coordinate reconciliation through the authorized document and operating procedures. Neither identifier is to be silently corrected, and neither the equipment state nor a safe work condition can be inferred from this dialogue. The language task is to communicate the discrepancy, hold, owner, and next review accurately.

People: Luis, Field lead; Farah, System operator.

Read the record

Choose one answer per question using the facts above.

1. Which identifiers conflict?

- A. Two approved replacement instructions
- B. Q27 and Q72
- C. Q27 and Q27
- D. Two confirmed names for the same asset

2. Which identifier is correct from the supplied facts?

- A. Q72 because it sounds more familiar
- B. Both, because the digits match
- C. It has not been established.
- D. Q27 because it appears first

3. What does a repeat-back establish?

- A. That equipment is deenergized
- B. That a switching action is authorized
- C. That the physical asset has been verified
- D. That the discrepancy and current hold were understood

[Answers and explanations, page 138](#)

B Vocabulary in use

CORE TERMS

equipment identifier

The exact reference used to identify a particular item of equipment.

verify the equipment identifier

work package

The documents and information governing a defined work task.

review the work package

switching order

An authorized sequence or instruction for switching under the applicable process.

verify the switching order

system operator

An authorized person responsible for specified system-operating functions.

contact the system operator

energized

Connected to an electrical energy source or otherwise carrying electrical potential as applicable.

verify energized status

isolation

Separation from relevant energy sources under the applicable authorized process.

verify isolation requirements

asset tag

A label or code assigned to an asset for identification.

reconcile the asset tag

switching request

A request for specified switching activity through the authorized process.

check the switching request

single-line diagram

A simplified diagram representing electrical connections with single lines.

consult the current single-line diagram

field lead

The person leading the relevant field team or task.

notify the field lead

deenergized

Without connection to an electrical potential source, stored charge, or voltage relative to earth; not synonymous with safe to work.

establish deenergized status

backfeed

Electrical energy supplied from an unexpected or alternative direction or source.

assess backfeed hazards

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

equipment identifier EQUIPMENT IDENTIFIER

verify the equipment identifier

Keep the meaning precise: The exact reference used to identify a particular item of equipment.

single-line diagram SINGLE-LINE DIAGRAM

consult the current single-line diagram

Keep the meaning precise: A simplified diagram representing electrical connections with single lines.

B Precision and professional shorthand

EXTEND YOUR RANGE

grounding

Establishing the required electrical connection to ground under applicable procedures.

follow authorized grounding requirements

arc flash

A hazardous release of energy associated with an electrical arc.

assess arc-flash hazards

qualified worker

A worker with the required training and competence for the specified task.

verify qualified-worker status

clearance

A formal authorization or controlled status with a defined meaning under the operating procedure.

verify the clearance conditions

read-back

Repetition of a received message to check its accuracy.

perform an exact read-back

induced voltage

Voltage produced by electromagnetic influence from another source.

assess induced-voltage hazards

minimum approach distance

A required separation from electrical hazards under applicable conditions and rules.

observe the applicable minimum approach distance

operating authority

The assigned authority to make or direct specified operational decisions.

preserve operating authority

lockout/tagout

Procedures using locks and tags within the applicable hazardous-energy control process.

follow applicable lockout/tagout procedures

hold point

A boundary beyond which the affected activity must not proceed until requirements are met.

maintain the hold point

B Precision and professional shorthand / continued

document reconciliation

Resolving conflicting information through the authorized review and record process.

complete document reconciliation

revision control

Management of document versions and their applicable status.

maintain revision control

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

backfeed BACKFEED

assess backfeed hazards

Keep the meaning precise: Electrical energy supplied from an unexpected or alternative direction or source.

qualified worker QUALIFIED WORKER

verify qualified-worker status

Keep the meaning precise: A worker with the required training and competence for the specified task.

Phrases that move the work forward

State the discrepancy

The work package says Q27; the switching request says Q72.

Avoid choosing by appearance

We have not established which identifier is correct.

Contrast the other reference

The switching request reads Q seven two.

Name the review owner

Farah will coordinate the authorized reconciliation.

Check receipt

Please read back the discrepancy and task status.

Avoid a state assumption

We cannot infer the equipment's electrical state from these labels.

Maintain role boundaries

Only the relevant authorized personnel can change the operating status.

State the next condition

The conflict must be resolved through the required process.

Keep the hold explicit

The affected task remains on hold.

Repeat the digits

I read Q two seven in the work package.

Preserve the documents

Do not silently change either reference.

Keep authority separate

This conversation does not authorize an operational action.

Limit the repeat-back

That confirms the message, not the physical asset.

Check the applicable issue

Reconcile the current documents through revision control.

Avoid an improvised shortcut

Familiarity with the site is not a substitute for verification.

Close accurately

Keep the task on hold until the applicable requirements and authorization are satisfied.

Precision in real exchanges

Purpose: Repeat the digits

Useful wording: I read Q two seven in the work package.

Purpose: Contrast the other reference

Useful wording: The switching request reads Q seven two.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which message preserves the discrepancy?

- A.** Q27 is correct because it was typed first.
- B.** Q72 is correct because the numbers look familiar.
- C.** Both references mean the same equipment, so proceed.
- D.** Work package Q27; switching request Q72; correct reference unresolved; task on hold.

2. What should happen to the conflicting records?

- A.** Quietly edit one until both match.
- B.** Delete the less convenient reference.
- C.** Replace both with a guessed asset name.
- D.** Preserve them and use the authorized reconciliation process.

3. A colleague needs the term for this meaning: A request for specified switching activity through the authorized process. Which term fits?

- A.** arc flash
- B.** read-back
- C.** energized
- D.** switching request

D Choose the response that fits / continued

4. Rebuild the exchange from "Two identifiers must not be treated as interchangeable". Luis: "I will preserve both documents and report the mismatch. The team knows the site well, but familiarity does not tell us which record is wrong." Farah: [missing response] Luis: "Let me read the distinction again: Q two seven in the package; Q seven two in the request. The affected task remains on hold." Which response belongs in the gap?

- A.** That is the right boundary. A switching request is not permission to improvise an operation. Keep the discrepancy and hold explicit until the actual procedure establishes the information and authorization required.
- B.** Do not substitute plausibility for document reconciliation. We need the applicable process to establish the correct information and its relationship to the physical asset, not merely make two documents look consistent.
- C.** Correct. The work package may contain the error, or the associated request may. We must not give either one automatic priority just because it was the first document someone read.
- D.** Use the required revision control process. The relevant records must be reconciled and distributed correctly, with any operational authorization handled under its own requirements rather than implied by an attachment.

[Answers and explanations, page 138](#)

One useful distinction

Q27 and Q72 contain the same digits in a different order. That resemblance does not prove a harmless typo or identify the correct asset. Keep both references intact in the discrepancy report until authorized reconciliation is complete.

E Conversation

Two identifiers must not be treated as interchangeable

Two identifiers must not be treated as interchangeable

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

Operating authority / equipment identifier / work package / deenergized / hold point / read-back / system operator / revision control / document reconciliation / switching request

- 01 **Luis:** The affected task is on hold. Our work package identifies Q two seven, but the switching request identifies Q seven two. We have not established the correct reference.
- 02 **Farah:** I have the ¹ _____ discrepancy. Keep both references exactly as recorded while I coordinate the authorized review. This conversation does not authorize any operational action.
- 03 **Luis:** A colleague thinks the digits were simply transposed and wants to correct the request. That may be plausible, but we do not have a verified basis.
- 04 **Farah:** Do not substitute plausibility for ² _____. We need the applicable process to establish the correct information and its relationship to the physical asset, not merely make two documents look consistent.
- 05 **Luis:** I will preserve both documents and report the mismatch. The team knows the site well, but familiarity does not tell us which record is wrong.
- 06 **Farah:** Correct. The ³ _____ may contain the error, or the associated request may. We must not give either one automatic priority just because it was the first document someone read.

Conversation / continued

- 07 **Luis:** Let me read the distinction again: Q two seven in the package; Q seven two in the request. The affected task remains on hold.
- 08 **Farah:** That ⁴ _____ confirms the message accurately. It does not verify the physical equipment, establish its electrical state, or satisfy the separate requirements for an authorized operating decision.
- 09 **Luis:** I will tell the incoming lead you received the mismatch but have not released the task. Both identifiers will stay in the handover.
- 10 **Farah:** Keep the ⁵ _____ visible in the handover. My acknowledgement means I received the discrepancy. It is not a release, a clearance, or an instruction to perform switching.

Conversation continues on the next page.

Two identifiers must not be treated as interchangeable

CONVERSATION / CONTINUED

- 11 **Luis:** Should I label the equipment deenergized? The public outage map shows customers without supply nearby, but that is a different source.
- 12 **Farah:** Do not infer ⁶ _____ status from an outage map or these records. The applicable hazardous-energy procedures and qualified verification govern that determination, not a communications summary.
- 13 **Luis:** I will leave the equipment state unconfirmed. We need to communicate the document problem, not create our own technical work sequence.
- 14 **Farah:** Exactly. ⁷ _____ remains with the relevant authorized personnel under the actual procedures. Neither our discussion nor a corrected label alone establishes every condition required for the work.
- 15 **Luis:** Who coordinates the next review? The incoming lead needs a named contact and a clear statement that the discrepancy remains unresolved.
- 16 **Farah:** I will coordinate it as the ⁸ _____ for this exchange, through the authorized process. Keep the current hold and unresolved reference in the handover, and identify any later verified decision by its record.
- 17 **Luis:** If a replacement file arrives, where will its authorized revision status be recorded? I do not want the crew relying on the filename alone.
- 18 **Farah:** Use the required ⁹ _____ process. The relevant records must be reconciled and distributed correctly, with any operational authorization handled under its own requirements rather than implied by an attachment.

Two identifiers must not be treated as interchangeable / continued

- 19 **Luis:** My summary is Q27 in the package, Q72 in the request, correct identifier unresolved, task on hold, and you coordinating the authorized review.
- 20 **Farah:** That is the right boundary. A ¹⁰ _____ is not permission to improvise an operation. Keep the discrepancy and hold explicit until the actual procedure establishes the information and authorization required.

CHECK THE GAPS

1. equipment identifier / **2.** document reconciliation / **3.** work package / **4.** read-back / **5.** hold point / **6.** deenergized / **7.** Operating authority / **8.** system operator / **9.** revision control / **10.** switching request

[Why these answers fit, page 140](#)

F Check accuracy and scope

Two identifiers must not be treated as interchangeable

Return to the case

A fictional field work package identifies equipment Q27, while its associated switching request identifies Q72. The team has not established which identifier is correct. Field lead Luis has placed the affected task on hold under the local process; no operational action is authorized from these conflicting documents. System operator Farah will coordinate reconciliation through the authorized document and operating procedures. Neither identifier is to be silently corrected, and neither the equipment state nor a safe work condition can be inferred from this dialogue. The language task is to communicate the discrepancy, hold, owner, and next review accurately.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. Which conclusion is not supported by a read-back?

- A. The listener knows who coordinates the review.
- B. The equipment is safe to work on.
- C. The listener heard Q27 and Q72.
- D. The listener understood the task is on hold.

2. Which response to schedule pressure is appropriate?

- A. Proceed using whichever asset is closer.
- B. Assume a familiar label removes the conflict.
- C. Use the dialogue as the switching instruction.
- D. The identifier conflict remains unresolved; the task stays on hold under the local process.

[Answers and explanations, page 141](#)

Listen for the distinction

Switch roles for turns 11-20. Keep a correct read-back separate from equipment verification or operating permission.

Exact repetition can prevent a dangerous assumption

Similar numbers can sound like a small administrative mistake. Treat the discrepancy as unresolved until the authorized process establishes the correct reference. A respectful repeat-back confirms the message; it does not verify the physical asset or authorize work.

F Say it / transfer to a new case

Read back another identifier conflict

A work package says R18; its associated request says R81. The correct reference is unresolved. Coordinator Ema owns the review, and the affected task remains on hold.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

R18 / Ema / hold / R81

- 01 **Lead:** The work package identifies ¹ _____.
- 02 **Operator:** The associated request identifies ² _____.
- 03 **Lead:** The review coordinator is ³ _____.
- 04 **Operator:** The affected task remains on ⁴ _____.

CHECK THE GAPS

1. R18 / 2. R81 / 3. Ema / 4. hold

[Why these answers fit, page 141](#)

F Say it / transfer to a new case / continued

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "Two identifiers must not be treated as interchangeable".

Luis: "I will leave the equipment state unconfirmed. We need to communicate the document problem, not create our own technical work sequence." Farah: [missing response] Luis: "Who coordinates the next review? The incoming lead needs a named contact and a clear statement that the discrepancy remains unresolved." Which response belongs in the gap?

- A.** Keep the hold point visible in the handover. My acknowledgement means I received the discrepancy. It is not a release, a clearance, or an instruction to perform switching.
- B.** Exactly. Operating authority remains with the relevant authorized personnel under the actual procedures. Neither our discussion nor a corrected label alone establishes every condition required for the work.
- C.** That read-back confirms the message accurately. It does not verify the physical equipment, establish its electrical state, or satisfy the separate requirements for an authorized operating decision.
- D.** I have the equipment identifier discrepancy. Keep both references exactly as recorded while I coordinate the authorized review. This conversation does not authorize any operational action.

[Answers and explanations, page 142](#)

Review 1 / Meaning and context

Use language from the lessons you have completed. Choose one answer per question.

Case file

Revisit "Grid Reliability and Outage Response" and "Safety, Field Work, and Switching". Choose precise terminology, then reconstruct the missing responses using both neighboring turns. The final two questions also revisit earlier conversations.

1. A colleague needs the term for this meaning: Delivery of electricity through the network serving end users. Which term fits?

- A. kilowatt-hour (kWh)
- B. outage management system (OMS)
- C. distribution
- D. outage footprint

2. A colleague needs the term for this meaning: The person leading the relevant field team or task. Which term fits?

- A. clearance
- B. field lead
- C. grounding
- D. equipment identifier

3. Rebuild the exchange from "An update time is not a restoration promise". Nia: "Can we at least promise another update? Saying the estimate is unavailable without a next contact point sounds as though we have nothing further to offer." Paul: [missing response] Nia: "I will put the update time on its own line and label it clearly. It must not look like a deadline for the lights to come back on." Which response belongs in the gap?

- A. Those are the verified figures in the status snapshot. Keep the timestamp attached. The number may change as information improves, and it is not a count of individual people.
- B. Yes. Make an update commitment for sixteen forty local time. I will provide the verified position then, even if the restoration estimate remains unavailable and we need to say so.
- C. Remove that diagnosis. Damage assessment and other relevant checks remain with qualified operations personnel. We should not turn a plausible equipment explanation into a finding because it sounds more informative.
- D. We can confirm the crew assignment. Arrival has not been verified, so do not say crews are on site. Assignment and physical arrival are different stages in the response.

Review 1 / Meaning and context / continued

4. Rebuild the exchange from "Two identifiers must not be treated as interchangeable". Luis: "If a replacement file arrives, where will its authorized revision status be recorded? I do not want the crew relying on the filename alone." Farah: [missing response] Luis: "My summary is Q27 in the package, Q72 in the request, correct identifier unresolved, task on hold, and you coordinating the authorized review." Which response belongs in the gap?

- A.** Correct. The work package may contain the error, or the associated request may. We must not give either one automatic priority just because it was the first document someone read.
- B.** That is the right boundary. A switching request is not permission to improvise an operation. Keep the discrepancy and hold explicit until the actual procedure establishes the information and authorization required.
- C.** Use the required revision control process. The relevant records must be reconciled and distributed correctly, with any operational authorization handled under its own requirements rather than implied by an attachment.
- D.** Do not substitute plausibility for document reconciliation. We need the applicable process to establish the correct information and its relationship to the physical asset, not merely make two documents look consistent.

[Answers and explanations, page 173](#)

A Read the situation

LESSON 03 / REGULATORY AFFAIRS AND RATE CASES

Explain a rate proposal and calculate a conditional bill example without implying approval.

A proposed rate is mistaken for the current bill

A fictional notice proposes increasing an energy charge from \$0.10 to \$0.105 per kWh, a 5% increase in that component. The monthly fixed charge would remain \$20. The proposal is under review; neither approval nor an effective date is established. Customer adviser Hana uses a simplified 500 kWh monthly example with no taxes, credits, or other charges. At the current rates the example totals \$70; under the proposal it would total \$72.50 at the same usage. Customer Mr Diaz assumes his entire bill has already risen 5%. His actual account has not been reviewed.

People: Hana, Customer adviser; Mr Diaz, Customer.

Read the record

Choose one answer per question using the facts above.

1. What is the proposal's current status?

- A. Already effective for every customer
- B. Rejected permanently
- C. Applied only because a notice was mailed
- D. Under review, with no approval or effective date established

2. What does the 5% figure describe?

- A. The increase in every total bill
- B. The change in monthly usage
- C. An increase in the fixed charge
- D. The energy-charge rate increase from \$0.10 to \$0.105 per kWh

3. What is the current simplified bill at 500 kWh?

- A. \$72.50
- B. \$73.50
- C. \$70
- D. \$50

[Answers and explanations, page 143](#)

B Vocabulary in use

CORE TERMS

tariff

The applicable schedule of rates, terms, and conditions for service.

consult the current tariff

public utilities commission

A regulatory body overseeing specified utility matters in its jurisdiction.

identify the public utilities commission

cost of service

Costs allocated to providing utility service under the relevant analysis.

assess cost of service

rate of return

The return rate considered or allowed on the relevant investment basis.

explain the rate of return

fixed charge

A charge not directly varying with the measured usage in the stated example.

distinguish the fixed charge

demand charge

A charge based on measured or specified demand under the applicable tariff.

explain a demand charge

rate case

A regulatory proceeding concerning utility revenues, rates, or their allocation.

explain the rate case

revenue requirement

The revenue amount considered necessary under the applicable regulatory determination.

review the revenue requirement

rate base

The investment value used in the applicable regulatory return calculation.

determine the rate base

customer class

A grouping of customers used for service or rate treatment.

identify the customer class

volumetric charge

A charge based on the quantity consumed or delivered.

calculate the volumetric charge

ratepayer

A customer paying the regulated utility's rates.

communicate with ratepayers

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

tariff **TARIFF**

consult the current tariff

Keep the meaning precise: The applicable schedule of rates, terms, and conditions for service.

rate base **RATE BASE**

determine the rate base

Keep the meaning precise: The investment value used in the applicable regulatory return calculation.

B Precision and professional shorthand

EXTEND YOUR RANGE

filing

A formal submission to the relevant authority or proceeding.

review a regulatory filing

hearing

A formal session for evidence, argument, or public participation.

attend a regulatory hearing

proposed rate

A rate submitted for consideration rather than established as current.

distinguish the proposed rate

bill impact

The effect of rates and usage on a customer's total charge.

illustrate the bill impact

rate design

The structure by which charges are assigned and recovered from customers.

explain the rate design

intervenor

A party participating in a proceeding under its applicable rules.

identify an intervenor

docket

The official record or identifier for a proceeding.

locate the docket

effective date

The date on which an approved or applicable provision begins to operate.

verify the effective date

approved rate

A rate accepted through the relevant regulatory process.

verify the approved rate

test year

A period used as a basis for the relevant rate-case analysis.

identify the test year

rate rider

A separate adjustment or provision attached to the relevant rate structure.

identify a rate rider

usage assumption

The stated consumption level used in a calculation or example.

state the usage assumption

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

ratepayer RATEPAYER

communicate with ratepayers

Keep the meaning precise: A customer paying the regulated utility's rates.

proposed rate PROPOSED RATE

distinguish the proposed rate

Keep the meaning precise: A rate submitted for consideration rather than established as current.

Phrases that move the work forward

Name the status first

The notice describes a proposal that is still under review.

Identify the component

The five percent refers to the energy-charge rate.

State the proposed rate

The proposed rate is ten and a half cents per kilowatt-hour.

Give the usage basis

This example holds monthly usage at five hundred kilowatt-hours.

Calculate the proposed component

Under the proposal, the energy charge would be fifty-two dollars fifty.

Distinguish percentage bases

That is about a 3.57 percent increase in this example total.

Limit the illustration

Taxes, credits, and other charges are excluded from this simplified example.

Offer the relevant record

The official notice and proceeding record show the proposal's status.

Avoid implied approval

No approval or effective date is established in this case.

State the current rate

The current example rate is ten cents per kilowatt-hour.

Keep the fixed charge

The monthly twenty-dollar fixed charge would remain unchanged.

Calculate the current component

The current energy charge is fifty dollars.

Add the components

The example total would move from seventy dollars to seventy-two dollars fifty.

Preserve the condition

These figures apply only if the proposal is approved as described.

Avoid account assumptions

We have not reviewed your actual account or usage.

Close with a check

The proposal changes one rate component, not every bill by the same percentage.

Precision in real exchanges

Purpose: State the current rate

Useful wording: The current example rate is ten cents per kilowatt-hour.

Purpose: State the proposed rate

Useful wording: The proposed rate is ten and a half cents per kilowatt-hour.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. What would the proposed energy charge be at 500 kWh?

- A.** \$72.50
- B.** \$105
- C.** \$52.50
- D.** \$50

2. What would the simplified total be?

- A.** \$52.50
- B.** \$73.50
- C.** \$75
- D.** \$72.50

3. A colleague needs the term for this meaning: The revenue amount considered necessary under the applicable regulatory determination. Which term fits?

- A.** fixed charge
- B.** revenue requirement
- C.** hearing
- D.** rate design

D Choose the response that fits / continued

4. Rebuild the exchange from "A proposed rate is mistaken for the current bill". Mr Diaz: "Could you show a simple example of how the energy rate combines with the other charge on a bill?" Hana: [missing response] Mr Diaz: "At ten cents for each of five hundred kilowatt-hours, the current energy part is fifty dollars. Then I still add the twenty-dollar monthly charge." Which response belongs in the gap?

- A.** The proposed rate is still under review. No approval or effective date is established here, so the notice does not mean this change has already reached your bill.
- B.** Exactly. The bill impact in this illustration is about three point five seven percent. The energy rate rises five percent, but the unchanged fixed charge makes the total's percentage different.
- C.** Yes. Your customer class and actual applicable terms also matter. We have not reviewed your account, so I should not present this simplified calculation as your personal bill forecast.
- D.** Let's use a usage assumption of five hundred kilowatt-hours for the month. We will hold that constant and exclude taxes, credits, and other charges so the comparison is clear.

[Answers and explanations, page 143](#)

One useful distinction

The example energy charge rises from \$50 to \$52.50. With the unchanged \$20 fixed charge, the total rises from \$70 to \$72.50: \$2.50, or about 3.57%, not 5%. All proposed figures are conditional.

E Conversation

A proposed rate is mistaken for the current bill

A proposed rate is mistaken for the current bill

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

proposed rate / customer class / rate design / fixed charge / volumetric charge /
effective date / approved rate / bill impact / docket / usage assumption

- 01 **Mr Diaz:** I received the notice about a five percent increase. Does that mean my whole electricity bill has already gone up by five percent this month?
- 02 **Hana:** The ¹ _____ is still under review. No approval or effective date is established here, so the notice does not mean this change has already reached your bill.
- 03 **Mr Diaz:** I still want to understand the five percent figure. The notice has several numbers, and I assumed that percentage described my total.
- 04 **Hana:** It describes the ² _____ rate, from ten cents to ten and a half cents per kilowatt-hour. The separate monthly fixed charge would remain twenty dollars.
- 05 **Mr Diaz:** Could you show a simple example of how the energy rate combines with the other charge on a bill?
- 06 **Hana:** Let's use a ³ _____ of five hundred kilowatt-hours for the month. We will hold that constant and exclude taxes, credits, and other charges so the comparison is clear.

Conversation / continued

- 07 **Mr Diaz:** At ten cents for each of five hundred kilowatt-hours, the current energy part is fifty dollars. Then I still add the twenty-dollar monthly charge.
- 08 **Hana:** Correct. Including the ⁴ _____, the current example totals seventy dollars. Under the proposal, the energy part would be fifty-two dollars fifty, before that same twenty dollars.
- 09 **Mr Diaz:** So the proposed example total would be seventy-two dollars fifty. That is two dollars fifty more than seventy, not five percent of the whole amount.
- 10 **Hana:** Exactly. The ⁵ _____ in this illustration is about three point five seven percent. The energy rate rises five percent, but the unchanged fixed charge makes the total's percentage different.

Conversation continues on the next page.

A proposed rate is mistaken for the current bill

CONVERSATION / CONTINUED

- 11 **Mr Diaz:** My usage is not always five hundred, and my bill has a credit line. Can we check my own account before you estimate my total?
- 12 **Hana:** Yes. Your ⁶ _____ and actual applicable terms also matter. We have not reviewed your account, so I should not present this simplified calculation as your personal bill forecast.
- 13 **Mr Diaz:** Where can I see whether the proposal changes or is accepted? I would prefer the official information rather than a social-media summary of the notice.
- 14 **Hana:** Use the official notice and ⁷ _____ to check the proceeding details. We still need the filing number and participation deadline; don't guess either one.
- 15 **Mr Diaz:** And if a decision is eventually issued, I should still check what it actually approves rather than assume every part of the original request was accepted.
- 16 **Hana:** Correct. An ⁸ _____ may differ from what was proposed. The decision and applicable tariff information determine the resulting terms, not the version of the notice first circulated.
- 17 **Mr Diaz:** If it is approved later, how will I know which bill first uses the new rate? Is that date part of the decision?
- 18 **Hana:** Check the ⁹ _____ rather than infer one. Here, neither approval nor that date is established, so the proposed numbers remain conditional throughout our explanation.

A proposed rate is mistaken for the current bill / continued

- 19 **Mr Diaz:** I can now explain it accurately: a five percent proposal for one energy-rate component, with a different percentage effect on the simplified total, and no approved change yet.
- 20 **Hana:** That captures the ¹⁰ _____ distinction. Keep the usage and exclusions beside the example, and use would rather than has when describing the proposal's possible effect.

CHECK THE GAPS

1. proposed rate / 2. volumetric charge / 3. usage assumption / 4. fixed charge / 5. bill impact / 6. customer class / 7. docket / 8. approved rate / 9. effective date / 10. rate design

[Why these answers fit, page 144](#)

F Check accuracy and scope

A proposed rate is mistaken for the current bill

Return to the case

A fictional notice proposes increasing an energy charge from \$0.10 to \$0.105 per kWh, a 5% increase in that component. The monthly fixed charge would remain \$20. The proposal is under review; neither approval nor an effective date is established. Customer adviser Hana uses a simplified 500 kWh monthly example with no taxes, credits, or other charges. At the current rates the example totals \$70; under the proposal it would total \$72.50 at the same usage. Customer Mr Diaz assumes his entire bill has already risen 5%. His actual account has not been reviewed.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. Which percentage statement is accurate?

- A. The fixed charge rises 5%.
- B. Usage necessarily rises 5%.
- C. The energy rate rises 5%; this example total rises about 3.57%.
- D. Every total bill rises exactly 5%.

2. Which customer statement preserves the status?

- A. The proposal takes effect automatically when discussed.
- B. This is a conditional illustration, not an approved change to your account.
- C. Your bill has already risen because the notice was published.
- D. The example determines every future bill.

[Answers and explanations, page 146](#)

Listen for the distinction

Switch roles; stress would for \$72.50 and distinguish the 5 percent component change from the 3.57 percent total change.

Explain the number the customer will actually interpret

A notice may accurately describe a percentage change in one component while a reader hears a change in the whole bill. Identify the component first, then show the conditional total. Do not dismiss the misunderstanding as a failure to read carefully.

F Say it / transfer to a new case

Calculate another conditional example

At 400 kWh, a simplified current bill uses \$0.10 per kWh plus a \$20 fixed charge. An unapproved proposal would change the energy rate to \$0.105. Other charges are excluded.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

unapproved / 62 / 60 / 42

- 01 **Adviser:** The current total is \$¹ _____.
- 02 **Customer:** The proposed energy component would be \$² _____.
- 03 **Adviser:** The proposed total would be \$³ _____.
- 04 **Customer:** The proposal remains ⁴ _____.

CHECK THE GAPS

1. 60 / 2. 42 / 3. 62 / 4. unapproved

[Why these answers fit, page 146](#)

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "A proposed rate is mistaken for the current bill". Mr Diaz: "Where can I see whether the proposal changes or is accepted? I would prefer the official information rather than a social-media summary of the notice." Hana: [missing response] Mr Diaz: "And if a decision is eventually issued, I should still check what it actually approves rather than assume every part of the original request was accepted." Which response belongs in the gap?

- A.** Check the effective date rather than infer one. Here, neither approval nor that date is established, so the proposed numbers remain conditional throughout our explanation.
- B.** Use the official notice and docket to check the proceeding details. We still need the filing number and participation deadline; don't guess either one.
- C.** It describes the volumetric charge rate, from ten cents to ten and a half cents per kilowatt-hour. The separate monthly fixed charge would remain twenty dollars.
- D.** That captures the rate design distinction. Keep the usage and exclusions beside the example, and use would rather than has when describing the proposal's possible effect.

[Answers and explanations, page 147](#)

A Read the situation

LESSON 04 / RENEWABLES INTEGRATION AND INTERCONNECTION

Explain renewable-project review status without confusing capacity, application progress, and operating permission.

In the queue does not mean connected

A fictional 120 kW rooftop solar project has submitted interconnection application Q314 and received an acknowledgement. It is in the review queue, but inverter data remain incomplete and the metering review is open. No connection approval, permission to operate, confirmed upgrade cost, or operating date has been issued. Developer Elena finds a presentation saying connection secured. Utility coordinator Amir must help replace that claim with the actual status. The 120 kW figure is proposed nameplate power, not annual energy output or a guaranteed export allowance. Applicable utility and jurisdictional requirements govern the real process.

People: Elena, Project developer; Amir, Utility interconnection coordinator.

Read the record

Choose one answer per question using the facts above.

1. What has the project received?

- A. A final upgrade invoice
- B. An acknowledgement of application Q314
- C. Permission to operate
- D. A guaranteed export allowance

2. What does 120 kW describe?

- A. Proposed nameplate power
- B. Annual energy in kWh
- C. A confirmed export entitlement
- D. The approved upgrade price

3. Which status is supported?

- A. Every technical review passed
- B. No application exists
- C. Application acknowledged; inverter data incomplete; metering review open
- D. Connection secured with a fixed operating date

[Answers and explanations, page 148](#)

B Vocabulary in use

CORE TERMS

interconnection

The arrangement and process for connecting a generating resource to an electrical network.

review the interconnection

photovoltaic (PV)

Relating to conversion of sunlight into electricity.

develop a photovoltaic project

inverter

Equipment converting direct-current electricity to alternating-current electricity in the relevant application.

submit inverter data

review queue

The sequence or grouping of applications awaiting relevant review.

track the review queue

feasibility study

A preliminary assessment of whether and under what conditions a proposed connection may be feasible.

review a feasibility study

distributed energy resource (DER)

A generation, storage, or controllable resource connected at the distribution or customer level.

assess a distributed energy resource

nameplate capacity

The rated power capacity stated for equipment or a system on its specified basis.

state nameplate capacity

application acknowledgement

Confirmation that a submitted application has been received.

distinguish application acknowledgement

queue position

The application's place under the applicable queue rules.

confirm queue position

system impact study

Analysis of a proposed connection's effects on the electrical system.

assess the system impact study

B Vocabulary in use / continued

facilities study

Review of the facilities and associated work needed for a proposed connection.

review the facilities study

hosting capacity

The ability of a network area to accommodate additional resources under defined conditions.

assess hosting capacity

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

interconnection INTERCONNECTION

review the interconnection

Keep the meaning precise: The arrangement and process for connecting a generating resource to an electrical network.

application acknowledgement APPLICATION ACKNOWLEDGEMENT

distinguish application acknowledgement

Keep the meaning precise: Confirmation that a submitted application has been received.

B Precision and professional shorthand

EXTEND YOUR RANGE

export limit

A limit on the power a resource may send to the network under applicable terms.

verify the export limit

protection settings

Parameters governing relevant protective equipment behavior.

verify protection settings

network upgrade

A change to network facilities required or proposed for a connection or other need.

assess network upgrades

interconnection agreement

The applicable agreement defining the terms of a connection.

review the interconnection agreement

commissioning

Verification and documentation of installed-system performance under the relevant process.

coordinate commissioning

non-export arrangement

An arrangement intended to prevent export to the network under its specified controls and terms.

review a non-export arrangement

metering arrangement

The equipment and terms used to measure relevant flows or usage.

confirm the metering arrangement

cost allocation

Assignment of costs to the relevant parties under the applicable basis.

clarify cost allocation

permission to operate (PTO)

The required authorization to operate under the relevant utility process.

verify permission to operate

curtailment

Reduction of output below otherwise available generation under specified conditions.

explain curtailment risk

B Precision and professional shorthand / continued

power quality

Characteristics of electrical supply or output relevant to acceptable performance.

assess power quality

reactive power

Power associated with alternating-current energy exchange in inductive or capacitive elements.

assess reactive-power requirements

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

hosting capacity HOSTING CAPACITY

assess hosting capacity

Keep the meaning precise: The ability of a network area to accommodate additional resources under defined conditions.

network upgrade NETWORK UPGRADE

assess network upgrades

Keep the meaning precise: A change to network facilities required or proposed for a connection or other need.

C Phrases that move the work forward

Report the completed step

Application Q314 has been submitted and acknowledged.

Correct the slide

Connection secured overstates the current status.

Name the second open item

The metering review is still open.

Define the capacity figure

The 120 kW figure is proposed nameplate power.

Avoid an export assumption

Nameplate capacity does not establish the permitted export limit.

Preserve timing uncertainty

No operating date has been issued.

Limit queue language

Queue status does not itself reserve an approved connection.

Avoid automatic completion

Supplying one missing document does not close every review.

State the current stage

The application is in the review queue.

Name the first open item

Inverter data remain incomplete.

Separate operating permission

No permission to operate has been issued.

Avoid an energy claim

It is not annual energy output in kilowatt-hours.

Keep costs qualified

Upgrade costs and their allocation are not confirmed.

Ask for the applicable route

Which current utility requirements govern this application?

Coordinate the missing input

We will submit the required inverter information for review.

Close with separate statuses

Report receipt, technical review, commercial terms, and operating permission separately.

Precision in real exchanges

Purpose: Name the first open item

Useful wording: Inverter data remain incomplete.

Purpose: Name the second open item

Useful wording: The metering review is still open.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which presentation line is accurate?

- A.** Connection secured because the acknowledgement arrived
- B.** Annual output guaranteed at 120 kW
- C.** Export rights confirmed by the proposed nameplate rating
- D.** Q314 acknowledged; technical reviews open; no operating permission issued

2. Which unit measures energy rather than power?

- A.** W
- B.** kWh
- C.** kW
- D.** MW

3. A colleague needs the term for this meaning: The rated power capacity stated for equipment or a system on its specified basis. Which term fits?

- A.** feasibility study
- B.** commissioning
- C.** nameplate capacity
- D.** protection settings

D Choose the response that fits / continued

4. Rebuild the exchange from "In the queue does not mean connected". Elena: "I will replace secured with application submitted and acknowledged, technical review ongoing. What should I say about the 120 kW figure beside the project name?" Amir: [missing response] Elena: "I will change the label. The slide currently uses the same 120 figure under annual generation, which the rating does not support." Which response belongs in the gap?

- A.** Describe the review queue status accurately. We have no basis here to claim reserved capacity, an approved export allowance, or a completed connection decision from that administrative step.
- B.** Correct. Nor does the figure establish an export limit. The permitted operating arrangement depends on the applicable review and terms, not simply the size written on the proposed equipment.
- C.** Label it proposed nameplate capacity. It describes power on its stated rating basis. It is not annual energy output, which would use kilowatt-hours, and it does not establish actual generation.
- D.** Good. The eventual interconnection agreement and required operating authorizations each need their actual status reported. Do not let a short heading collapse all those stages into one unsupported claim.

[Answers and explanations, page 148](#)

One useful distinction

Kilowatts describe power; kilowatt-hours describe energy over time. Proposed nameplate power does not establish annual output, hosting capacity, approved export, or permission to operate. Each needs its own basis and, where relevant, decision.

E Conversation

In the queue does not mean connected

In the queue does not mean connected

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

export limit / cost allocation / network upgrades / nameplate capacity /
interconnection agreement / permission to operate / review queue / metering arrangement
/ inverter / application acknowledgement

- 01 **Elena:** The presentation says connection secured. We have an acknowledgement for Q314, but is that heading too strong?
- 02 **Amir:** It is. The ¹ _____ confirms receipt, not approval. Inverter data remain incomplete, the metering review is open, and no permission to operate has been issued.
- 03 **Elena:** Can I describe our queue status as capacity reserved, or would that imply a commitment the record does not establish?
- 04 **Amir:** Describe the ² _____ status accurately. We have no basis here to claim reserved capacity, an approved export allowance, or a completed connection decision from that administrative step.
- 05 **Elena:** I will replace secured with application submitted and acknowledged, technical review ongoing. What should I say about the 120 kW figure beside the project name?
- 06 **Amir:** Label it proposed ³ _____. It describes power on its stated rating basis. It is not annual energy output, which would use kilowatt-hours, and it does not establish actual generation.

Conversation / continued

- 07 **Elena:** I will change the label. The slide currently uses the same 120 figure under annual generation, which the rating does not support.
- 08 **Amir:** Correct. Nor does the figure establish an ⁴ _____. The permitted operating arrangement depends on the applicable review and terms, not simply the size written on the proposed equipment.
- 09 **Elena:** The technical team is preparing the missing inverter information. I can give them the action, but I should not promise that supplying it completes every review.
- 10 **Amir:** Exactly. The ⁵ _____ data are one open input. The metering review remains separate, and other applicable requirements still need their own verified status under the actual utility process.

Conversation continues on the next page.

In the queue does not mean connected

CONVERSATION / CONTINUED

- 11 **Elena:** The investor slide also shows our internal operating target. We have no confirmation that the required reviews will finish by then.
- 12 **Amir:** Mark it as an internal target, not ⁶ _____ or a confirmed date. In this case, no operating date has been issued, and no one should interpret the slide as authorization to energize or operate.
- 13 **Elena:** We should remove the claim that upgrades will cost nothing as well. I do not see any verified study or cost decision supporting that assumption.
- 14 **Amir:** Yes. Potential ⁷ _____ and their costs remain unconfirmed here. An application acknowledgement does not determine whether upgrades are needed or which party would pay for them.
- 15 **Elena:** I will separate the engineering questions from the commercial ones. A technical answer might identify work, but the responsibility for its cost still needs its own basis.
- 16 **Amir:** That is the ⁸ _____ distinction. Use the applicable rules and agreements rather than assume that a rooftop project, a queue position, or a proposed budget settles responsibility.
- 17 **Elena:** What can I put in the next-actions box? The investors need to see which submission our team is preparing and which review remains open.
- 18 **Amir:** Say the team is submitting the missing data for review while the ⁹ _____ is being assessed. That is concrete progress, with the open items visible, and does not imply that either review has reached a favorable decision.
- 19 **Elena:** My revised slide will distinguish proposed power, acknowledged application, open technical items, unconfirmed costs and timing, and the absence of operating permission.
- 20 **Amir:** Good. The eventual ¹⁰ _____ and required operating authorizations each need their actual status reported. Do not let a short heading collapse all those stages into one unsupported claim.

CHECK THE GAPS

1. application acknowledgement / 2. review queue / 3. nameplate capacity / 4. export limit / 5. inverter / 6. permission to operate / 7. network upgrades / 8. cost allocation / 9. metering arrangement / 10. interconnection agreement

[Why these answers fit, page 150](#)

F Check accuracy and scope

In the queue does not mean connected

Return to the case

A fictional 120 kW rooftop solar project has submitted interconnection application Q314 and received an acknowledgement. It is in the review queue, but inverter data remain incomplete and the metering review is open. No connection approval, permission to operate, confirmed upgrade cost, or operating date has been issued. Developer Elena finds a presentation saying connection secured. Utility coordinator Amir must help replace that claim with the actual status. The 120 kW figure is proposed nameplate power, not annual energy output or a guaranteed export allowance. Applicable utility and jurisdictional requirements govern the real process.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. What follows from submitting the missing inverter data?

- A. That input can be reviewed; other requirements remain separate.
- B. Every review automatically closes.
- C. The system can operate immediately.
- D. Upgrade costs become zero.

2. Which statement about costs is supported?

- A. All upgrades are free because the system is rooftop solar.
- B. The application number is the upgrade price.
- C. Acknowledgement makes the developer's budget binding on the utility.
- D. Upgrade costs and allocation remain unconfirmed.

[Answers and explanations, page 151](#)

Listen for the distinction

Switch roles for turns 11-20; separate an internal target, upgrade cost allocation, and operating permission.

A milestone label can outrun the evidence

A project team may shorten a long status into secured to sound decisive. State the completed administrative step and the open technical questions separately. This allows a positive report of progress without implying a permission or commercial certainty that does not exist.

F Say it / transfer to a new case

Report another application stage

A proposed 75 kW project has acknowledgement for application Z206. Metering review is open, and no permission to operate is issued.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

open / 75 / unissued / Z206

- 01 **Developer:** The application reference is ¹ _____.
- 02 **Coordinator:** The proposed nameplate power is ² _____ kW.
- 03 **Developer:** Metering review remains ³ _____.
- 04 **Coordinator:** Permission to operate is ⁴ _____.

CHECK THE GAPS

1. Z206 / 2. 75 / 3. open / 4. unissued

[Why these answers fit, page 151](#)

F Say it / transfer to a new case / continued

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "In the queue does not mean connected". Elena: "We should remove the claim that upgrades will cost nothing as well. I do not see any verified study or cost decision supporting that assumption." Amir: [missing response] Elena: "I will separate the engineering questions from the commercial ones. A technical answer might identify work, but the responsibility for its cost still needs its own basis." Which response belongs in the gap?

- A.** Yes. Potential network upgrades and their costs remain unconfirmed here. An application acknowledgement does not determine whether upgrades are needed or which party would pay for them.
- B.** Exactly. The inverter data are one open input. The metering review remains separate, and other applicable requirements still need their own verified status under the actual utility process.
- C.** It is. The application acknowledgement confirms receipt, not approval. Inverter data remain incomplete, the metering review is open, and no permission to operate has been issued.
- D.** Describe the review queue status accurately. We have no basis here to claim reserved capacity, an approved export allowance, or a completed connection decision from that administrative step.

[Answers and explanations, page 152](#)

Review 2 / Meaning and context

Use language from the lessons you have completed. Choose one answer per question.

Case file

Revisit "Regulatory Affairs and Rate Cases" and "Renewables Integration and Interconnection". Choose precise terminology, then reconstruct the missing responses using both neighboring turns. The final two questions also revisit earlier conversations.

1. A colleague needs the term for this meaning: A regulatory body overseeing specified utility matters in its jurisdiction. Which term fits?

- A. docket
- B. test year
- C. public utilities commission
- D. customer class

2. A colleague needs the term for this meaning: The application's place under the applicable queue rules. Which term fits?

- A. interconnection agreement
- B. interconnection
- C. queue position
- D. export limit

3. Rebuild the exchange from "Two identifiers must not be treated as interchangeable". Luis: "I will tell the incoming lead you received the mismatch but have not released the task. Both identifiers will stay in the handover." Farah: [missing response] Luis: "Should I label the equipment deenergized? The public outage map shows customers without supply nearby, but that is a different source." Which response belongs in the gap?

- A. That read-back confirms the message accurately. It does not verify the physical equipment, establish its electrical state, or satisfy the separate requirements for an authorized operating decision.
- B. I have the equipment identifier discrepancy. Keep both references exactly as recorded while I coordinate the authorized review. This conversation does not authorize any operational action.
- C. Keep the hold point visible in the handover. My acknowledgement means I received the discrepancy. It is not a release, a clearance, or an instruction to perform switching.
- D. Exactly. Operating authority remains with the relevant authorized personnel under the actual procedures. Neither our discussion nor a corrected label alone establishes every condition required for the work.

Review 2 / Meaning and context / continued

4. Rebuild the exchange from "In the queue does not mean connected". Elena: "What can I put in the next-actions box? The investors need to see which submission our team is preparing and which review remains open." Amir: [missing response] Elena: "My revised slide will distinguish proposed power, acknowledged application, open technical items, unconfirmed costs and timing, and the absence of operating permission." Which response belongs in the gap?

- A.** Label it proposed nameplate capacity. It describes power on its stated rating basis. It is not annual energy output, which would use kilowatt-hours, and it does not establish actual generation.
- B.** Correct. Nor does the figure establish an export limit. The permitted operating arrangement depends on the applicable review and terms, not simply the size written on the proposed equipment.
- C.** Say the team is submitting the missing data for review while the metering arrangement is being assessed. That is concrete progress, with the open items visible, and does not imply that either review has reached a favorable decision.
- D.** Mark it as an internal target, not permission to operate or a confirmed date. In this case, no operating date has been issued, and no one should interpret the slide as authorization to energize or operate.

[Answers and explanations, page 176](#)

A Read the situation

LESSON 05 / ASSET MANAGEMENT AND MAINTENANCE

Compare a stated cost basis, test an assumption, and keep the purchase decision separate from partial arithmetic.

The cheapest purchase is not the cheapest comparison

Two fictional asset options are compared over ten years. Option A costs \$10,000 to purchase and \$2,000 per year in maintenance. Option B costs \$14,000 to purchase and \$1,000 per year in maintenance. The exercise uses constant annual amounts and no discounting. Installation, energy, downtime, disposal, residual value, and technical equivalence have not been assessed. Analyst Sam finds a slide calling A the lowest-cost choice because its purchase price is lower. Asset manager Priya requests a purchase-and-maintenance comparison, with its limits stated. Neither option is approved for purchase.

People: Sam, Asset analyst; Priya, Asset manager.

Read the record

Choose one answer per question using the facts above.

1. What is Option A's ten-year purchase-and-maintenance total?

- A. \$20,000
- B. \$10,000
- C. \$30,000
- D. \$12,000

2. What is Option B's corresponding total?

- A. \$14,000
- B. \$30,000
- C. \$24,000
- D. \$15,000

3. What does the supplied comparison establish?

- A. All possible ownership costs are included.
- B. B is \$6,000 lower on this limited undiscounted basis.
- C. B is approved for purchase.
- D. A is technically inferior.

[Answers and explanations, page 153](#)

B Vocabulary in use

CORE TERMS

asset management

Coordinating asset decisions across performance, risk, cost, and life.

develop an asset-management plan

capital expenditure (CAPEX)

Spending on acquiring or improving long-lived assets under the applicable accounting treatment.

assess capital expenditure

preventive maintenance

Planned maintenance intended to reduce failures or deterioration.

schedule preventive maintenance

condition-based maintenance

Maintenance guided by evidence of the actual asset condition.

evaluate condition-based maintenance

recurring cost

A cost expected to occur repeatedly over a period.

estimate recurring costs

life-cycle cost

Cost across the relevant stages of an asset's life on a defined basis.

assess life-cycle cost

purchase price

The amount paid to acquire an asset.

compare purchase prices

operating expenditure (OPEX)

Costs of operating the business or assets under the relevant accounting treatment.

forecast operating expenditure

corrective maintenance

Maintenance performed to address an identified fault or failure.

track corrective maintenance

maintenance interval

The period or usage between planned maintenance actions.

review the maintenance interval

assessment horizon

The period over which options are evaluated.

define the assessment horizon

total cost of ownership

The included acquisition, operation, maintenance, and other ownership costs over a stated period.

compare total cost of ownership

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

asset management ASSET MANAGEMENT

develop an asset-management plan

Keep the meaning precise: Coordinating asset decisions across performance, risk, cost, and life.

corrective maintenance CORRECTIVE MAINTENANCE

track corrective maintenance

Keep the meaning precise: Maintenance performed to address an identified fault or failure.

B Precision and professional shorthand

EXTEND YOUR RANGE

downtime

Time during which an asset is unavailable for its intended service.

account for downtime

asset criticality

The importance of an asset based on the consequences of its failure or unavailability.

assess asset criticality

replacement cycle

The timing or pattern used to replace assets.

plan the replacement cycle

disposal cost

The cost of removing or disposing of an asset at the relevant stage.

include disposal costs

sensitivity analysis

Testing how a result changes when an assumption changes.

run a sensitivity analysis

failure mode

A particular way an asset or component can fail.

assess a failure mode

remaining useful life

The estimated period of useful service still available from an asset.

estimate remaining useful life

residual value

The value remaining at the end of the assessment period.

estimate residual value

discounted cash flow

Evaluation of future cash flows using an explicit discount-rate basis.

distinguish discounted cash flow

technical equivalence

Comparable ability to meet the specified technical requirements.

establish technical equivalence

B Precision and professional shorthand / continued

cost boundary

The set of costs included or excluded from an analysis.

state the cost boundary

decision criteria

The factors used to assess and choose among alternatives.

agree decision criteria

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

total cost of ownership TOTAL COST OF OWNERSHIP

compare total cost of ownership

Keep the meaning precise: The included acquisition, operation, maintenance, and other ownership costs over a stated period.

replacement cycle REPLACEMENT CYCLE

plan the replacement cycle

Keep the meaning precise: The timing or pattern used to replace assets.

Phrases that move the work forward

Identify the narrow comparison

The slide compares purchase prices only.

Name the horizon

We are comparing ten years.

Calculate A

Ten thousand plus ten times two thousand gives thirty thousand dollars.

State the limited result

B is six thousand dollars lower on this purchase-and-maintenance basis.

Avoid a broad label

This is not a complete life-cycle-cost comparison.

Check technical suitability

Technical equivalence remains unassessed.

State the sensitivity result

B would then total thirty thousand dollars over ten years.

Avoid an approval claim

Neither option is approved for purchase.

State the higher upfront amount

B costs four thousand dollars more to purchase.

Explain the recurring cost

A has two thousand dollars of annual maintenance.

Calculate B

Fourteen thousand plus ten times one thousand gives twenty-four thousand dollars.

Preserve the exclusions

Installation, energy, downtime, disposal, and residual value are excluded.

Name the financial assumption

The figures are undiscounted and use constant annual amounts.

Test an assumption

At sixteen hundred dollars a year, B's maintenance changes the comparison.

Separate affordability

A lower upfront price and a lower long-term total are different considerations.

Close with the decision basis

Present the arithmetic, exclusions, and unresolved decision criteria together.

Precision in real exchanges

Purpose: Explain the recurring cost

Useful wording: A has two thousand dollars of annual maintenance.

Purpose: Calculate A

Useful wording: Ten thousand plus ten times two thousand gives thirty thousand dollars.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Why is lowest-cost choice unsupported for A?

- A.** A has no purchase price.
- B.** Ten-year costs must always equal the initial payment.
- C.** B has already been selected by engineering.
- D.** It uses purchase price while ignoring the supplied recurring maintenance difference.

2. At \$1,600 annual maintenance, what would B total over ten years?

- A.** \$15,600
- B.** \$24,000
- C.** \$30,000
- D.** \$16,000

3. A colleague needs the term for this meaning: Costs of operating the business or assets under the relevant accounting treatment. Which term fits?

- A.** sensitivity analysis
- B.** asset criticality
- C.** operating expenditure (OPEX)
- D.** recurring cost

D Choose the response that fits / continued

4. Rebuild the exchange from "The cheapest purchase is not the cheapest comparison". Sam: "B totals twenty-four thousand: fourteen thousand plus ten times one thousand. That is six thousand lower on this basis." Priya: [missing response] Sam: "The calculation leaves out installation, energy, downtime, disposal, and residual value. We also have not established that both options satisfy the technical requirements equally." Which response belongs in the gap?

- A.** Correct. The recurring cost reverses the purchase-price ranking. But describe that as a purchase-and-maintenance result, not proof that B is the best asset for every purpose.
- B.** Yes. It compares purchase price, not the full cost basis. Both options have recurring maintenance, and their annual amounts differ enough to change the longer comparison.
- C.** Correct. Technical equivalence remains unassessed. A matching subtotal does not tell us whether either option meets the required duty, reliability, operating conditions, or other technical criteria.
- D.** Keep residual value among the exclusions. The same applies to disposal costs and downtime. We need their actual basis before including them in a wider analysis.

[Answers and explanations, page 153](#)

One useful distinction

A totals \$30,000 and B totals \$24,000 on the supplied purchase-and-maintenance basis. B is \$6,000 lower despite its \$4,000 higher purchase price. Neither number is a complete life-cycle estimate.

Conversation

The cheapest purchase is not the cheapest comparison

The cheapest purchase is not the cheapest comparison

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

purchase price / Total cost of ownership / discounted cash flow / recurring cost /
cost boundary / assessment horizon / sensitivity analysis / Technical equivalence /
decision criteria / residual value

- 01 **Sam:** A costs ten thousand upfront and B fourteen thousand. The slide calls A the lowest-cost choice. Is that too broad?
- 02 **Priya:** Yes. It compares ¹ _____, not the full cost basis. Both options have recurring maintenance, and their annual amounts differ enough to change the longer comparison.
- 03 **Sam:** A needs two thousand dollars a year in maintenance; B needs one thousand. We are using ten years and constant annual figures, without discounting.
- 04 **Priya:** Keep that ² _____ visible. For A, ten thousand plus ten times two thousand gives thirty thousand dollars. We should not compare ten years of one option with one year of another.
- 05 **Sam:** B totals twenty-four thousand: fourteen thousand plus ten times one thousand. That is six thousand lower on this basis.
- 06 **Priya:** Correct. The ³ _____ reverses the purchase-price ranking. But describe that as a purchase-and-maintenance result, not proof that B is the best asset for every purpose.

E Conversation / continued

- 07 **Sam:** The calculation leaves out installation, energy, downtime, disposal, and residual value. We also have not established that both options satisfy the technical requirements equally.
- 08 **Priya:** State the ⁴ _____ beside the totals. An omitted cost is not automatically zero. The audience should see what this comparison answers and what still requires assessment.
- 09 **Sam:** I will label this purchase and maintenance, not complete ownership cost.
- 10 **Priya:** Exactly. ⁵ _____ needs an explicit scope and period. Our figures cover only two categories, so we should not imply that all relevant ownership effects have been evaluated.

Conversation continues on the next page.

The cheapest purchase is not the cheapest comparison

CONVERSATION / CONTINUED

- 11 **Sam:** The maintenance forecast is uncertain. Could we test a different amount for B to show how sensitive the result is to that assumption?
- 12 **Priya:** Use a ⁶ _____. At sixteen hundred dollars a year, B's ten-year maintenance is sixteen thousand, bringing its total with purchase to thirty thousand dollars.
- 13 **Sam:** That would match A on this limited basis. It would not prove the two options have identical performance, risks, or costs outside the comparison.
- 14 **Priya:** Correct. ⁷ _____ remains unassessed. A matching subtotal does not tell us whether either option meets the required duty, reliability, operating conditions, or other technical criteria.
- 15 **Sam:** We also have no residual-value estimate. One asset might retain more value at the end of ten years, but we cannot assume an amount.
- 16 **Priya:** Keep ⁸ _____ among the exclusions. The same applies to disposal costs and downtime. We need their actual basis before including them in a wider analysis.
- 17 **Sam:** The heading says present value, but we have only added the amounts. I will need to correct that heading too, unless a separate discounted analysis is available.
- 18 **Priya:** No. This is not ⁹ _____. We have not applied a discount rate. Use undiscounted purchase-and-maintenance comparison so the heading does not promise an analysis we did not perform.
- 19 **Sam:** I will show A at thirty thousand and B at twenty-four thousand, with the alternative B-maintenance case, exclusions, and no purchase approval.
- 20 **Priya:** Good. Put the unresolved ¹⁰ _____ beside those figures. Affordability, technical suitability, risk, and the wider cost basis remain part of the actual decision, not assumptions hidden by a low price.

CHECK THE GAPS

1. purchase price / 2. assessment horizon / 3. recurring cost / 4. cost boundary / 5. Total cost of ownership / 6. sensitivity analysis / 7. Technical equivalence / 8. residual value / 9. discounted cash flow / 10. decision criteria

[Why these answers fit, page 154](#)

F Check accuracy and scope

The cheapest purchase is not the cheapest comparison

Return to the case

Two fictional asset options are compared over ten years. Option A costs \$10,000 to purchase and \$2,000 per year in maintenance. Option B costs \$14,000 to purchase and \$1,000 per year in maintenance. The exercise uses constant annual amounts and no discounting. Installation, energy, downtime, disposal, residual value, and technical equivalence have not been assessed. Analyst Sam finds a slide calling A the lowest-cost choice because its purchase price is lower. Asset manager Priya requests a purchase-and-maintenance comparison, with its limits stated. Neither option is approved for purchase.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. Which label fits the original calculation?

- A. Ten-year undiscounted purchase-and-maintenance comparison
- B. Complete discounted life-cycle cost
- C. Confirmed procurement approval
- D. Verified technical-equivalence assessment

2. What remains necessary before a full decision?

- A. Choose A automatically because its first payment is lower.
- B. Assume all omitted costs are zero.
- C. Assess omitted costs, technical suitability, and the relevant decision criteria.
- D. Choose B automatically because one subtotal is lower.

[Answers and explanations, page 156](#)

Listen for the distinction

Switch roles; explain the \$1,600 annual-maintenance sensitivity without implying technical equivalence.

Challenge the comparison, not the budget owner

A low initial price can be attractive when a team faces a tight annual budget. Show which costs the slide includes before challenging its conclusion. A transparent comparison lets colleagues discuss affordability and long-term cost as related but different questions.

F Say it / transfer to a new case

Compare the same included costs

Over five years, C costs \$8,000 plus \$1,000 annual maintenance. D costs \$10,000 plus \$400 annual maintenance. Use undiscounted purchase and maintenance only.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

13,000 / 1,000 / 12,000 / other

- 01 **Analyst:** C totals \$¹ _____.
- 02 **Manager:** D totals \$² _____.
- 03 **Analyst:** D is \$³ _____ lower on this basis.
- 04 **Manager:** The comparison excludes ⁴ _____ costs.

CHECK THE GAPS

1. 13,000 / 2. 12,000 / 3. 1,000 / 4. other

[Why these answers fit, page 156](#)

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "The cheapest purchase is not the cheapest comparison".
Sam: "That would match A on this limited basis. It would not prove the two options have identical performance, risks, or costs outside the comparison."
Priya: [missing response]
Sam: "We also have no residual-value estimate. One asset might retain more value at the end of ten years, but we cannot assume an amount." Which response belongs in the gap?

- A.** Correct. The recurring cost reverses the purchase-price ranking. But describe that as a purchase-and-maintenance result, not proof that B is the best asset for every purpose.
- B.** Yes. It compares purchase price, not the full cost basis. Both options have recurring maintenance, and their annual amounts differ enough to change the longer comparison.
- C.** Keep residual value among the exclusions. The same applies to disposal costs and downtime. We need their actual basis before including them in a wider analysis.
- D.** Correct. Technical equivalence remains unassessed. A matching subtotal does not tell us whether either option meets the required duty, reliability, operating conditions, or other technical criteria.

[Answers and explanations, page 157](#)

A Read the situation

LESSON 06 / EMERGENCY PREPAREDNESS AND STORM RESPONSE

Hand over storm-response resources with exact counts, distinct statuses, and a clear receiving owner.

Requested resources are not all available

At the 19:30 local coordination handover, six external crews have been requested. Three are confirmed: one is at the staging location and two are en route. The other three remain unconfirmed. Twenty lodging spaces were requested; twelve are confirmed and eight are pending. Arrival times for the two traveling crews are not verified. Outgoing coordinator Daniel hands over to Sofia, who accepts tracking the open requests and providing the next status update at 20:00. Confirmed, arrived, briefed, and authorized for deployment are separate stages; this record establishes no new operational assignment or restoration promise.

People: Daniel, Outgoing logistics coordinator; Sofia, Incoming logistics coordinator.

Read the record

Choose one answer per question using the facts above.

1. How many requested crews are confirmed?

- A. Six
- B. Five
- C. One
- D. Three

2. How many of the confirmed crews have arrived at staging?

- A. Two
- B. Six
- C. One
- D. Three

3. How many lodging spaces remain pending?

- A. Eight
- B. Twelve
- C. Twenty
- D. Three

[Answers and explanations, page 158](#)

B Vocabulary in use

CORE TERMS

emergency operations center (EOC)

A location or function coordinating information and resources during an emergency.

support the emergency operations center

mutual assistance

Support provided by other organizations under applicable arrangements.

request mutual assistance

resource confirmation

Verification that the requested resource is committed on stated terms.

obtain resource confirmation

mobilization

Preparing and moving resources for an assigned response.

track mobilization status

en route

Traveling toward the relevant destination, not yet arrived.

report crews en route

deployment authorization

Permission to assign or send resources to specified work under the applicable process.

verify deployment authorization

incident command

The authority structure directing an incident response under the applicable system.

coordinate with incident command

resource request

A documented request for specified people, equipment, or support.

track a resource request

staging location

A designated place where resources assemble before further assignment.

report arrival at staging

demobilization

Organized release and return of resources when no longer required.

plan demobilization

estimated time of arrival (ETA)

An estimate of when a person or resource will reach a destination.

verify the estimated time of arrival

crew roster

A list of personnel assigned to a crew or response.

reconcile the crew roster

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

emergency operations center (EOC) EMERGENCY OPERATIONS CENTER (EOC)

support the emergency operations center

Keep the meaning precise: A location or function coordinating information and resources during an emergency.

staging location STAGING LOCATION

report arrival at staging

Keep the meaning precise: A designated place where resources assemble before further assignment.

B Precision and professional shorthand

EXTEND YOUR RANGE

credential verification

Checking the relevant qualifications or authorizations of personnel.

complete credential verification

operational period

A defined interval used for response planning and coordination.

identify the operational period

logistics

Coordination of resources, movement, accommodation, and other support.

coordinate response logistics

resource shortfall

The gap between required or requested resources and those available or confirmed.

identify a resource shortfall

communications plan

The defined channels, contacts, and arrangements for response communication.

follow the communications plan

request owner

The named person responsible for following up a request.

identify the request owner

shift handover

Transfer of current information and responsibilities between shifts.

conduct a shift handover

situation report

A structured update of current conditions, actions, and resource status.

issue a situation report

lodging allocation

Assignment of accommodation capacity to the relevant personnel.

confirm lodging allocation

fatigue management

Arrangements to address risks arising from tiredness and work-rest demands.

follow fatigue-management requirements

access restriction

A limitation on entry or movement in an affected area.

verify access restrictions

status reconciliation

Checking that different reports describe the same resources without conflict or duplication.

complete status reconciliation

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

crew roster **CREW ROSTER**

reconcile the crew roster

Keep the meaning precise: A list of personnel assigned to a crew or response.

logistics **LOGISTICS**

coordinate response logistics

Keep the meaning precise: Coordination of resources, movement, accommodation, and other support.

C Phrases that move the work forward

Timestamp the handover

This is the resource position at 19:30 local time.

Separate confirmations

Three crews are confirmed and three remain unconfirmed.

Avoid double counting

Those three statuses describe the same confirmed group.

State lodging demand

Twenty lodging spaces were requested.

Name the receiving owner

Sofia has accepted tracking the open requests.

Set the communication time

The next status update is at 20:00 local time.

Preserve operational boundaries

Arrival at staging does not itself authorize a work assignment.

Report unchanged conditions

The next update will include unresolved requests even if their status is unchanged.

State the request total

Six external crews were requested.

Break down the confirmed group

One confirmed crew is at staging and two are en route.

Qualify arrival timing

Arrival times for the traveling crews are not verified.

State lodging confirmation

Twelve spaces are confirmed and eight remain pending.

Separate acceptance from supply

Accepting the handover does not confirm the missing resources.

Avoid an availability claim

Requested does not mean available for deployment.

Keep categories consistent

Use requested, confirmed, en route, and arrived as separate status fields.

Close with read-back

Please repeat the crew counts, lodging counts, owner, and next update time.

Precision in real exchanges

Purpose: Break down the confirmed group

Useful wording: One confirmed crew is at staging and two are en route.

Purpose: Avoid double counting

Useful wording: Those three statuses describe the same confirmed group.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which crew summary avoids double counting?

- A.** Six requested; six confirmed because three plus one plus two equals six
- B.** One confirmed because only one has arrived
- C.** Nine requested because three are confirmed
- D.** Six requested; three confirmed, comprising one arrived and two en route

2. Which lodging statement is supported?

- A.** Twenty available because twenty were requested
- B.** Eight confirmed and twelve canceled
- C.** Twelve confirmed plus twenty more confirmed
- D.** Twelve confirmed; eight pending from a request for twenty

3. A colleague needs the term for this meaning: A documented request for specified people, equipment, or support. Which term fits?

- A.** operational period
- B.** en route
- C.** communications plan
- D.** resource request

D Choose the response that fits / continued

4. Rebuild the exchange from "Requested resources are not all available". Daniel: "Please correct the earlier six-available line. It appears to count the same three crews twice, once as confirmed and again by travel status." Sofia: [missing response] Daniel: "Lodging also needs a qualification: twenty spaces requested, twelve confirmed, eight pending. The request remains open." Which response belongs in the gap?

- A.** I will correct the situation report. It should show six requested, three confirmed, and three unconfirmed, with the arrival breakdown nested within the confirmed group.
- B.** Correct. Deployment authorization and restoration planning are separate operational matters. I can report the resource status without claiming when any particular service point will be restored.
- C.** So the en route group is part of the three confirmed, not an additional two. I will not add one arrived and two traveling to the confirmed total again.
- D.** I accept that as the request owner. My acceptance transfers coordination responsibility, not supplier confirmation. The open requests remain open until their status is verified and recorded.

[Answers and explanations, page 158](#)

One useful distinction

The one arrived crew and two en-route crews are subsets of the three confirmed crews. They are not three additional crews. Six requested minus three confirmed leaves three requests unconfirmed.

E Conversation

Requested resources are not all available

Requested resources are not all available

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

situation report / Lodging allocation / resource shortfall / staging location /
estimated time of arrival / Deployment authorization / request owner / en route /
status reconciliation / shift handover

- 01 **Daniel:** This is the resource position at nineteen thirty local time. Six external crews were requested, and three are confirmed. I need to hand over the remaining requests.
- 02 **Sofia:** I will accept the ¹ _____. First, break down those three confirmed crews. I want to distinguish who has arrived from who is still traveling before I update the situation report.
- 03 **Daniel:** One is at staging and two are en route. Three requested crews remain unconfirmed. Arrival times for the traveling crews are unverified.
- 04 **Sofia:** So the ² _____ group is part of the three confirmed, not an additional two. I will not add one arrived and two traveling to the confirmed total again.
- 05 **Daniel:** Please correct the earlier six-available line. It appears to count the same three crews twice, once as confirmed and again by travel status.
- 06 **Sofia:** I will correct the ³ _____. It should show six requested, three confirmed, and three unconfirmed, with the arrival breakdown nested within the confirmed group.

Conversation / continued

- 07 **Daniel:** Lodging also needs a qualification: twenty spaces requested, twelve confirmed, eight pending. The request remains open.
- 08 **Sofia:** I will record that ⁴ _____ explicitly. A request for twenty does not mean twenty spaces are available, and we should not assign accommodation on the basis of the request alone.
- 09 **Daniel:** Please take ownership of both the unconfirmed crews and the pending lodging spaces. I want the outgoing record to identify who is following them up.
- 10 **Sofia:** I accept that as the ⁵ _____. My acceptance transfers coordination responsibility, not supplier confirmation. The open requests remain open until their status is verified and recorded.

Conversation continues on the next page.

Requested resources are not all available

CONVERSATION / CONTINUED

- 11 **Daniel:** When is your next update? The coordination lead needs a consistent time to refresh the resource summary across the response team.
- 12 **Sofia:** Twenty hundred local time. I will provide a ⁶ _____ then, including any requests still unresolved. That is an information commitment, not a promise that every crew or lodging space will be confirmed.
- 13 **Daniel:** The crew at staging has arrived, but this snapshot says nothing about its briefing, qualification checks, or an authorized work assignment. Please keep those stages separate.
- 14 **Sofia:** Agreed. Arrival at the ⁷ _____ is not permission to deploy. I will leave the applicable operational checks and assignments with the authorized response process rather than infer them from presence.
- 15 **Daniel:** Someone may ask whether these crews will restore a neighborhood tonight. Our logistics counts cannot support that promise, and no such assignment is established.
- 16 **Sofia:** Correct. ⁸ _____ and restoration planning are separate operational matters. I can report the resource status without claiming when any particular service point will be restored.
- 17 **Daniel:** The next shift also asked when the two traveling crews will arrive. I have no verified ETA to hand over.
- 18 **Sofia:** I will mark the ⁹ _____ as unverified. Any update needs its source and time basis, particularly if access restrictions or other conditions change during the response.

Requested resources are not all available / continued

- 19 **Daniel:** Please read the final numbers back so I can close the administrative handover without leaving a different version in my outgoing report.
- 20 **Sofia:** Six crews requested, three confirmed: one at staging, two en route. Three unconfirmed. ¹⁰ _____ is twelve confirmed, eight pending. I own follow-up and will update at twenty hundred local time.

CHECK THE GAPS

1. shift handover / 2. en route / 3. situation report / 4. resource shortfall / 5. request owner / 6. status reconciliation / 7. staging location / 8. Deployment authorization / 9. estimated time of arrival / 10. Lodging allocation

[Why these answers fit, page 159](#)

F Check accuracy and scope

Requested resources are not all available

Return to the case

At the 19:30 local coordination handover, six external crews have been requested. Three are confirmed: one is at the staging location and two are en route. The other three remain unconfirmed. Twenty lodging spaces were requested; twelve are confirmed and eight are pending. Arrival times for the two traveling crews are not verified. Outgoing coordinator Daniel hands over to Sofia, who accepts tracking the open requests and providing the next status update at 20:00. Confirmed, arrived, briefed, and authorized for deployment are separate stages; this record establishes no new operational assignment or restoration promise.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. What does the 20:00 commitment promise?

- A. All lodging confirmed
- B. Restoration of every affected service point
- C. A new status update
- D. All crews arriving

2. What follows from a crew arriving at staging?

- A. The crew counts twice in the confirmed total.
- B. Arrival is established, while other required deployment stages remain separate.
- C. Every operational assignment is automatically authorized.
- D. All credentials are verified without review.

[Answers and explanations, page 161](#)

Listen for the distinction

Switch roles; distinguish 12 confirmed lodging spaces from 20 requested and 20:00 from an arrival promise.

Totals can hide different stages

A fast handover often compresses requested, confirmed, and arrived into available. Use the categories explicitly and check whether one count is a subset of another. A concise but structured read-back is more useful than a larger total that double-counts people or resources.

F Say it / transfer to a new case

Count subsets only once

Eight crews are requested; five confirmed crews comprise two at staging and three en route. Three remain unconfirmed. Eighteen lodging spaces are requested and fourteen confirmed.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

five / fourteen / four / three

- 01 **Coordinator:** The confirmed crew total is ¹ _____.
- 02 **Receiver:** The unconfirmed crew count is ² _____.
- 03 **Coordinator:** Confirmed lodging spaces total ³ _____.
- 04 **Receiver:** The lodging shortfall is ⁴ _____ spaces.

CHECK THE GAPS

1. five / 2. three / 3. fourteen / 4. four

[Why these answers fit, page 161](#)

F Say it / transfer to a new case / continued

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "Requested resources are not all available". Daniel: "The crew at staging has arrived, but this snapshot says nothing about its briefing, qualification checks, or an authorized work assignment. Please keep those stages separate." Sofia: [missing response] Daniel: "Someone may ask whether these crews will restore a neighborhood tonight. Our logistics counts cannot support that promise, and no such assignment is established." Which response belongs in the gap?

- A.** Agreed. Arrival at the staging location is not permission to deploy. I will leave the applicable operational checks and assignments with the authorized response process rather than infer them from presence.
- B.** I will accept the shift handover. First, break down those three confirmed crews. I want to distinguish who has arrived from who is still traveling before I update the situation report.
- C.** I will record that resource shortfall explicitly. A request for twenty does not mean twenty spaces are available, and we should not assign accommodation on the basis of the request alone.
- D.** Six crews requested, three confirmed: one at staging, two en route. Three unconfirmed. Lodging allocation is twelve confirmed, eight pending. I own follow-up and will update at twenty hundred local time.

[Answers and explanations, page 162](#)

Review 3 / Meaning and context

Use language from the lessons you have completed. Choose one answer per question.

Case file

Revisit "Asset Management and Maintenance" and "Emergency Preparedness and Storm Response". Choose precise terminology, then reconstruct the missing responses using both neighboring turns. The final two questions also revisit earlier conversations.

1. A colleague needs the term for this meaning: Spending on acquiring or improving long-lived assets under the applicable accounting treatment. Which term fits?

- A. failure mode
- B. maintenance interval
- C. capital expenditure (CAPEX)
- D. discounted cash flow

2. A colleague needs the term for this meaning: Organized release and return of resources when no longer required. Which term fits?

- A. credential verification
- B. resource shortfall
- C. demobilization
- D. emergency operations center (EOC)

3. Rebuild the exchange from "In the queue does not mean connected". Elena: "The technical team is preparing the missing inverter information. I can give them the action, but I should not promise that supplying it completes every review." Amir: [missing response] Elena: "The investor slide also shows our internal operating target. We have no confirmation that the required reviews will finish by then." Which response belongs in the gap?

- A. Exactly. The inverter data are one open input. The metering review remains separate, and other applicable requirements still need their own verified status under the actual utility process.
- B. That is the cost allocation distinction. Use the applicable rules and agreements rather than assume that a rooftop project, a queue position, or a proposed budget settles responsibility.
- C. Describe the review queue status accurately. We have no basis here to claim reserved capacity, an approved export allowance, or a completed connection decision from that administrative step.
- D. Correct. Nor does the figure establish an export limit. The permitted operating arrangement depends on the applicable review and terms, not simply the size written on the proposed equipment.

Review 3 / Meaning and context / continued

4. Rebuild the exchange from "Requested resources are not all available". Daniel: "The next shift also asked when the two traveling crews will arrive. I have no verified ETA to hand over." Sofia: [missing response] Daniel: "Please read the final numbers back so I can close the administrative handover without leaving a different version in my outgoing report." Which response belongs in the gap?

- A.** I will mark the estimated time of arrival as unverified. Any update needs its source and time basis, particularly if access restrictions or other conditions change during the response.
- B.** I will record that resource shortfall explicitly. A request for twenty does not mean twenty spaces are available, and we should not assign accommodation on the basis of the request alone.
- C.** So the en route group is part of the three confirmed, not an additional two. I will not add one arrived and two traveling to the confirmed total again.
- D.** I will accept the shift handover. First, break down those three confirmed crews. I want to distinguish who has arrived from who is still traveling before I update the situation report.

[Answers and explanations, page 179](#)

A Read the situation

LESSON 07 / CUSTOMER PROGRAMS AND ENERGY EFFICIENCY

Report an observed energy reduction while separating measurement, explanation, and verified savings.

Lower consumption does not isolate the program effect

A fictional office used 10,000 kWh in a baseline month and 8,500 kWh in a post-installation month after an efficiency retrofit. Both readings cover 30 days. The second month had milder weather and average daily occupancy fell from 40 to 30 people. No adjusted baseline or agreed savings-verification analysis has been completed. Program specialist Leila finds a draft claiming the retrofit proved 15% savings and a 15% bill reduction. Analyst Victor must help report the observed 1,500 kWh, or 15%, consumption decline without assigning the entire change to the retrofit. Rates and bill components are not supplied.

People: Leila, Efficiency program specialist; Victor, Energy analyst.

Read the record

Choose one answer per question using the facts above.

1. What measured energy change is supplied?

- A. A guaranteed 15% bill reduction
- B. A 1,500 kW fall in peak demand
- C. A 1,500 kWh reduction, equal to 15% of baseline use
- D. A proved 15% retrofit effect

2. Which other conditions changed?

- A. The currency used on the bill
- B. Weather and occupancy
- C. Only the equipment, with all conditions fixed
- D. The reading period from 30 to 60 days

3. What has not been completed?

- A. The two monthly readings
- B. Identification of the reading periods
- C. The arithmetic difference between the readings
- D. An adjusted baseline and savings-verification analysis

[Answers and explanations, page 163](#)

B Vocabulary in use

CORE TERMS

energy efficiency

Providing the relevant service with less energy under a defined comparison.

improve energy efficiency

retrofit

A modification or addition to improve an existing system or building.

assess an efficiency retrofit

baseline period

The reference period used to establish pre-intervention conditions or use.

define the baseline period

metered consumption

Energy use measured by the relevant meter over a stated interval.

compare metered consumption

adjusted baseline

Reference use adjusted to relevant comparison conditions under an explicit method.

calculate an adjusted baseline

heating degree days

A weather indicator based on temperature relative to a specified heating reference.

use heating degree days

energy conservation

Reducing energy use through changes in behavior, service, or activity.

encourage energy conservation

energy conservation measure (ECM)

A defined intervention intended to reduce energy or related resource use.

evaluate an energy conservation measure

reporting period

The period for which performance or results are being assessed.

identify the reporting period

measurement and verification (M&V)

A defined process for assessing and verifying savings against an appropriate basis.

develop a measurement and verification plan

weather normalization

Adjusting energy analysis to a defined weather basis.

apply weather normalization

cooling degree days

A weather indicator based on temperature relative to a specified cooling reference.

use cooling degree days

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

energy efficiency ENERGY EFFICIENCY

improve energy efficiency

Keep the meaning precise: Providing the relevant service with less energy under a defined comparison.

reporting period REPORTING PERIOD

identify the reporting period

Keep the meaning precise: The period for which performance or results are being assessed.

B Precision and professional shorthand

EXTEND YOUR RANGE

occupancy

The presence or number of people using a space over a defined basis.

track occupancy changes

independent variable

An input used to explain variation in another measured quantity.

identify relevant independent variables

attribution

Assigning an observed effect to a particular cause or intervention.

qualify savings attribution

gross savings

Savings associated with an intervention before specified program-attribution adjustments.

distinguish gross savings

rebound effect

Increased use of a service that may offset some expected efficiency savings.

assess the rebound effect

operating hours

The time during which a facility or system is operated.

document operating hours

confounding factor

A factor that complicates attribution of an observed change to one cause.

account for confounding factors

avoided energy use

Energy estimated not to have been used compared with an appropriate counterfactual basis.

estimate avoided energy use

net savings

Program savings after the relevant adjustments for attribution and other specified effects.

assess net savings

persistence

The extent to which an effect continues over time.

evaluate savings persistence

B Precision and professional shorthand / continued

uncertainty

The limits on confidence or precision in an estimate or conclusion.

report savings uncertainty

bill savings

A reduction in monetary charges under the relevant rates and billing conditions.

distinguish bill savings

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

cooling degree days COOLING DEGREE DAYS

use cooling degree days

Keep the meaning precise: A weather indicator based on temperature relative to a specified cooling reference.

attribution ATTRIBUTION

qualify savings attribution

Keep the meaning precise: Assigning an observed effect to a particular cause or intervention.

C Phrases that move the work forward

State the readings

Consumption fell from ten thousand to eight thousand five hundred kilowatt-hours.

Calculate the difference

The observed reduction is fifteen hundred kilowatt-hours.

Qualify attribution

We cannot assign the whole decline to the retrofit from these readings alone.

Name the occupancy change

Average daily occupancy fell from forty to thirty people.

Identify the missing analysis

An adjusted baseline and verification analysis have not been completed.

Preserve the unit

These figures are energy in kilowatt-hours, not peak power in kilowatts.

Keep the result useful

The decline is real in the supplied readings, while its causes remain to be assessed.

Avoid invented adjustments

Do not subtract an assumed weather effect without a supported method.

Name the period

Both readings cover thirty days.

State the denominator

That is fifteen percent of baseline consumption.

Name the weather change

The reporting month had milder weather.

Avoid a false constant

The comparison conditions were not unchanged.

Distinguish the measures

Lower energy use does not automatically mean the same percentage reduction in the bill.

Correct the claim

Replace proved savings with observed consumption reduction.

State the method boundary

Use the applicable measurement and verification plan for a verified savings claim.

Close with the evidence

Report the readings, changed conditions, and unresolved attribution together.

Precision in real exchanges

Purpose: State the denominator

Useful wording: That is fifteen percent of baseline consumption.

Purpose: Qualify attribution

Useful wording: We cannot assign the whole decline to the retrofit from these readings alone.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which headline is supported?

- A.** Peak demand fell 1,500 kW.
- B.** Metered use fell 15%; retrofit attribution remains unverified.
- C.** Retrofit proved exactly 15% savings.
- D.** Every customer bill will fall 15%.

2. Why do equal 30-day periods not settle attribution?

- A.** Equal periods make all other factors identical.
- B.** Thirty days always proves program savings.
- C.** The meter must be wrong if conditions changed.
- D.** Weather and occupancy still differed.

3. A colleague needs the term for this meaning: A defined intervention intended to reduce energy or related resource use. Which term fits?

- A.** adjusted baseline
- B.** rebound effect
- C.** energy conservation measure (ECM)
- D.** independent variable

D Choose the response that fits / continued

4. Rebuild the exchange from "Lower consumption does not isolate the program effect". Leila: "Average daily occupancy fell from forty to thirty people. That is ten fewer, or twenty-five percent of the original forty, not a ten percent change." Victor: [missing response] Leila: "So we should not try to correct the energy result with a guessed number for people, then assign whatever remains to the retrofit." Which response belongs in the gap?

- A.** Correct. Occupancy is a separate measured condition. We cannot assume its effect on energy is proportional to the headcount change or simply subtract twenty-five percent.
- B.** That makes the confounding factors visible. Keep the fifteen percent as an observed consumption reduction, not a certified savings result or a promise about future bills.
- C.** Good. The measurement and verification process needs the relevant comparison conditions and method. Our immediate communication should identify the missing analysis rather than invent its outcome.
- D.** Weather normalization may form part of the applicable method. The appropriate approach must be established from the project and data, not improvised from the word milder.

[Answers and explanations, page 163](#)

One useful distinction

The observed reduction is 1,500 kWh divided by the baseline 10,000 kWh, or 15%. It is measured consumption change, not yet a verified retrofit effect. Milder weather and lower occupancy also changed the comparison.

E Conversation

Lower consumption does not isolate the program effect

Lower consumption does not isolate the program effect

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

attribution / Uncertainty / adjusted baseline / Weather normalization / confounding factors
/ Occupancy / measurement and verification / bill savings / metered consumption /
reporting period

- 01 **Leila:** The draft says our retrofit proved fifteen percent energy savings and the same reduction in bills. The meter readings fell, but can we support both claims?
- 02 **Victor:** We can support the ¹ _____ change: ten thousand to eight thousand five hundred kilowatt-hours. That is fifteen hundred less, or fifteen percent of the original reading.
- 03 **Leila:** Both readings cover thirty days. I initially thought matching the period length meant we could attribute the whole difference to the equipment installed between them.
- 04 **Victor:** It removes one difference, but the ² _____ had milder weather and fewer occupants. Those changes can affect energy use, so the conditions were not otherwise held constant.
- 05 **Leila:** Average daily occupancy fell from forty to thirty people. That is ten fewer, or twenty-five percent of the original forty, not a ten percent change.
- 06 **Victor:** Correct. ³ _____ is a separate measured condition. We cannot assume its effect on energy is proportional to the headcount change or simply subtract twenty-five percent.

Conversation / continued

- 07 **Leila:** So we should not try to correct the energy result with a guessed number for people, then assign whatever remains to the retrofit.
- 08 **Victor:** Exactly. An ⁴ _____ needs an explicit, supported method. It is not an informal subtraction that makes the result fit the program story.
- 09 **Leila:** The weather changed too. The second month was milder, but we have not quantified the resulting heating or cooling effect in this analysis.
- 10 **Victor:** ⁵ _____ may form part of the applicable method. The appropriate approach must be established from the project and data, not improvised from the word milder.

Conversation continues on the next page.

Lower consumption does not isolate the program effect

CONVERSATION / CONTINUED

- 11 **Leila:** I do not want to discard the meter result. Can the headline state the fifteen-percent consumption decline and flag the attribution separately?
- 12 **Victor:** Say observed consumption fell fifteen percent, with ⁶ _____ to the retrofit unverified. That preserves both the measured result and the limit on what it demonstrates about the intervention.
- 13 **Leila:** The program manager heard unverified as no benefit. Please help me correct that impression without claiming an effect we have not measured.
- 14 **Victor:** No. ⁷ _____ is not a finding of zero benefit. We have not isolated the effect, and that means we should avoid both an exact success claim and an unsupported dismissal.
- 15 **Leila:** We need to correct the savings claim too. We don't have the rates, fixed charges, credits, demand charges, or other billing details for this account.
- 16 **Victor:** Then we cannot calculate ⁸ _____. A fifteen percent energy decline does not automatically produce a fifteen percent bill decline, even when the energy readings themselves are accurate.
- 17 **Leila:** I will keep the units visible. Kilowatt-hours measure the energy used over the period; these monthly readings do not establish what happened to peak demand.
- 18 **Victor:** Good. The ⁹ _____ process needs the relevant comparison conditions and method. Our immediate communication should identify the missing analysis rather than invent its outcome.

Lower consumption does not isolate the program effect / continued

- 19 **Leila:** The revised summary will give both readings, the equal thirty-day periods, the weather and occupancy changes, and the fact that no adjusted analysis is complete.
- 20 **Victor:** That makes the ¹⁰ _____ visible. Keep the fifteen percent as an observed consumption reduction, not a certified savings result or a promise about future bills.

CHECK THE GAPS

1. metered consumption / 2. reporting period / 3. Occupancy / 4. adjusted baseline / 5. Weather normalization / 6. attribution / 7. Uncertainty / 8. bill savings / 9. measurement and verification / 10. confounding factors

[Why these answers fit, page 164](#)

F Check accuracy and scope

Lower consumption does not isolate the program effect

Return to the case

A fictional office used 10,000 kWh in a baseline month and 8,500 kWh in a post-installation month after an efficiency retrofit. Both readings cover 30 days. The second month had milder weather and average daily occupancy fell from 40 to 30 people. No adjusted baseline or agreed savings-verification analysis has been completed. Program specialist Leila finds a draft claiming the retrofit proved 15% savings and a 15% bill reduction. Analyst Victor must help report the observed 1,500 kWh, or 15%, consumption decline without assigning the entire change to the retrofit. Rates and bill components are not supplied.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. What is the occupancy decline?

- A. 33.3% of the original forty
- B. 25%, from 40 to 30 people
- C. 10%, because ten people fewer means ten percent
- D. 15%, matching the energy decline

2. Which bill statement is justified?

- A. The fixed charge necessarily disappeared.
- B. A kilowatt-hour equals a dollar.
- C. Bill savings cannot be calculated from the supplied information.
- D. The bill necessarily fell by 15%.

[Answers and explanations, page 166](#)

Listen for the distinction

Switch roles; distinguish the 25 percent occupancy decline from an unmeasured energy effect.

A qualified result can still be useful

Teams may feel pressure to turn a promising result into a simple success claim. State the observed change clearly, then name the factors that prevent stronger attribution. This preserves useful evidence without treating either enthusiasm or skepticism as a substitute for analysis.

F Say it / transfer to a new case

Report a decline without inventing its cause

Two equal-length periods show 12,000 and 10,800 kWh. Weather and operating hours changed. No adjusted analysis or billing rates are supplied.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

calculable / unverified / 1,200 / 10

- 01 **Analyst:** The observed reduction is ¹ _____ kWh.
- 02 **Manager:** That equals ² _____ percent of baseline use.
- 03 **Analyst:** Attribution to the intervention remains ³ _____.
- 04 **Manager:** Monetary bill savings are not ⁴ _____.

CHECK THE GAPS

1. 1,200 / 2. 10 / 3. unverified / 4. calculable

[Why these answers fit, page 166](#)

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "Lower consumption does not isolate the program effect".
Leila: "The program manager heard unverified as no benefit. Please help me correct that impression without claiming an effect we have not measured." **Victor:** [missing response]
Leila: "We need to correct the savings claim too. We don't have the rates, fixed charges, credits, demand charges, or other billing details for this account." **Which response belongs in the gap?**

- A.** It removes one difference, but the reporting period had milder weather and fewer occupants. Those changes can affect energy use, so the conditions were not otherwise held constant.
- B.** Then we cannot calculate bill savings. A fifteen percent energy decline does not automatically produce a fifteen percent bill decline, even when the energy readings themselves are accurate.
- C.** No. Uncertainty is not a finding of zero benefit. We have not isolated the effect, and that means we should avoid both an exact success claim and an unsupported dismissal.
- D.** Say observed consumption fell fifteen percent, with attribution to the retrofit unverified. That preserves both the measured result and the limit on what it demonstrates about the intervention.

[Answers and explanations, page 167](#)

A Read the situation

LESSON 08 / EXECUTIVE RELIABILITY AND INVESTMENT UPDATES

Translate reliability indices, check a comparison, and distinguish a metric trend from an investment promise.

Fewer interruptions, more total outage minutes

A fictional utility serves 1,000 customers in each of two years. Using the same sustained-interruption definitions and event coverage, Year 1 records 1,200 customer interruptions and 90,000 customer-minutes interrupted. Year 2 records 1,000 customer interruptions and 120,000 customer-minutes interrupted. The same major-event treatment applies in both years. Analyst Ravi presents the results to community liaison Celia. A draft headline says reliability improved on every measure. A proposed investment is also described as guaranteed to reduce next-year interruptions, although no validated impact estimate is supplied. Both claims need qualification.

People: Ravi, Reliability analyst; Celia, Community liaison.

Read the record

Choose one answer per question using the facts above.

1. What is Year 1 SAIFI?

- A. 1,200 interruptions for every customer
- B. 0.9 interruptions per customer
- C. 1.2 interruptions per customer
- D. 90 minutes per customer

2. What is Year 2 SAIDI?

- A. 1 interruption per customer
- B. 120,000 minutes for every customer
- C. 12 minutes per customer
- D. 120 minutes per customer

3. Which overall description matches the two indices?

- A. Both frequency and duration improved.
- B. Every customer had exactly one interruption.
- C. The proposed investment already reduced the results.
- D. Average frequency fell while average total interruption duration rose.

[Answers and explanations, page 168](#)

B Vocabulary in use

CORE TERMS

System Average Interruption Duration Index (SAIDI)

Average total sustained-interruption time per customer over a stated period.

explain SAIDI in minutes

sustained interruption

An interruption meeting the duration threshold in the applicable reporting definition.

define sustained interruptions

customer-minute interrupted

One interruption minute for one customer.

sum customer-minutes interrupted

Customer Average Interruption Duration Index (CAIDI)

Average duration per sustained customer interruption on a stated basis.

distinguish CAIDI from SAIDI

major event day

A day classified as a major event under the stated reliability methodology.

state major-event-day treatment

System Average Interruption Frequency Index (SAIFI)

Average sustained-interruption count per customer over a stated period.

explain SAIFI as frequency

customer interruption

One counted interruption affecting one customer.

count customer interruptions

customers served

The customer population used as the denominator.

state customers served

momentary interruption

A short interruption classified under the applicable reporting definition.

distinguish momentary interruptions

event coverage

The set of events included in a reported measure.

align event coverage

B Vocabulary in use / continued

reporting methodology

The definitions and procedures used to calculate the measures.

document the reporting methodology

denominator

The quantity by which another is divided to calculate a ratio or average.

check the denominator

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

System Average Interruption Duration Index (SAIDI) SYSTEM AVERAGE INTERRUPTION DURATION INDEX (SAIDI)

explain SAIDI in minutes

Keep the meaning precise: Average total sustained-interruption time per customer over a stated period.

customers served CUSTOMERS SERVED

state customers served

Keep the meaning precise: The customer population used as the denominator.

B Precision and professional shorthand

EXTEND YOUR RANGE

frequency

How often counted events occur over the stated period or basis.

explain interruption frequency

system average

A measure averaged over the defined system population.

qualify the system average

reliability trend

The direction of change in defined service-reliability measures over time.

interpret the reliability trend

investment proposal

A plan requesting resources for a specified project or improvement.

assess an investment proposal

business case

The stated rationale, costs, benefits, risks, and assumptions supporting a decision.

review the business case

duration

How long an interruption or accumulated interruption time lasts.

explain interruption duration

distribution of outcomes

How results vary across customers, locations, or events.

examine the distribution of outcomes

resilience

The ability to withstand, adapt to, and recover from disruptive events.

distinguish resilience from a single reliability index

benefit estimate

An estimate of the favorable effects expected from an action.

validate the benefit estimate

counterfactual

An estimate or model of what would occur without the intervention.

establish the counterfactual basis

B Precision and professional shorthand / continued

target outcome

The result an initiative aims to achieve, not a guaranteed result.

distinguish the target outcome

performance commitment

A defined undertaking about performance on a specified basis.

qualify the performance commitment

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

denominator DENOMINATOR

check the denominator

Keep the meaning precise: The quantity by which another is divided to calculate a ratio or average.

reliability trend RELIABILITY TREND

interpret the reliability trend

Keep the meaning precise: The direction of change in defined service-reliability measures over time.

C Phrases that move the work forward

Define frequency

SAIFI describes average sustained interruptions per customer.

State the period

These figures cover each full reporting year.

Calculate Year 1 frequency

Twelve hundred divided by one thousand gives 1.2.

Calculate Year 1 duration

Ninety thousand customer-minutes divided by one thousand gives ninety minutes.

Summarize the mixed trend

Interruptions were less frequent on average, but total interruption time increased.

Qualify the average

Individual customers may have experienced different outcomes.

Distinguish CAIDI

CAIDI describes average duration per customer interruption, not per customer served.

Qualify the investment

The proposed benefit needs a supported estimate and assumptions.

Define total duration

SAIDI describes average total sustained-interruption minutes per customer.

Show the denominator

Both years use one thousand customers.

Calculate Year 2 frequency

One thousand divided by one thousand gives 1.0.

Calculate Year 2 duration

One hundred twenty thousand divided by one thousand gives one hundred twenty minutes.

Correct the headline

The data do not show improvement on every measure.

Check the comparison

Use the same definitions, event coverage, and major-event treatment.

Separate resilience

A single annual index does not describe every aspect of resilience.

Close with the decision

Present the measured trend separately from the investment proposal and its uncertainty.

Precision in real exchanges

Purpose: Show the denominator

Useful wording: Both years use one thousand customers.

Purpose: Calculate Year 1 frequency

Useful wording: Twelve hundred divided by one thousand gives 1.2.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which Year 1 calculation gives CAIDI?

- A.** 1,200 divided by 1,000 = 1.2 minutes
- B.** 1,000 divided by 90,000 = 90 minutes
- C.** 90,000 customer-minutes divided by 1,200 customer interruptions = 75 minutes
- D.** 90,000 divided by 1,000 = 90 minutes

2. Which interpretation of Year 2 SAIFI is accurate?

- A.** All customers were interrupted at the same time.
- B.** The system average is one counted interruption per customer.
- C.** Every customer had exactly one interruption.
- D.** Every interruption lasted one minute.

3. A colleague needs the term for this meaning: One counted interruption affecting one customer. Which term fits?

- A.** customer interruption
- B.** major event day
- C.** system average
- D.** business case

D Choose the response that fits / continued

4. Rebuild the exchange from "Fewer interruptions, more total outage minutes".

Celia: "Residents will challenge an average of one if they personally had three interruptions. I want to explain that without dismissing their experience." **Ravi:** [missing response] **Celia:** "Now the duration measure. We have ninety thousand customer-minutes in Year 1 and a hundred twenty thousand in Year 2, again across a thousand customers." **Which response belongs in the gap?**

- A.** Exactly. A system average can coexist with uneven outcomes. Some customers may have none and others several; the average alone does not describe that distribution.
- B.** Start with frequency. SAIFI is the average count of sustained interruptions per customer. It falls from one point two in Year 1 to one in Year 2.
- C.** Correct. Keep the denominator visible. It is the defined customer population, not only the customers who experienced interruptions, and it does not count network equipment failures.
- D.** Yes. The duration measure worsened while frequency improved. We must say both, rather than choose whichever number supports the preferred headline about overall progress.

[Answers and explanations, page 168](#)

One useful distinction

SAIFI is 1.2 in Year 1 and 1.0 in Year 2. SAIDI is 90 and 120 minutes respectively. Frequency fell, but total interruption duration per customer rose. The headline improved on every measure is therefore false.

E Conversation

Fewer interruptions, more total outage minutes

Fewer interruptions, more total outage minutes

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

resilience / event coverage / duration / target outcome / frequency / system average / denominator / reporting methodology / CAIDI / SAIDI

- 01 **Celia:** The headline says reliability improved on every measure, but the chart shows SAIDI increasing. I need a clear explanation before presenting this to community representatives.
- 02 **Ravi:** Start with ¹ _____. SAIFI is the average count of sustained interruptions per customer. It falls from one point two in Year 1 to one in Year 2.
- 03 **Celia:** We get those figures by dividing twelve hundred customer interruptions and then one thousand by the same thousand customers served in each year.
- 04 **Ravi:** Correct. Keep the ² _____ visible. It is the defined customer population, not only the customers who experienced interruptions, and it does not count network equipment failures.
- 05 **Celia:** Residents will challenge an average of one if they personally had three interruptions. I want to explain that without dismissing their experience.
- 06 **Ravi:** Exactly. A ³ _____ can coexist with uneven outcomes. Some customers may have none and others several; the average alone does not describe that distribution.
- 07 **Celia:** Now the duration measure. We have ninety thousand customer-minutes in Year 1 and a hundred twenty thousand in Year 2, again across a thousand customers.

E Conversation / continued

- 08 **Ravi:** That gives ⁴ _____ of ninety and one hundred twenty minutes. It measures total interruption time per customer over the year, not the length of one typical incident.
- 09 **Celia:** Then interruptions became less frequent on average, but customers experienced more total interruption time on the system-average basis. That is a mixed trend, not universal improvement.
- 10 **Ravi:** Yes. The ⁵ _____ measure worsened while frequency improved. We must say both, rather than choose whichever number supports the preferred headline about overall progress.

Conversation continues on the next page.

Fewer interruptions, more total outage minutes

CONVERSATION / CONTINUED

- 11 **Celia:** Someone may ask how long an interruption lasted on average. That requires a different denominator from the number of customers served, does it not?
- 12 **Ravi:** Use ⁶ _____ on this same measurement basis: ninety thousand divided by twelve hundred is seventy-five minutes; one hundred twenty thousand divided by one thousand is one hundred twenty minutes.
- 13 **Celia:** So CAIDI is duration per customer interruption, while SAIDI is accumulated duration per customer served. Similar acronyms conceal an important distinction.
- 14 **Ravi:** Correct. Also preserve the ⁷ _____. The supplied years use the same sustained-interruption definitions and major-event treatment, which is necessary for interpreting the comparison we just made.
- 15 **Celia:** Please put the major-event treatment next to the chart. If that changes between years, we need to explain it before comparing the trend.
- 16 **Ravi:** Exactly. State the ⁸ _____, period, and scope. Readers should not have to discover a changed definition after reacting to a large improvement or deterioration in the headline.
- 17 **Celia:** The investment slide promises fewer interruptions next year, but we have no validated estimate explaining the size or certainty of that effect.
- 18 **Ravi:** Then label it a ⁹ _____, not a guarantee. The business case needs a supported benefit estimate, assumptions, costs, and risks; these historical indices cannot supply that causal forecast by themselves.

Fewer interruptions, more total outage minutes / continued

- 19 **Celia:** I will present the two measured trends, explain the averages, and place the investment proposal in a separate section with its remaining evidence needs.
- 20 **Ravi:** Good. Community questions about ¹⁰ _____ may reach beyond these annual averages. Explain what the indices measure accurately, then identify the additional evidence needed rather than stretching one number to answer everything.

CHECK THE GAPS

1. frequency / 2. denominator / 3. system average / 4. SAIDI / 5. duration / 6. CAIDI / 7. event coverage / 8. reporting methodology / 9. target outcome / 10. resilience

[Why these answers fit, page 170](#)

F Check accuracy and scope

Fewer interruptions, more total outage minutes

Return to the case

A fictional utility serves 1,000 customers in each of two years. Using the same sustained-interruption definitions and event coverage, Year 1 records 1,200 customer interruptions and 90,000 customer-minutes interrupted. Year 2 records 1,000 customer interruptions and 120,000 customer-minutes interrupted. The same major-event treatment applies in both years. Analyst Ravi presents the results to community liaison Celia. A draft headline says reliability improved on every measure. A proposed investment is also described as guaranteed to reduce next-year interruptions, although no validated impact estimate is supplied. Both claims need qualification.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. What must be aligned for the comparison?

- A. Customer totals alone, regardless of period
- B. Chart labels alone, regardless of calculation rules
- C. Definitions, reporting periods, population basis, and event coverage
- D. Units alone, regardless of included events

2. Which investment statement is supported?

- A. The proposal automatically removes every outage.
- B. The benefit remains a proposal requiring a validated basis.
- C. Historical averages guarantee next year's result.
- D. The draft heading proves the investment caused improvement.

[Answers and explanations, page 171](#)

Listen for the distinction

Switch roles; distinguish CAIDI per customer interruption from SAIDI per customer served.

Translate an average without turning it into everybody

Community members may compare an average with their own outage experience and conclude that one must be wrong. Explain the population and units. An average can describe the system accurately while concealing substantial differences between individual customers or neighborhoods.

F Say it / transfer to a new case

Compute two distinct indices

A fictional year has 500 customers served, 750 sustained customer interruptions, and 60,000 customer-minutes interrupted on one consistent reporting basis.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

80 / 120 / 1.5 / averages

- 01 **Analyst:** SAIFI is ¹ _____ interruptions per customer.
- 02 **Liaison:** SAIDI is ² _____ minutes per customer.
- 03 **Analyst:** CAIDI is ³ _____ minutes per customer interruption.
- 04 **Liaison:** These are ⁴ _____, not identical individual experiences.

CHECK THE GAPS

1. 1.5 / 2. 120 / 3. 80 / 4. averages

[Why these answers fit, page 171](#)

F Say it / transfer to a new case / continued

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "Fewer interruptions, more total outage minutes". Celia: "So CAIDI is duration per customer interruption, while SAIDI is accumulated duration per customer served. Similar acronyms conceal an important distinction." Ravi: [missing response] Celia: "Please put the major-event treatment next to the chart. If that changes between years, we need to explain it before comparing the trend." Which response belongs in the gap?

- A.** Correct. Also preserve the event coverage. The supplied years use the same sustained-interruption definitions and major-event treatment, which is necessary for interpreting the comparison we just made.
- B.** That gives SAIDI of ninety and one hundred twenty minutes. It measures total interruption time per customer over the year, not the length of one typical incident.
- C.** Correct. Keep the denominator visible. It is the defined customer population, not only the customers who experienced interruptions, and it does not count network equipment failures.
- D.** Start with frequency. SAIFI is the average count of sustained interruptions per customer. It falls from one point two in Year 1 to one in Year 2.

[Answers and explanations, page 172](#)

Review 4 / Meaning and context

Use language from the lessons you have completed. Choose one answer per question.

Case file

Revisit "Customer Programs and Energy Efficiency" and "Executive Reliability and Investment Updates". Choose precise terminology, then reconstruct the missing responses using both neighboring turns. The final two questions also revisit earlier conversations.

1. A colleague needs the term for this meaning: A modification or addition to improve an existing system or building. Which term fits?

- A. retrofit
- B. measurement and verification (M&V)
- C. operating hours
- D. net savings

2. A colleague needs the term for this meaning: A short interruption classified under the applicable reporting definition. Which term fits?

- A. momentary interruption
- B. investment proposal
- C. frequency
- D. System Average Interruption Duration Index (SAIDI)

3. Rebuild the exchange from "Requested resources are not all available". Daniel: "Please take ownership of both the unconfirmed crews and the pending lodging spaces. I want the outgoing record to identify who is following them up." Sofia: [missing response] Daniel: "When is your next update? The coordination lead needs a consistent time to refresh the resource summary across the response team." Which response belongs in the gap?

- A. I accept that as the request owner. My acceptance transfers coordination responsibility, not supplier confirmation. The open requests remain open until their status is verified and recorded.
- B. Correct. Deployment authorization and restoration planning are separate operational matters. I can report the resource status without claiming when any particular service point will be restored.
- C. I will correct the situation report. It should show six requested, three confirmed, and three unconfirmed, with the arrival breakdown nested within the confirmed group.
- D. So the en route group is part of the three confirmed, not an additional two. I will not add one arrived and two traveling to the confirmed total again.

Review 4 / Meaning and context / continued

4. Rebuild the exchange from "Fewer interruptions, more total outage minutes".

Celia: "The investment slide promises fewer interruptions next year, but we have no validated estimate explaining the size or certainty of that effect." Ravi: [missing response] Celia: "I will present the two measured trends, explain the averages, and place the investment proposal in a separate section with its remaining evidence needs." Which response belongs in the gap?

- A.** Exactly. State the reporting methodology, period, and scope. Readers should not have to discover a changed definition after reacting to a large improvement or deterioration in the headline.
- B.** Then label it a target outcome, not a guarantee. The business case needs a supported benefit estimate, assumptions, costs, and risks; these historical indices cannot supply that causal forecast by themselves.
- C.** Good. Community questions about resilience may reach beyond these annual averages. Explain what the indices measure accurately, then identify the additional evidence needed rather than stretching one number to answer everything.
- D.** Use CAIDI on this same measurement basis: ninety thousand divided by twelve hundred is seventy-five minutes; one hundred twenty thousand divided by one thousand is one hundred twenty minutes.

[Answers and explanations, page 182](#)

Language for the next case

Lower energy use, higher demand charge

energy charge

The energy charge follows total monthly kWh, giving \$900 this month rather than the previous \$1,000.

Ben: The tariff has two components. Your energy charge fell from a thousand dollars to nine hundred. The demand component changed in the other direction.

billing-demand values

The fictional tariff uses the maximum fifteen-minute average: 60 kW previously and 72 kW now, with no ratchet.

Ben: Correct. Those are the two monthly billing-demand values under this tariff: sixty and seventy-two. The interval report confirms that no other interval was higher.

Load shifting

Load shifting changes when demand occurs; it may move rather than reduce the highest billed interval.

Ben: No. Load shifting could create a different peak. The authorized site team needs to assess any change, and we can then examine its effect under the actual tariff.

demand interval

The stated demand interval is fifteen minutes, or one quarter of an hour, over which average power is calculated.

Ben: It is eighteen kilowatt-hours within the highest demand interval. Fifteen minutes is a quarter of an hour, so eighteen divided by a quarter gives seventy-two kilowatts.

peak demand

Peak demand here is the highest interval-average power, not total monthly energy or a momentary equipment reading.

Ben: Exactly. Your peak demand rose twenty percent, from sixty to seventy-two kilowatts. A reduction in total energy does not determine that peak.

demand ratchet

A demand ratchet can link billed demand to earlier demand or another contractual floor; the fictional tariff expressly excludes it.

Ben: A demand ratchet can carry a previous peak or other tariff basis into later billing. We have explicitly excluded that feature here; other tariffs may use it.

Read the phrases aloud. Then complete the conversation on the following pages using the word bank.

Conversation

Lower energy use, higher demand charge

A fictional business tariff charges \$0.10/kWh plus \$12/kW for the month's highest 15-minute average demand, with no ratchet or other charges. Monthly energy fell from 10,000 to 9,000 kWh. The highest interval energy rose from 15 to 18 kWh. All other intervals were lower; the two months use the same tariff.

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

energy charge / peak demand / billing-demand values / Load shifting / demand ratchet / demand interval

- 01 **Asha:** We used a thousand fewer kilowatt-hours, but this month's bill is higher. I thought using less electricity would necessarily make the total fall.
- 02 **Ben:** The tariff has two components. Your ¹ _____ fell from a thousand dollars to nine hundred. The demand component changed in the other direction.
- 03 **Asha:** I see eighteen on the interval report. Is that eighteen kilowatts, or eighteen kilowatt-hours? The column heading says energy.
- 04 **Ben:** It is eighteen kilowatt-hours within the highest ² _____. Fifteen minutes is a quarter of an hour, so eighteen divided by a quarter gives seventy-two kilowatts.
- 05 **Asha:** Last month's highest interval was fifteen kilowatt-hours. Dividing by a quarter gives sixty kilowatts, not fifteen.
- 06 **Ben:** Correct. Those are the two monthly ³ _____ under this tariff: sixty and seventy-two. The interval report confirms that no other interval was higher.

Conversation / continued

- 07 **Asha:** At twelve dollars per kilowatt, last month's demand charge was seven hundred twenty dollars. This month's is eight hundred sixty-four.
- 08 **Ben:** Yes, an increase of a hundred forty-four dollars. The hundred-dollar energy saving is smaller, so the combined total rises by forty-four dollars.
- 09 **Asha:** Then the totals are seventeen hundred twenty before and seventeen hundred sixty-four now. That reconciles, even though monthly energy fell ten percent.
- 10 **Ben:** Exactly. Your ⁴ _____ rose twenty percent, from sixty to seventy-two kilowatts. A reduction in total energy does not determine that peak.

Conversation continues on the next page.

Lower energy use, higher demand charge

CONVERSATION / CONTINUED

- 11 **Asha:** Could one brief equipment start-up be the whole explanation? Someone showed me a momentary reading from a machine display.
- 12 **Ben:** That display alone cannot establish this fifteen-minute average. We need the interval timestamp and relevant site records before attributing the peak to a particular event.
- 13 **Asha:** We are discussing moving some equipment use to a different time. Would that guarantee a lower demand charge?
- 14 **Ben:** No. ⁵ _____ could create a different peak. The authorized site team needs to assess any change, and we can then examine its effect under the actual tariff.
- 15 **Asha:** So I should not add the individual equipment ratings and assume that total was the measured maximum at the meter.
- 16 **Ben:** Right. Ratings, simultaneous use, measured interval demand, and billing demand are different quantities. This case gives us the measured intervals and a simple tariff rule.
- 17 **Asha:** You mentioned no ratchet. What does that mean for the calculation you just showed me?
- 18 **Ben:** A ⁶ _____ can carry a previous peak or other tariff basis into later billing. We have explicitly excluded that feature here; other tariffs may use it.
- 19 **Asha:** Please send the two component calculations and the timestamp of the highest interval, so our facilities team can review the actual event.
- 20 **Ben:** I will. The supported result is lower monthly energy, higher interval demand, and a forty-four-dollar increase under these supplied terms, not evidence of a faulty meter or a known equipment cause.

CHECK THE GAPS

1. energy charge / 2. demand interval / 3. billing-demand values / 4. peak demand / 5. Load shifting / 6. demand ratchet

[Why these answers fit, page 185](#)

Convert the quarter-hour quantity first

A fictional tariff charges \$0.10/kWh plus \$12/kW for the highest 15-minute average, with no other charges or ratchet. Monthly use is 8,000 kWh. The highest 15-minute interval contains 20 kWh; all other intervals are lower.

Complete the exchange using each phrase once. Read both roles, then switch roles and repeat with the bank covered.

WORD AND PHRASE BANK

80 / 800 / 960 / 1,760

- 01 **Specialist:** The highest average demand is ¹ _____ kW.
- 02 **Customer:** The monthly energy component is \$² _____.
- 03 **Specialist:** The demand component is \$³ _____.
- 04 **Customer:** The combined total is \$⁴ _____.

CHECK THE GAPS

1. 80 / 2. 800 / 3. 960 / 4. 1,760

[Why these answers fit, page 185](#)

Keep the distinction audible

Explain an interval-based demand charge without confusing kilowatts and kilowatt-hours.

Language for the next case

An actual water reading reconciles earlier estimates

cumulative register

The cumulative register records the meter's running total; period usage comes from a difference between comparable readings.

Idris: That number is the cumulative register, not the month's consumption. We need the difference between comparable readings and then account for what was already billed.

previously billed quantity

Thirty cubic metres have already been billed; subtracting them from sixty leaves thirty to reconcile rather than charging sixty again.

Idris: No. After the previously billed quantity is accounted for, thirty cubic metres remain to reconcile. We are not adding sixty on top of the earlier thirty.

unit conversion

One cubic metre equals one thousand litres; sixty cubic metres therefore equals sixty thousand litres.

Idris: Sixty cubic metres is sixty thousand litres. Keep that unit conversion separate from billing: the quantity still covers the full period between the two actual readings.

actual reading

The 1 April figure of 1,060 is measured, unlike the estimated intermediate figure of 1,030.

Idris: Correct. The new actual reading gives sixty cubic metres since that January measurement. It does not tell us the exact split between individual months.

catch-up adjustment

A catch-up adjustment reconciles the cumulative actual total with earlier estimated billing; it does not establish one month's measured usage.

Idris: Yes. Call it a catch-up adjustment, with the dates and earlier estimate visible. Avoid relabeling it as independently measured March consumption.

billing calculation

The monetary calculation requires applicable rates, billing periods, and other charges; the supplied volume alone does not determine the amount due.

Idris: The billing calculation needs the applicable rates and charges, which are not supplied in this language example. We must check those separately for a real account.

Read the phrases aloud. Then complete the conversation on the following pages using the word bank.

Conversation

An actual water reading reconciles earlier estimates

A fictional property meter read 1,000 cubic metres on 1 January, actually measured. Its 1 March reading of 1,030 was estimated; 30 cubic metres were already billed. An actual 1 April reading is 1,060. The same meter, register units, and multiplier of one are verified; no rollover or replacement occurred. Rates and other charges are not supplied.

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

actual reading / unit conversion / catch-up adjustment / previously billed quantity /
billing calculation / cumulative register

- 01 **Mara:** The new statement uses a reading of one thousand sixty. Surely our building did not use that much water in one month?
- 02 **Idris:** That number is the ¹ _____, not the month's consumption. We need the difference between comparable readings and then account for what was already billed.
- 03 **Mara:** The last actual reading was one thousand on the first of January. The first-of-March figure was one thousand thirty, but it was marked estimated.
- 04 **Idris:** Correct. The new ² _____ gives sixty cubic metres since that January measurement. It does not tell us the exact split between individual months.
- 05 **Mara:** Thirty cubic metres have already been billed using the March estimate. Does the new statement charge all sixty again?
- 06 **Idris:** No. After the ³ _____ is accounted for, thirty cubic metres remain to reconcile. We are not adding sixty on top of the earlier thirty.

Conversation / continued

- 07 **Mara:** So can I tell the tenants that March's actual use was exactly thirty cubic metres?
- 08 **Idris:** Not from these readings. The intermediate figure was an estimate. The new actual reading establishes the January-to-April total, not exactly when within those months the water passed through the meter.
- 09 **Mara:** That means the additional thirty may include a correction to earlier estimated use as well as water used after the estimate date.
- 10 **Idris:** Yes. Call it a ⁴ _____, with the dates and earlier estimate visible. Avoid relabeling it as independently measured March consumption.

Conversation continues on the next page.

An actual water reading reconciles earlier estimates

CONVERSATION / CONTINUED

- 11 **Mara:** Before we accept the numbers, could this be a different meter or a change of units? We have several properties on the account.
- 12 **Idris:** For this case, the meter identity, units, and multiplier of one are verified, with no replacement or rollover. Those checks matter before comparing register values.
- 13 **Mara:** The register is in cubic metres, while a tenant asked for litres. What is the whole January-to-April difference in litres?
- 14 **Idris:** Sixty cubic metres is sixty thousand litres. Keep that ⁵ _____ separate from billing: the quantity still covers the full period between the two actual readings.
- 15 **Mara:** Does the larger-than-estimated reading prove there is a leak, or that the meter is faulty?
- 16 **Idris:** Neither conclusion follows from the catch-up calculation alone. We can route a consumption or meter concern for the appropriate review without guessing its cause from an underestimated bill.
- 17 **Mara:** Please show the reconciliation in writing, including the estimate label. I also need to know whether the amount due is correct, not just the volume.
- 18 **Idris:** The ⁶ _____ needs the applicable rates and charges, which are not supplied in this language example. We must check those separately for a real account.
- 19 **Mara:** Then my summary is sixty cubic metres measured between January and April, thirty already billed, and thirty left to reconcile, with no exact monthly split.
- 20 **Idris:** That is accurate. I will retain the actual and estimated labels and refer any disputed account details through the proper review route, without treating this reconciliation as a leak diagnosis.

CHECK THE GAPS

1. cumulative register / 2. actual reading / 3. previously billed quantity / 4. catch-up adjustment / 5. unit conversion / 6. billing calculation

[Why these answers fit, page 187](#)

Reconcile the running total once

The same verified meter reads 3,000 cubic metres actually on 1 January, an estimated 3,025 on 1 March, and an actual 3,038 on 1 April. Twenty-five cubic metres were billed. Multiplier one; no replacement, rollover, rates, or other charges are supplied.

Complete the exchange using each phrase once. Read both roles, then switch roles and repeat with the bank covered.

WORD AND PHRASE BANK

13 / estimated / 38 / monthly

- 01 **Adviser:** Actual use between January and April totals ¹ _____ cubic metres.
- 02 **Manager:** The remaining quantity to reconcile is ² _____ cubic metres.
- 03 **Adviser:** The intermediate March figure was ³ _____.
- 04 **Manager:** These readings do not establish an exact ⁴ _____ split.

CHECK THE GAPS

1. 38 / 2. 13 / 3. estimated / 4. monthly

[Why these answers fit, page 187](#)

Keep the distinction audible

Explain a cumulative meter register and a catch-up quantity without inventing when the water was used.

Language for the next case

Battery power is not duration

Power capacity

Power capacity describes the rate of output, in MW; it cannot by itself specify how many hours the battery can deliver energy.

Nina: There is no valid calculation in that statement. Power capacity is twenty megawatts, while the separate nameplate energy rating is eighty megawatt-hours.

discharge duration

The conditional duration is usable energy divided by constant output: 60 MWh divided by 20 MW equals three hours.

Nina: Exactly. Label it a conditional discharge duration, not a site backup guarantee. Actual availability and the operating arrangement still require the relevant engineering assessment.

power limit

The 25 MW request exceeds the 20 MW power rating; dividing energy by an unsupported output rate cannot establish capability.

Nina: No. That requested rate exceeds the stated power limit of twenty megawatts. A duration calculation cannot authorize or establish operation beyond the supplied capability.

usable energy

Usable energy is the 60 MWh engineers make available at the AC boundary after losses and reserves, not the 80 MWh nameplate figure.

Nina: Use the supplied usable energy for this case: sixty megawatt-hours at the AC boundary, already net of losses and reserves.

round-trip efficiency

Round-trip efficiency compares delivered energy with charging input; 60 divided by 75 is 80%, not another deduction from already-net usable energy.

Nina: No. The usable AC figure already allows for losses. The measured cycle's round-trip efficiency is sixty divided by seventy-five: eighty percent, not another deduction.

operating assumptions

Operating assumptions state the supplied usable-energy boundary, constant output, and absence of further derating; the calculated duration is conditional on them.

Nina: Keep the operating assumptions beside the three-hour result. That prevents someone reusing it for a different state, output, or site without checking.

Read the phrases aloud. Then complete the conversation on the following pages using the word bank.

Conversation

Battery power is not duration

Fictional battery ratings: 20 MW and 80 MWh. Engineers supply 60 MWh usable AC energy, net of losses and reserves. Assume constant 20 MW output and no further derating. No dispatch authorization or backup capability is established. A separate measured cycle used 75 MWh to deliver 60 MWh.

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

power limit / usable energy / round-trip efficiency / Power capacity / discharge duration / operating assumptions

- 01 **Joel:** The presentation says this twenty-megawatt battery provides twenty hours of backup. I cannot find the calculation behind that sentence.
- 02 **Nina:** There is no valid calculation in that statement. ¹ _____ is twenty megawatts, while the separate nameplate energy rating is eighty megawatt-hours.
- 03 **Joel:** If we divide eighty megawatt-hours by twenty megawatts, the nameplate ratio is four hours. That is already very different from twenty.
- 04 **Nina:** Use the supplied ² _____ for this case: sixty megawatt-hours at the AC boundary, already net of losses and reserves.
- 05 **Joel:** At a constant twenty-megawatt output, sixty divided by twenty gives three hours under those assumptions. Is that the calculation we should show?
- 06 **Nina:** Exactly. Label it a conditional ³ _____, not a site backup guarantee. Actual availability and the operating arrangement still require the relevant engineering assessment.

Conversation / continued

- 07 **Joel:** The separate cycle used seventy-five megawatt-hours to deliver sixty. That ratio is eighty percent, so should I multiply the usable sixty by eighty percent again?
- 08 **Nina:** No. The usable AC figure already allows for losses. The measured cycle's
4 _____ is sixty divided by seventy-five: eighty percent, not another deduction.
- 09 **Joel:** So eighty percent efficiency is not eighty percent state of charge, or a twenty-percent reduction in the power rating.
- 10 **Nina:** Correct. Keep the measurement boundary explicit. Energy losses, charge state, and power limits describe different quantities.

Conversation continues on the next page.

Battery power is not duration

CONVERSATION / CONTINUED

- 11 **Joel:** Suppose the illustrative output were ten megawatts instead, still with sixty usable megawatt-hours and no other constraints. The simple duration would be six hours.
- 12 **Nina:** Yes, under that simplified constant-output assumption. Do not describe it as extra stored energy; the same energy is being delivered at a lower rate.
- 13 **Joel:** Our customer asks for twenty-five megawatts. Could we promise a shorter run because sixty divided by twenty-five still gives a number?
- 14 **Nina:** No. That requested rate exceeds the stated ⁵ _____ of twenty megawatts. A duration calculation cannot authorize or establish operation beyond the supplied capability.
- 15 **Joel:** We also have not established islanding or the customer's critical-load arrangement. Calling the three hours backup would hide those missing conditions.
- 16 **Nina:** Exactly. Having stored energy does not by itself establish a functioning backup supply. The actual connection, controls, loads, and authorized operating plan need their own basis.
- 17 **Joel:** I will show both nameplate ratings and a separate planning line for sixty usable megawatt-hours at a constant twenty-megawatt output.
- 18 **Nina:** Keep the ⁶ _____ beside the three-hour result. That prevents someone reusing it for a different state, output, or site without checking.
- 19 **Joel:** And the measured eighty-percent round-trip efficiency belongs in its own line, with seventy-five input and sixty delivered, rather than another deduction.
- 20 **Nina:** Correct. Remove twenty hours and the unsupported backup promise. The revised slide will distinguish power, energy, the conditional duration, and measured efficiency without supplying a dispatch instruction.

CHECK THE GAPS

1. Power capacity / **2.** usable energy / **3.** discharge duration / **4.** round-trip efficiency / **5.** power limit / **6.** operating assumptions

[Why these answers fit, page 189](#)

Use net available energy once

A fictional system has a 6 MW output limit and 15 MWh usable AC energy already net of losses and reserves. Assume constant 6 MW output and no further derating. A measured cycle used 20 MWh charging energy to deliver 15 MWh. No actual operating permission is supplied.

Complete the exchange using each phrase once. Read both roles, then switch roles and repeat with the bank covered.

WORD AND PHRASE BANK

150 / double-count / 2.5 / 75

- 01 **Analyst:** The conditional duration is ¹ _____ hours.
- 02 **Manager:** That duration equals ² _____ minutes.
- 03 **Analyst:** The measured round-trip efficiency is ³ _____ percent.
- 04 **Manager:** Applying that efficiency again would ⁴ _____ the losses.

CHECK THE GAPS

1. 2.5 / 2. 150 / 3. 75 / 4. double-count

[Why these answers fit, page 189](#)

Keep the distinction audible

Distinguish storage power, energy, usable output, and a conditional duration calculation.

01 / Answers and explanations

A / Read the situation

A1. What is verified at 16:10?

C. 420 affected service points in the Oak district

The supplied operations update verifies the affected count and area, not cause or restoration time.

[Return to the exercise, page 4](#)

A2. What does 16:40 represent?

A. The next status update

Paul commits to another verified status update, even if restoration timing remains unavailable.

[Return to the exercise, page 4](#)

A3. Which crew statement is accurate?

D. A crew is assigned; arrival is unconfirmed.

Assignment is confirmed, but the brief explicitly leaves crew arrival unconfirmed.

[Return to the exercise, page 4](#)

D / Response choices

D1. Which public update matches the record?

C. At 16:10, 420 service points are affected; restoration timing is under assessment; next update 16:40.

The accurate update preserves the count, timestamp, unresolved estimate, and communication commitment.

[Return to the exercise, page 9](#)

D2. Which phrase wrongly strengthens the crew status?

A. Crews are on site.

On site claims arrival, which the supplied facts do not confirm.

[Return to the exercise, page 9](#)

01 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: A circuit supplying a section of the distribution network. Which term fits?

A. feeder

A Correct. feeder: A circuit supplying a section of the distribution network. The usual combination is "identify the affected feeder".

B Not here. restoration sequence: The authorized order of activities or service recovery during restoration. The usual combination is "communicate the restoration sequence".

C Not here. supervisory control and data acquisition (SCADA): Systems used to monitor and control relevant industrial processes. The usual combination is "interpret SCADA information".

D Not here. estimated restoration time (ERT): The current estimate of when interrupted service may be restored. The usual combination is "update the estimated restoration time".

[Return to the exercise, page 9](#)

D4. Rebuild the exchange from "An update time is not a restoration promise". Nia: "I will retain service points rather than replace that with residents. Customers also want to know whether anybody is working on the problem right now." Paul: [missing response] Nia: "Customer service is already saying on site. I will ask them to change that to assigned, with arrival unconfirmed." Which response belongs in the gap?

D. We can confirm the crew assignment. Arrival has not been verified, so do not say crews are on site. Assignment and physical arrival are different stages in the response.

A Not here. This line belongs to turn 4, after Nia says: "What can I say confidently? The draft also mentions the Oak district and four hundred twenty affected service points, but I want the exact scope." It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 8, after Nia says: "Customer service is already saying on site. I will ask them to change that to assigned, with arrival unconfirmed." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 16, after Nia says: "I will correct the website and customer-service script together. Leaving the eighteen hundred promise in either channel would continue the confusion." It addresses that point, not the missing turn in the supplied exchange.

D Correct. This is Paul's response in turn 6. It connects Nia's preceding point with Nia's follow-up. Crew assignment means a crew has been allocated; it does not establish arrival, repair progress, or restoration.

[Return to the exercise, page 9](#)

E / Conversation

1. planning assumption

Turn 2. A planning assumption is an unverified basis for a plan, not a confirmed restoration estimate suitable for a promise.

01 / Answers and explanations / continued

2. status snapshot

Turn 4. The status snapshot describes known conditions at a stated time, not a final total or prediction of the outage's full scope.

3. crew assignment

Turn 6. Crew assignment means a crew has been allocated; it does not establish arrival, repair progress, or restoration.

4. outage management system

Turn 8. The outage management system supports tracking the incident, but communications must preserve the actual verified status recorded through operations.

5. update commitment

Turn 10. An update commitment promises further information at a specified time, not restoration or a completed assessment by that time.

6. estimated restoration time

Turn 12. Estimated restoration time concerns when service may return; the next communication time is not a substitute for that operational estimate.

7. Damage assessment

Turn 14. Damage assessment evaluates actual damage and conditions; an unverified guess about equipment failure must not replace its findings.

8. outage footprint

Turn 16. The outage footprint is the verified affected area or service-point set; here it is the Oak district snapshot, not an invented wider impact.

9. restoration sequence

Turn 18. The restoration sequence is an authorized operational matter; a public communications update does not direct switching or establish electrical safety.

10. crew arrival

Turn 20. Crew arrival is a distinct verified event that can be reported when confirmed, without automatically implying repair completion or restoration.

[Return to the conversation, page 11](#)

01 / Answers and explanations / continued

F / Accuracy and scope

F1. What should happen if no estimate exists at 16:40?

D. Provide the promised update and state that timing remains under assessment.

The commitment is to provide status information, not to produce a certainty that does not exist.

[Return to the exercise, page 15](#)

F2. What does the 420 figure count?

A. Service points in the verified snapshot

The supplied unit is affected service points, and the figure is limited to a timestamped snapshot.

[Return to the exercise, page 15](#)

F / Guided speaking

1. 180

Officer: The verified affected count is 180 service points.

Turn 1. One hundred eighty is the supplied service-point count for this snapshot.

2. Pine

Liaison: The affected district is Pine.

Turn 2. Pine is the named district in the separate outage case.

3. 09:50

Officer: The next information update is at 09:50.

Turn 3. Nine fifty is the stated communication time, not a restoration estimate.

4. assessment

Liaison: Restoration timing remains under assessment.

Turn 4. The brief explicitly leaves restoration timing under assessment rather than confirmed.

[Return to the conversation, page 16](#)

01 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "An update time is not a restoration promise". Nia: "The draft also guesses that a failed transformer caused the outage. Our record does not verify that cause." Paul: [missing response] Nia: "I will correct the website and customer-service script together. Leaving the eighteen hundred promise in either channel would continue the confusion." Which response belongs in the gap?

C. Remove that diagnosis. Damage assessment and other relevant checks remain with qualified operations personnel. We should not turn a plausible equipment explanation into a finding because it sounds more informative.

A Not here. This line belongs to turn 10, after Nia says: "Can we at least promise another update? Saying the estimate is unavailable without a next contact point sounds as though we have nothing further to offer." It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 4, after Nia says: "What can I say confidently? The draft also mentions the Oak district and four hundred twenty affected service points, but I want the exact scope." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Paul's response in turn 14. It connects Nia's preceding point with Nia's follow-up. Damage assessment evaluates actual damage and conditions; an unverified guess about equipment failure must not replace its findings.

D Not here. This line belongs to turn 6, after Nia says: "I will retain service points rather than replace that with residents. Customers also want to know whether anybody is working on the problem right now." It addresses that point, not the missing turn in the supplied exchange.

[Return to the exercise, page 16](#)

02 / Answers and explanations

A / Read the situation

A1. Which identifiers conflict?

B. Q27 and Q72

The work package identifies Q27 while the switching request identifies Q72.

[Return to the exercise, page 17](#)

A2. Which identifier is correct from the supplied facts?

C. It has not been established.

The case provides no verified basis for selecting either conflicting identifier.

[Return to the exercise, page 17](#)

A3. What does a repeat-back establish?

D. That the discrepancy and current hold were understood

Repeating the message confirms communication, not the equipment condition or operating authority.

[Return to the exercise, page 17](#)

D / Response choices

D1. Which message preserves the discrepancy?

D. Work package Q27; switching request Q72; correct reference unresolved; task on hold.

The accurate message gives both exact identifiers and preserves the unresolved status and hold.

[Return to the exercise, page 22](#)

D2. What should happen to the conflicting records?

D. Preserve them and use the authorized reconciliation process.

Traceable reconciliation preserves the evidence and avoids inventing a correct identifier.

[Return to the exercise, page 22](#)

02 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: A request for specified switching activity through the authorized process. Which term fits?

D. switching request

A Not here. arc flash: A hazardous release of energy associated with an electrical arc. The usual combination is "assess arc-flash hazards".

B Not here. read-back: Repetition of a received message to check its accuracy. The usual combination is "perform an exact read-back".

C Not here. energized: Connected to an electrical energy source or otherwise carrying electrical potential as applicable. The usual combination is "verify energized status".

D Correct. switching request: A request for specified switching activity through the authorized process. The usual combination is "check the switching request".

[Return to the exercise, page 22](#)

D4. Rebuild the exchange from "Two identifiers must not be treated as interchangeable". Luis: "I will preserve both documents and report the mismatch. The team knows the site well, but familiarity does not tell us which record is wrong." Farah: [missing response] Luis: "Let me read the distinction again: Q two seven in the package; Q seven two in the request. The affected task remains on hold." Which response belongs in the gap?

C. Correct. The work package may contain the error, or the associated request may. We must not give either one automatic priority just because it was the first document someone read.

A Not here. This line belongs to turn 20, after Luis says: "My summary is Q27 in the package, Q72 in the request, correct identifier unresolved, task on hold, and you coordinating the authorized review." It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 4, after Luis says: "A colleague thinks the digits were simply transposed and wants to correct the request. That may be plausible, but we do not have a verified basis." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Farah's response in turn 6. It connects Luis's preceding point with Luis's follow-up. The work package contains task information, but its identifier is not automatically correct merely because it appears first.

D Not here. This line belongs to turn 18, after Luis says: "If a replacement file arrives, where will its authorized revision status be recorded? I do not want the crew relying on the filename alone." It addresses that point, not the missing turn in the supplied exchange.

[Return to the exercise, page 22](#)

02 / Answers and explanations / continued

E / Conversation

1. equipment identifier

Turn 2. The equipment identifier distinguishes the actual asset; Q27 and Q72 cannot be treated as equivalent.

2. document reconciliation

Turn 4. Document reconciliation resolves conflicting references through authorized review, not silent editing to match an assumption.

3. work package

Turn 6. The work package contains task information, but its identifier is not automatically correct merely because it appears first.

4. read-back

Turn 8. Read-back confirms the received identifiers and task status; it does not verify the asset or provide operating permission.

5. hold point

Turn 10. The hold point prevents the affected activity from proceeding until the specified review and authorization requirements have been satisfied.

6. deenergized

Turn 12. Deenergized status requires the applicable hazardous-energy process; an outage map or uncertain label does not establish it.

7. Operating authority

Turn 14. Operating authority belongs to the people assigned the relevant decisions under the actual procedure; this dialogue does not confer it.

8. system operator

Turn 16. The system operator is the named coordinator here; accepting that role does not itself resolve the discrepancy or release the task.

9. revision control

Turn 18. Revision control establishes the applicable document issue and status; a newer-looking file name alone is not sufficient evidence.

02 / Answers and explanations / continued

10. switching request

Turn 20. A switching request asks for activity; it is not itself a verified authorized instruction to perform that activity.

[Return to the conversation, page 24](#)

F / Accuracy and scope

F1. Which conclusion is not supported by a read-back?

B. The equipment is safe to work on.

Communication accuracy does not establish electrical state, work safety, or operating authorization.

[Return to the exercise, page 28](#)

F2. Which response to schedule pressure is appropriate?

D. The identifier conflict remains unresolved; the task stays on hold under the local process.

The local hold cannot be replaced by an unverified choice or a language-practice script.

[Return to the exercise, page 28](#)

F / Guided speaking

1. R18

Lead: The work package identifies R18.

Turn 1. R18 is the identifier printed in the supplied work package.

2. R81

Operator: The associated request identifies R81.

Turn 2. R81 is the conflicting identifier in the supplied request.

3. Ema

Lead: The review coordinator is Ema.

Turn 3. Ema is the named person coordinating this separate review.

4. hold

Operator: The affected task remains on hold.

Turn 4. The brief preserves the task hold while the correct reference remains unresolved.

[Return to the conversation, page 29](#)

02 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "Two identifiers must not be treated as interchangeable". Luis: "I will leave the equipment state unconfirmed. We need to communicate the document problem, not create our own technical work sequence." Farah: [missing response] Luis: "Who coordinates the next review? The incoming lead needs a named contact and a clear statement that the discrepancy remains unresolved." Which response belongs in the gap?

B. Exactly. Operating authority remains with the relevant authorized personnel under the actual procedures. Neither our discussion nor a corrected label alone establishes every condition required for the work.

A Not here. This line belongs to turn 10, after Luis says: "I will tell the incoming lead you received the mismatch but have not released the task. Both identifiers will stay in the handover." It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Farah's response in turn 14. It connects Luis's preceding point with Luis's follow-up. Operating authority belongs to the people assigned the relevant decisions under the actual procedure; this dialogue does not confer it.

C Not here. This line belongs to turn 8, after Luis says: "Let me read the distinction again: Q two seven in the package; Q seven two in the request. The affected task remains on hold." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 2, after Luis says: "The affected task is on hold. Our work package identifies Q two seven, but the switching request identifies Q seven two. We have not established the correct reference." It addresses that point, not the missing turn in the supplied exchange.

[Return to the exercise, page 29](#)

03 / Answers and explanations

A / Read the situation

A1. What is the proposal's current status?

D. Under review, with no approval or effective date established

The supplied notice describes an unapproved proposal with no established effective date.

[Return to the exercise, page 33](#)

A2. What does the 5% figure describe?

D. The energy-charge rate increase from \$0.10 to \$0.105 per kWh

The percentage applies to the energy rate component, while the fixed charge remains unchanged.

[Return to the exercise, page 33](#)

A3. What is the current simplified bill at 500 kWh?

C. \$70

Five hundred times \$0.10 is \$50, plus the \$20 fixed charge gives \$70.

[Return to the exercise, page 33](#)

D / Response choices

D1. What would the proposed energy charge be at 500 kWh?

C. \$52.50

Five hundred multiplied by \$0.105 per kWh gives \$52.50 before the fixed charge.

[Return to the exercise, page 37](#)

D2. What would the simplified total be?

D. \$72.50

The proposed \$52.50 energy charge plus the unchanged \$20 fixed charge totals \$72.50.

[Return to the exercise, page 37](#)

03 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: The revenue amount considered necessary under the applicable regulatory determination. Which term fits?

B. revenue requirement

A Not here. fixed charge: A charge not directly varying with the measured usage in the stated example. The usual combination is "distinguish the fixed charge".

B Correct. revenue requirement: The revenue amount considered necessary under the applicable regulatory determination. The usual combination is "review the revenue requirement".

C Not here. hearing: A formal session for evidence, argument, or public participation. The usual combination is "attend a regulatory hearing".

D Not here. rate design: The structure by which charges are assigned and recovered from customers. The usual combination is "explain the rate design".

[Return to the exercise, page 37](#)

D4. Rebuild the exchange from "A proposed rate is mistaken for the current bill". Mr Diaz: "Could you show a simple example of how the energy rate combines with the other charge on a bill?" Hana: [missing response] Mr Diaz: "At ten cents for each of five hundred kilowatt-hours, the current energy part is fifty dollars. Then I still add the twenty-dollar monthly charge." Which response belongs in the gap?

D. Let's use a usage assumption of five hundred kilowatt-hours for the month. We will hold that constant and exclude taxes, credits, and other charges so the comparison is clear.

A Not here. This line belongs to turn 2, after Mr Diaz says: "I received the notice about a five percent increase. Does that mean my whole electricity bill has already gone up by five percent this month?" It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 10, after Mr Diaz says: "So the proposed example total would be seventy-two dollars fifty. That is two dollars fifty more than seventy, not five percent of the whole amount." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 12, after Mr Diaz says: "My usage is not always five hundred, and my bill has a credit line. Can we check my own account before you estimate my total?" It addresses that point, not the missing turn in the supplied exchange.

D Correct. This is Hana's response in turn 6. It connects Mr Diaz's preceding point with Mr Diaz's follow-up. The usage assumption fixes consumption at 500 kWh so the example isolates the proposed rate change rather than changing both rate and usage.

[Return to the exercise, page 37](#)

E / Conversation

1. proposed rate

Turn 2. The proposed rate is under consideration; the notice does not establish approval or a current change to the customer's account.

03 / Answers and explanations / continued

2. volumetric charge

Turn 4. The volumetric charge depends on consumption; the proposed percentage increase concerns its per-kWh rate, not every component of the total bill.

3. usage assumption

Turn 6. The usage assumption fixes consumption at 500 kWh so the example isolates the proposed rate change rather than changing both rate and usage.

4. fixed charge

Turn 8. The fixed charge is the unchanged \$20 component in this example; it must be added to the energy charge to obtain the total.

5. bill impact

Turn 10. Bill impact concerns the total charge; the example's \$2.50 increase on \$70 is about 3.57%, not the component rate's 5%.

6. customer class

Turn 12. Customer class can determine applicable rate treatment; the simplified example does not establish the terms governing Mr Diaz's actual account.

7. docket

Turn 14. The docket is the proceeding's official record or identifier, allowing the customer to locate the proposal and relevant decisions.

8. approved rate

Turn 16. An approved rate is the outcome accepted through the relevant process; it need not be identical to the original proposal.

9. effective date

Turn 18. The effective date identifies when a provision begins to operate; the supplied case establishes neither that date nor an approval.

10. rate design

Turn 20. Rate design is the structure of charges; separating its components explains why a component-rate percentage differs from the total-bill effect.

[Return to the conversation, page 39](#)

03 / Answers and explanations / continued

F / Accuracy and scope

F1. Which percentage statement is accurate?

C. The energy rate rises 5%; this example total rises about 3.57%.

The unchanged fixed charge means the total's percentage increase differs from the energy-rate increase.

[Return to the exercise, page 43](#)

F2. Which customer statement preserves the status?

B. This is a conditional illustration, not an approved change to your account.

The proposal remains unapproved and the actual account has not been reviewed.

[Return to the exercise, page 43](#)

F / Guided speaking

1. 60

Adviser: The current total is \$60.

Turn 1. Four hundred times ten cents is forty dollars, plus twenty gives sixty.

2. 42

Customer: The proposed energy component would be \$42.

Turn 2. Four hundred multiplied by \$0.105 gives a forty-two-dollar energy charge.

3. 62

Adviser: The proposed total would be \$62.

Turn 3. Forty-two dollars plus the unchanged twenty-dollar charge gives sixty-two.

4. unapproved

Customer: The proposal remains unapproved.

Turn 4. The supplied case explicitly labels the proposed rate as unapproved.

[Return to the conversation, page 44](#)

03 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "A proposed rate is mistaken for the current bill". Mr Diaz: "Where can I see whether the proposal changes or is accepted? I would prefer the official information rather than a social-media summary of the notice." Hana: [missing response] Mr Diaz: "And if a decision is eventually issued, I should still check what it actually approves rather than assume every part of the original request was accepted." Which response belongs in the gap?

B. Use the official notice and docket to check the proceeding details. We still need the filing number and participation deadline; don't guess either one.

A Not here. This line belongs to turn 18, after Mr Diaz says: "If it is approved later, how will I know which bill first uses the new rate? Is that date part of the decision?" It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Hana's response in turn 14. It connects Mr Diaz's preceding point with Mr Diaz's follow-up. The docket is the proceeding's official record or identifier, allowing the customer to locate the proposal and relevant decisions.

C Not here. This line belongs to turn 4, after Mr Diaz says: "I still want to understand the five percent figure. The notice has several numbers, and I assumed that percentage described my total." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 20, after Mr Diaz says: "I can now explain it accurately: a five percent proposal for one energy-rate component, with a different percentage effect on the simplified total, and no approved change yet." It addresses that point, not the missing turn in the supplied exchange.

[Return to the exercise, page 44](#)

04 / Answers and explanations

A / Read the situation

A1. What has the project received?

B. An acknowledgement of application Q314

The case establishes submission and acknowledgement, while the substantive reviews remain open.

[Return to the exercise, page 45](#)

A2. What does 120 kW describe?

A. Proposed nameplate power

Kilowatts measure power, and the brief labels this figure as proposed nameplate capacity.

[Return to the exercise, page 45](#)

A3. Which status is supported?

C. Application acknowledged; inverter data incomplete; metering review open

The accurate status preserves both the completed administrative step and the unresolved reviews.

[Return to the exercise, page 45](#)

D / Response choices

D1. Which presentation line is accurate?

D. Q314 acknowledged; technical reviews open; no operating permission issued

The accurate line separates receipt, ongoing review, and the absence of permission.

[Return to the exercise, page 51](#)

D2. Which unit measures energy rather than power?

B. kWh

Kilowatt-hours measure energy; watts, kilowatts, and megawatts measure power.

[Return to the exercise, page 51](#)

04 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: The rated power capacity stated for equipment or a system on its specified basis. Which term fits?

C. nameplate capacity

A Not here. feasibility study: A preliminary assessment of whether and under what conditions a proposed connection may be feasible. The usual combination is "review a feasibility study".

B Not here. commissioning: Verification and documentation of installed-system performance under the relevant process. The usual combination is "coordinate commissioning".

C Correct. nameplate capacity: The rated power capacity stated for equipment or a system on its specified basis. The usual combination is "state nameplate capacity".

D Not here. protection settings: Parameters governing relevant protective equipment behavior. The usual combination is "verify protection settings".

[Return to the exercise, page 51](#)

D4. Rebuild the exchange from "In the queue does not mean connected". Elena: "I will replace secured with application submitted and acknowledged, technical review ongoing. What should I say about the 120 kW figure beside the project name?" Amir: [missing response] Elena: "I will change the label. The slide currently uses the same 120 figure under annual generation, which the rating does not support." Which response belongs in the gap?

C. Label it proposed nameplate capacity. It describes power on its stated rating basis. It is not annual energy output, which would use kilowatt-hours, and it does not establish actual generation.

A Not here. This line belongs to turn 4, after Elena says: "Can I describe our queue status as capacity reserved, or would that imply a commitment the record does not establish?" It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 8, after Elena says: "I will change the label. The slide currently uses the same 120 figure under annual generation, which the rating does not support." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Amir's response in turn 6. It connects Elena's preceding point with Elena's follow-up. Nameplate capacity is rated power on a stated basis, not annual energy or an approved export allowance.

D Not here. This line belongs to turn 20, after Elena says: "My revised slide will distinguish proposed power, acknowledged application, open technical items, unconfirmed costs and timing, and the absence of operating permission." It addresses that point, not the missing turn in the supplied exchange.

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04 / Answers and explanations / continued

E / Conversation

1. application acknowledgement

Turn 2. Application acknowledgement confirms receipt of Q314, not connection approval or permission to operate.

2. review queue

Turn 4. The review queue identifies an administrative stage, not reserved capacity or an approved connection.

3. nameplate capacity

Turn 6. Nameplate capacity is rated power on a stated basis, not annual energy or an approved export allowance.

4. export limit

Turn 8. An export limit governs power sent to the network; the proposed nameplate rating does not establish it.

5. inverter

Turn 10. Inverter data are one outstanding input; submitting them does not automatically close metering review or other requirements.

6. permission to operate

Turn 12. Permission to operate is the relevant required authorization; an internal target date does not supply it.

7. network upgrades

Turn 14. Network upgrades are changes to network facilities; their scope and cost are unconfirmed here.

8. cost allocation

Turn 16. Cost allocation assigns costs to parties; identifying technical work does not itself settle who pays.

9. metering arrangement

Turn 18. The metering arrangement remains under review, separate from the completed administrative receipt of the application.

04 / Answers and explanations / continued

10. interconnection agreement

Turn 20. The interconnection agreement sets connection terms, distinct from the application and any separate operating requirements.

[Return to the conversation, page 53](#)

F / Accuracy and scope

F1. What follows from submitting the missing inverter data?

A. That input can be reviewed; other requirements remain separate.

Completing one information submission does not establish outcomes for all technical or commercial matters.

[Return to the exercise, page 56](#)

F2. Which statement about costs is supported?

D. Upgrade costs and allocation remain unconfirmed.

The brief explicitly establishes no confirmed upgrade cost or cost-allocation decision.

[Return to the exercise, page 56](#)

F / Guided speaking

1. Z206

Developer: The application reference is Z206.

Turn 1. Z206 is the identifier supplied for the separate acknowledged application.

2. 75

Coordinator: The proposed nameplate power is 75 kW.

Turn 2. Seventy-five is the proposed power rating, not annual energy output.

3. open

Developer: Metering review remains open.

Turn 3. The case explicitly identifies metering review as still open.

4. unissued

Coordinator: Permission to operate is unissued.

Turn 4. The brief says no permission to operate has been issued.

[Return to the conversation, page 57](#)

04 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "In the queue does not mean connected". Elena: "We should remove the claim that upgrades will cost nothing as well. I do not see any verified study or cost decision supporting that assumption." Amir: [missing response] Elena: "I will separate the engineering questions from the commercial ones. A technical answer might identify work, but the responsibility for its cost still needs its own basis." Which response belongs in the gap?

A. Yes. Potential network upgrades and their costs remain unconfirmed here. An application acknowledgement does not determine whether upgrades are needed or which party would pay for them.

A Correct. This is Amir's response in turn 14. It connects Elena's preceding point with Elena's follow-up. Network upgrades are changes to network facilities; their scope and cost are unconfirmed here.

B Not here. This line belongs to turn 10, after Elena says: "The technical team is preparing the missing inverter information. I can give them the action, but I should not promise that supplying it completes every review." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 2, after Elena says: "The presentation says connection secured. We have an acknowledgement for Q314, but is that heading too strong?" It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 4, after Elena says: "Can I describe our queue status as capacity reserved, or would that imply a commitment the record does not establish?" It addresses that point, not the missing turn in the supplied exchange.

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05 / Answers and explanations

A / Read the situation

A1. What is Option A's ten-year purchase-and-maintenance total?

C. \$30,000

Ten years of \$2,000 maintenance plus the \$10,000 purchase equals \$30,000.

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A2. What is Option B's corresponding total?

C. \$24,000

Ten years of \$1,000 maintenance plus the \$14,000 purchase equals \$24,000.

[Return to the exercise, page 61](#)

A3. What does the supplied comparison establish?

B. B is \$6,000 lower on this limited undiscounted basis.

The arithmetic favors B on the stated basis but excludes several costs and technical questions.

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D / Response choices

D1. Why is lowest-cost choice unsupported for A?

D. It uses purchase price while ignoring the supplied recurring maintenance difference.

A is cheaper upfront, but the supplied ten-year maintenance comparison favors B.

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D2. At \$1,600 annual maintenance, what would B total over ten years?

C. \$30,000

Fourteen thousand plus ten times sixteen hundred equals thirty thousand dollars.

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05 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: Costs of operating the business or assets under the relevant accounting treatment. Which term fits?

C. operating expenditure (OPEX)

A Not here. sensitivity analysis: Testing how a result changes when an assumption changes. The usual combination is "run a sensitivity analysis".

B Not here. asset criticality: The importance of an asset based on the consequences of its failure or unavailability. The usual combination is "assess asset criticality".

C Correct. operating expenditure (OPEX): Costs of operating the business or assets under the relevant accounting treatment. The usual combination is "forecast operating expenditure".

D Not here. recurring cost: A cost expected to occur repeatedly over a period. The usual combination is "estimate recurring costs".

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D4. Rebuild the exchange from "The cheapest purchase is not the cheapest comparison". Sam: "B totals twenty-four thousand: fourteen thousand plus ten times one thousand. That is six thousand lower on this basis." Priya: [missing response] Sam: "The calculation leaves out installation, energy, downtime, disposal, and residual value. We also have not established that both options satisfy the technical requirements equally." Which response belongs in the gap?

A. Correct. The recurring cost reverses the purchase-price ranking. But describe that as a purchase-and-maintenance result, not proof that B is the best asset for every purpose.

A Correct. This is Priya's response in turn 6. It connects Sam's preceding point with Sam's follow-up. The recurring maintenance cost accumulates over the ten-year period and reverses the ranking based on purchase price alone.

B Not here. This line belongs to turn 2, after Sam says: "A costs ten thousand upfront and B fourteen thousand. The slide calls A the lowest-cost choice. Is that too broad?" It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 14, after Sam says: "That would match A on this limited basis. It would not prove the two options have identical performance, risks, or costs outside the comparison." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 16, after Sam says: "We also have no residual-value estimate. One asset might retain more value at the end of ten years, but we cannot assume an amount." It addresses that point, not the missing turn in the supplied exchange.

[Return to the exercise, page 66](#)

E / Conversation

1. purchase price

Turn 2. Purchase price is the acquisition amount only; the slide incorrectly uses it to describe the entire cost choice.

05 / Answers and explanations / continued

2. assessment horizon

Turn 4. The assessment horizon is the ten-year period used to multiply recurring annual costs and compare the options.

3. recurring cost

Turn 6. The recurring maintenance cost accumulates over the ten-year period and reverses the ranking based on purchase price alone.

4. cost boundary

Turn 8. The cost boundary identifies included and excluded costs, preventing the partial comparison from appearing to cover all ownership effects.

5. Total cost of ownership

Turn 10. Total cost of ownership requires an explicit scope of relevant ownership costs; this exercise supplies only purchase and maintenance.

6. sensitivity analysis

Turn 12. Sensitivity analysis changes an assumption to test its effect; here it examines a higher annual maintenance amount for B.

7. Technical equivalence

Turn 14. Technical equivalence concerns ability to meet the required performance, which financial equality on a limited basis does not establish.

8. residual value

Turn 16. Residual value is the value remaining at the assessment horizon; it is excluded and has not been estimated here.

9. discounted cash flow

Turn 18. Discounted cash flow uses an explicit discount-rate basis for future amounts; the supplied arithmetic deliberately does not do that.

10. decision criteria

Turn 20. Decision criteria include the factors needed for the actual choice; limited cost arithmetic does not settle every financial or technical consideration.

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05 / Answers and explanations / continued

F / Accuracy and scope

F1. Which label fits the original calculation?

A. Ten-year undiscounted purchase-and-maintenance comparison

The calculation includes only the stated purchase and maintenance amounts without discounting.

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F2. What remains necessary before a full decision?

C. Assess omitted costs, technical suitability, and the relevant decision criteria.

The limited arithmetic leaves material financial and technical matters unresolved.

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F / Guided speaking

1. 13,000

Analyst: C totals \$13,000.

Turn 1. Eight thousand plus five years at one thousand equals thirteen thousand.

2. 12,000

Manager: D totals \$12,000.

Turn 2. Ten thousand plus five years at four hundred equals twelve thousand.

3. 1,000

Analyst: D is \$1,000 lower on this basis.

Turn 3. The difference between thirteen thousand and twelve thousand is one thousand.

4. other

Manager: The comparison excludes other costs.

Turn 4. The setup includes purchase and maintenance only, leaving other cost categories outside the calculation.

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05 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "The cheapest purchase is not the cheapest comparison". Sam: "That would match A on this limited basis. It would not prove the two options have identical performance, risks, or costs outside the comparison." Priya: [missing response] Sam: "We also have no residual-value estimate. One asset might retain more value at the end of ten years, but we cannot assume an amount." Which response belongs in the gap?

D. Correct. Technical equivalence remains unassessed. A matching subtotal does not tell us whether either option meets the required duty, reliability, operating conditions, or other technical criteria.

A Not here. This line belongs to turn 6, after Sam says: "B totals twenty-four thousand: fourteen thousand plus ten times one thousand. That is six thousand lower on this basis." It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 2, after Sam says: "A costs ten thousand upfront and B fourteen thousand. The slide calls A the lowest-cost choice. Is that too broad?" It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 16, after Sam says: "We also have no residual-value estimate. One asset might retain more value at the end of ten years, but we cannot assume an amount." It addresses that point, not the missing turn in the supplied exchange.

D Correct. This is Priya's response in turn 14. It connects Sam's preceding point with Sam's follow-up. Technical equivalence concerns ability to meet the required performance, which financial equality on a limited basis does not establish.

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06 / Answers and explanations

A / Read the situation

A1. How many requested crews are confirmed?

D. Three

The brief confirms three of the six requested crews, with three still unconfirmed.

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A2. How many of the confirmed crews have arrived at staging?

C. One

One confirmed crew is at staging; the other two confirmed crews are en route.

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A3. How many lodging spaces remain pending?

A. Eight

Twenty were requested and twelve confirmed, leaving eight spaces pending.

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D / Response choices

D1. Which crew summary avoids double counting?

D. Six requested; three confirmed, comprising one arrived and two en route

The arrived and en-route counts are subsets of the three confirmed crews.

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D2. Which lodging statement is supported?

D. Twelve confirmed; eight pending from a request for twenty

The brief gives twenty requested and twelve confirmed, leaving eight pending.

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06 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: A documented request for specified people, equipment, or support. Which term fits?

D. resource request

A Not here. operational period: A defined interval used for response planning and coordination. The usual combination is "identify the operational period".

B Not here. en route: Traveling toward the relevant destination, not yet arrived. The usual combination is "report crews en route".

C Not here. communications plan: The defined channels, contacts, and arrangements for response communication. The usual combination is "follow the communications plan".

D Correct. resource request: A documented request for specified people, equipment, or support. The usual combination is "track a resource request".

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D4. Rebuild the exchange from "Requested resources are not all available". Daniel: "Please correct the earlier six-available line. It appears to count the same three crews twice, once as confirmed and again by travel status." Sofia: [missing response] Daniel: "Lodging also needs a qualification: twenty spaces requested, twelve confirmed, eight pending. The request remains open." Which response belongs in the gap?

A. I will correct the situation report. It should show six requested, three confirmed, and three unconfirmed, with the arrival breakdown nested within the confirmed group.

A Correct. This is Sofia's response in turn 6. It connects Daniel's preceding point with Daniel's follow-up. The situation report must preserve actual categories and counts, correcting the unsupported claim of six available crews.

B Not here. This line belongs to turn 16, after Daniel says: "Someone may ask whether these crews will restore a neighborhood tonight. Our logistics counts cannot support that promise, and no such assignment is established." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 4, after Daniel says: "One is at staging and two are en route. Three requested crews remain unconfirmed. Arrival times for the traveling crews are unverified." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 10, after Daniel says: "Please take ownership of both the unconfirmed crews and the pending lodging spaces. I want the outgoing record to identify who is following them up." It addresses that point, not the missing turn in the supplied exchange.

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E / Conversation

1. shift handover

Turn 2. The shift handover transfers information and responsibility without changing the actual confirmation or arrival status of resources.

06 / Answers and explanations / continued

2. en route

Turn 4. En route means traveling; these two confirmed crews have not yet arrived at staging.

3. situation report

Turn 6. The situation report must preserve actual categories and counts, correcting the unsupported claim of six available crews.

4. resource shortfall

Turn 8. The resource shortfall is requested minus confirmed capacity, here eight pending lodging spaces.

5. request owner

Turn 10. The request owner accepts follow-up responsibility, which does not itself confirm the missing crews or lodging.

6. status reconciliation

Turn 12. Status reconciliation checks consistent resource reporting and prevents duplicate counting before the next update.

7. staging location

Turn 14. The staging location is an assembly point; arrival does not establish readiness or deployment authorization.

8. Deployment authorization

Turn 16. Deployment authorization permits specified work; the logistics snapshot supplies neither that authorization nor a restoration promise.

9. estimated time of arrival

Turn 18. Estimated time of arrival concerns reaching the destination; confirmed participation does not establish that estimate.

10. Lodging allocation

Turn 20. Lodging allocation must use confirmed capacity: twelve spaces are confirmed, with eight still pending.

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06 / Answers and explanations / continued

F / Accuracy and scope

F1. What does the 20:00 commitment promise?

C. A new status update

Sofia accepts a communication commitment, not a guarantee of resource delivery or service restoration.

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F2. What follows from a crew arriving at staging?

B. Arrival is established, while other required deployment stages remain separate.

Arrival does not itself establish briefing, qualification verification, or authorization for work.

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F / Guided speaking

1. five

Coordinator: The confirmed crew total is five.

Turn 1. Two at staging plus three en route make five confirmed crews.

2. three

Receiver: The unconfirmed crew count is three.

Turn 2. Eight requested minus five confirmed leaves three unconfirmed crews.

3. fourteen

Coordinator: Confirmed lodging spaces total fourteen.

Turn 3. Fourteen is the supplied count of confirmed accommodation spaces.

4. four

Receiver: The lodging shortfall is four spaces.

Turn 4. Eighteen requested minus fourteen confirmed leaves four spaces pending.

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06 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "Requested resources are not all available". Daniel: "The crew at staging has arrived, but this snapshot says nothing about its briefing, qualification checks, or an authorized work assignment. Please keep those stages separate." Sofia: [missing response] Daniel: "Someone may ask whether these crews will restore a neighborhood tonight. Our logistics counts cannot support that promise, and no such assignment is established." Which response belongs in the gap?

A. Agreed. Arrival at the staging location is not permission to deploy. I will leave the applicable operational checks and assignments with the authorized response process rather than infer them from presence.

A Correct. This is Sofia's response in turn 14. It connects Daniel's preceding point with Daniel's follow-up. The staging location is an assembly point; arrival does not establish readiness or deployment authorization.

B Not here. This line belongs to turn 2, after Daniel says: "This is the resource position at nineteen thirty local time. Six external crews were requested, and three are confirmed. I need to hand over the remaining requests." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 8, after Daniel says: "Lodging also needs a qualification: twenty spaces requested, twelve confirmed, eight pending. The request remains open." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 20, after Daniel says: "Please read the final numbers back so I can close the administrative handover without leaving a different version in my outgoing report." It addresses that point, not the missing turn in the supplied exchange.

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07 / Answers and explanations

A / Read the situation

A1. What measured energy change is supplied?

C. A 1,500 kWh reduction, equal to 15% of baseline use

Ten thousand minus 8,500 is 1,500 kWh, which is 15% of the baseline 10,000.

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A2. Which other conditions changed?

B. Weather and occupancy

The brief states milder weather and a fall in average daily occupancy from forty to thirty.

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A3. What has not been completed?

D. An adjusted baseline and savings-verification analysis

The observations exist, but the analysis needed to isolate a savings effect remains incomplete.

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D / Response choices

D1. Which headline is supported?

B. Metered use fell 15%; retrofit attribution remains unverified.

The readings support a consumption decline but not the causal, billing, or peak-demand claims.

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D2. Why do equal 30-day periods not settle attribution?

D. Weather and occupancy still differed.

Equal duration controls one comparison feature but does not remove the stated weather and occupancy differences.

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07 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: A defined intervention intended to reduce energy or related resource use. Which term fits?

C. energy conservation measure (ECM)

A Not here. adjusted baseline: Reference use adjusted to relevant comparison conditions under an explicit method. The usual combination is "calculate an adjusted baseline".

B Not here. rebound effect: Increased use of a service that may offset some expected efficiency savings. The usual combination is "assess the rebound effect".

C Correct. energy conservation measure (ECM): A defined intervention intended to reduce energy or related resource use. The usual combination is "evaluate an energy conservation measure".

D Not here. independent variable: An input used to explain variation in another measured quantity. The usual combination is "identify relevant independent variables".

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D4. Rebuild the exchange from "Lower consumption does not isolate the program effect". Leila: "Average daily occupancy fell from forty to thirty people. That is ten fewer, or twenty-five percent of the original forty, not a ten percent change." Victor: [missing response] Leila: "So we should not try to correct the energy result with a guessed number for people, then assign whatever remains to the retrofit." Which response belongs in the gap?

A. Correct. Occupancy is a separate measured condition. We cannot assume its effect on energy is proportional to the headcount change or simply subtract twenty-five percent.

A Correct. This is Victor's response in turn 6. It connects Leila's preceding point with Leila's follow-up. Occupancy fell from forty to thirty people; its contribution to the energy decline requires analysis.

B Not here. This line belongs to turn 20, after Leila says: "The revised summary will give both readings, the equal thirty-day periods, the weather and occupancy changes, and the fact that no adjusted analysis is complete." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 18, after Leila says: "I will keep the units visible. Kilowatt-hours measure the energy used over the period; these monthly readings do not establish what happened to peak demand." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 10, after Leila says: "The weather changed too. The second month was milder, but we have not quantified the resulting heating or cooling effect in this analysis." It addresses that point, not the missing turn in the supplied exchange.

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E / Conversation

1. metered consumption

Turn 2. Metered consumption fell by 1,500 kWh; those observations alone do not establish the cause.

07 / Answers and explanations / continued

2. reporting period

Turn 4. The reporting period had different weather and occupancy; equal duration does not make all conditions comparable.

3. Occupancy

Turn 6. Occupancy fell from forty to thirty people; its contribution to the energy decline requires analysis.

4. adjusted baseline

Turn 8. An adjusted baseline represents reference use under relevant comparison conditions using an explicit method, not arbitrary subtraction.

5. Weather normalization

Turn 10. Weather normalization adjusts analysis to a defined weather basis; it has not been completed here.

6. attribution

Turn 12. Attribution concerns how much change is due to the retrofit; that causal question remains unresolved.

7. Uncertainty

Turn 14. Uncertainty limits the supported conclusion; it is not proof that the retrofit had no benefit.

8. bill savings

Turn 16. Bill savings concerns money under actual billing conditions; missing rates and charges prevent a supported percentage.

9. measurement and verification

Turn 18. Measurement and verification supplies the defined basis for assessing savings and must address relevant comparison conditions.

10. confounding factors

Turn 20. Confounding factors complicate attribution, here weather and occupancy changes occurring alongside the retrofit.

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07 / Answers and explanations / continued

F / Accuracy and scope

F1. What is the occupancy decline?

B. 25%, from 40 to 30 people

Ten fewer divided by the original forty equals twenty-five percent.

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F2. Which bill statement is justified?

C. Bill savings cannot be calculated from the supplied information.

Rates and billing components are missing, so consumption figures alone do not determine monetary savings.

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F / Guided speaking

1. 1,200

Analyst: The observed reduction is 1,200 kWh.

Turn 1. Twelve thousand minus ten thousand eight hundred equals twelve hundred kilowatt-hours.

2. 10

Manager: That equals 10 percent of baseline use.

Turn 2. Twelve hundred divided by twelve thousand equals ten percent.

3. unverified

Analyst: Attribution to the intervention remains unverified.

Turn 3. Changed conditions and missing adjusted analysis prevent verified causal attribution.

4. calculable

Manager: Monetary bill savings are not calculable.

Turn 4. The case supplies no billing rates or other information needed for monetary savings.

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07 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "Lower consumption does not isolate the program effect". Leila: "The program manager heard unverified as no benefit. Please help me correct that impression without claiming an effect we have not measured." Victor: [missing response] Leila: "We need to correct the savings claim too. We don't have the rates, fixed charges, credits, demand charges, or other billing details for this account." Which response belongs in the gap?

C. No. Uncertainty is not a finding of zero benefit. We have not isolated the effect, and that means we should avoid both an exact success claim and an unsupported dismissal.

A Not here. This line belongs to turn 4, after Leila says: "Both readings cover thirty days. I initially thought matching the period length meant we could attribute the whole difference to the equipment installed between them." It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 16, after Leila says: "We need to correct the savings claim too. We don't have the rates, fixed charges, credits, demand charges, or other billing details for this account." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Victor's response in turn 14. It connects Leila's preceding point with Leila's follow-up. Uncertainty limits the supported conclusion; it is not proof that the retrofit had no benefit.

D Not here. This line belongs to turn 12, after Leila says: "I do not want to discard the meter result. Can the headline state the fifteen-percent consumption decline and flag the attribution separately?" It addresses that point, not the missing turn in the supplied exchange.

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08 / Answers and explanations

A / Read the situation

A1. What is Year 1 SAIFI?

C. 1.2 interruptions per customer

Divide 1,200 customer interruptions by 1,000 customers to obtain 1.2.

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A2. What is Year 2 SAIDI?

D. 120 minutes per customer

Divide 120,000 customer-minutes by 1,000 customers to obtain 120 minutes.

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A3. Which overall description matches the two indices?

D. Average frequency fell while average total interruption duration rose.

SAIFI falls from 1.2 to 1.0, while SAIDI rises from 90 to 120 minutes.

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D / Response choices

D1. Which Year 1 calculation gives CAIDI?

C. 90,000 customer-minutes divided by 1,200 customer interruptions = 75 minutes

CAIDI divides accumulated customer-interruption minutes by customer interruptions, giving seventy-five minutes.

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D2. Which interpretation of Year 2 SAIFI is accurate?

B. The system average is one counted interruption per customer.

A system average does not require identical interruption counts or experiences for every customer.

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08 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: One counted interruption affecting one customer. Which term fits?

A. customer interruption

A Correct. customer interruption: One counted interruption affecting one customer. The usual combination is "count customer interruptions".

B Not here. major event day: A day classified as a major event under the stated reliability methodology. The usual combination is "state major-event-day treatment".

C Not here. system average: A measure averaged over the defined system population. The usual combination is "qualify the system average".

D Not here. business case: The stated rationale, costs, benefits, risks, and assumptions supporting a decision. The usual combination is "review the business case".

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D4. Rebuild the exchange from "Fewer interruptions, more total outage minutes".

Celia: "Residents will challenge an average of one if they personally had three interruptions. I want to explain that without dismissing their experience." Ravi: [missing response] Celia: "Now the duration measure. We have ninety thousand customer-minutes in Year 1 and a hundred twenty thousand in Year 2, again across a thousand customers." Which response belongs in the gap?

A. Exactly. A system average can coexist with uneven outcomes. Some customers may have none and others several; the average alone does not describe that distribution.

A Correct. This is Ravi's response in turn 6. It connects Celia's preceding point with Celia's follow-up. A system average summarizes the population while allowing individual customers to have different counts, including none or several.

B Not here. This line belongs to turn 2, after Celia says: "The headline says reliability improved on every measure, but the chart shows SAIDI increasing. I need a clear explanation before presenting this to community representatives." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 4, after Celia says: "We get those figures by dividing twelve hundred customer interruptions and then one thousand by the same thousand customers served in each year." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 10, after Celia says: "Then interruptions became less frequent on average, but customers experienced more total interruption time on the system-average basis. That is a mixed trend, not universal improvement." It addresses that point, not the missing turn in the supplied exchange.

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08 / Answers and explanations / continued

E / Conversation

1. frequency

Turn 2. Frequency concerns how often interruptions occur; SAIFI falls from 1.2 to 1.0 on the supplied customer basis.

2. denominator

Turn 4. The denominator is the served-customer population used in the division, one thousand in both years of this comparison.

3. system average

Turn 6. A system average summarizes the population while allowing individual customers to have different counts, including none or several.

4. SAIDI

Turn 8. SAIDI is average total sustained-interruption duration per customer, calculated here as ninety and one hundred twenty minutes respectively.

5. duration

Turn 10. Duration here concerns accumulated interruption time; it rose even while the average interruption count fell.

6. CAIDI

Turn 12. CAIDI divides customer-minutes interrupted by customer interruptions, yielding seventy-five and one hundred twenty minutes on this consistent basis.

7. event coverage

Turn 14. Event coverage identifies which interruptions are included; a trend comparison requires consistent scope rather than mixing different event sets.

8. reporting methodology

Turn 16. Reporting methodology defines calculation and classification rules; changing those rules can undermine a comparison even when arithmetic is correct.

9. target outcome

Turn 18. A target outcome is an intended result, not a guaranteed effect; the supplied proposal lacks a validated impact estimate.

08 / Answers and explanations / continued

10. resilience

Turn 20. Resilience includes withstanding and recovering from disruption; a single annual average does not capture every aspect of that broader capability.

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F / Accuracy and scope

F1. What must be aligned for the comparison?

C. Definitions, reporting periods, population basis, and event coverage

Changing measurement scope can create a misleading trend even when each separate calculation is correct.

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F2. Which investment statement is supported?

B. The benefit remains a proposal requiring a validated basis.

No validated impact estimate is supplied, so the promised improvement is not established.

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F / Guided speaking

1. 1.5

Analyst: SAIFI is 1.5 interruptions per customer.

Turn 1. Seven hundred fifty customer interruptions divided by five hundred customers equals 1.5.

2. 120

Liaison: SAIDI is 120 minutes per customer.

Turn 2. Sixty thousand customer-minutes divided by five hundred customers equals one hundred twenty.

3. 80

Analyst: CAIDI is 80 minutes per customer interruption.

Turn 3. Sixty thousand customer-minutes divided by seven hundred fifty customer interruptions equals eighty.

4. averages

Liaison: These are averages, not identical individual experiences.

Turn 4. The measures summarize groups and do not require every customer's experience to match.

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08 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "Fewer interruptions, more total outage minutes".

Celia: "So CAIDI is duration per customer interruption, while SAIDI is accumulated duration per customer served. Similar acronyms conceal an important distinction."

Ravi: [missing response] **Celia:** "Please put the major-event treatment next to the chart. If that changes between years, we need to explain it before comparing the trend." Which response belongs in the gap?

A. Correct. Also preserve the event coverage. The supplied years use the same sustained-interruption definitions and major-event treatment, which is necessary for interpreting the comparison we just made.

A Correct. This is Ravi's response in turn 14. It connects Celia's preceding point with Celia's follow-up. Event coverage identifies which interruptions are included; a trend comparison requires consistent scope rather than mixing different event sets.

B Not here. This line belongs to turn 8, after Celia says: "Now the duration measure. We have ninety thousand customer-minutes in Year 1 and a hundred twenty thousand in Year 2, again across a thousand customers." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 4, after Celia says: "We get those figures by dividing twelve hundred customer interruptions and then one thousand by the same thousand customers served in each year." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 2, after Celia says: "The headline says reliability improved on every measure, but the chart shows SAIDI increasing. I need a clear explanation before presenting this to community representatives." It addresses that point, not the missing turn in the supplied exchange.

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Review 1 / Explanations

Cumulative review

1. A colleague needs the term for this meaning: Delivery of electricity through the network serving end users. Which term fits?

C. distribution

A Not here. kilowatt-hour (kWh): A unit of energy equal to one kilowatt sustained for one hour. The usual combination is "measure energy in kilowatt-hours".

B Not here. outage management system (OMS): A system supporting outage tracking, analysis, and response coordination. The usual combination is "update the outage management system".

C Correct. distribution: Delivery of electricity through the network serving end users. The usual combination is "restore distribution service".

D Not here. outage footprint: The area or set of service points affected by an outage. The usual combination is "verify the outage footprint".

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2. A colleague needs the term for this meaning: The person leading the relevant field team or task. Which term fits?

B. field lead

A Not here. clearance: A formal authorization or controlled status with a defined meaning under the operating procedure. The usual combination is "verify the clearance conditions".

B Correct. field lead: The person leading the relevant field team or task. The usual combination is "notify the field lead".

C Not here. grounding: Establishing the required electrical connection to ground under applicable procedures. The usual combination is "follow authorized grounding requirements".

D Not here. equipment identifier: The exact reference used to identify a particular item of equipment. The usual combination is "verify the equipment identifier".

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Review 1 / Explanations / continued

3. Rebuild the exchange from "An update time is not a restoration promise". Nia: "Can we at least promise another update? Saying the estimate is unavailable without a next contact point sounds as though we have nothing further to offer." Paul: [missing response] Nia: "I will put the update time on its own line and label it clearly. It must not look like a deadline for the lights to come back on." Which response belongs in the gap?

B. Yes. Make an update commitment for sixteen forty local time. I will provide the verified position then, even if the restoration estimate remains unavailable and we need to say so.

A Not here. This line belongs to turn 4, after Nia says: "What can I say confidently? The draft also mentions the Oak district and four hundred twenty affected service points, but I want the exact scope." It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Paul's response in turn 10. It connects Nia's preceding point with Nia's follow-up. An update commitment promises further information at a specified time, not restoration or a completed assessment by that time.

C Not here. This line belongs to turn 14, after Nia says: "The draft also guesses that a failed transformer caused the outage. Our record does not verify that cause." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 6, after Nia says: "I will retain service points rather than replace that with residents. Customers also want to know whether anybody is working on the problem right now." It addresses that point, not the missing turn in the supplied exchange.

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Review 1 / Explanations / continued

4. Rebuild the exchange from "Two identifiers must not be treated as interchangeable". Luis: "If a replacement file arrives, where will its authorized revision status be recorded? I do not want the crew relying on the filename alone." Farah: [missing response] Luis: "My summary is Q27 in the package, Q72 in the request, correct identifier unresolved, task on hold, and you coordinating the authorized review." Which response belongs in the gap?

C. Use the required revision control process. The relevant records must be reconciled and distributed correctly, with any operational authorization handled under its own requirements rather than implied by an attachment.

A Not here. This line belongs to turn 6, after Luis says: "I will preserve both documents and report the mismatch. The team knows the site well, but familiarity does not tell us which record is wrong." It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 20, after Luis says: "My summary is Q27 in the package, Q72 in the request, correct identifier unresolved, task on hold, and you coordinating the authorized review." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Farah's response in turn 18. It connects Luis's preceding point with Luis's follow-up. Revision control establishes the applicable document issue and status; a newer-looking file name alone is not sufficient evidence.

D Not here. This line belongs to turn 4, after Luis says: "A colleague thinks the digits were simply transposed and wants to correct the request. That may be plausible, but we do not have a verified basis." It addresses that point, not the missing turn in the supplied exchange.

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Review 2 / Explanations

Cumulative review

1. A colleague needs the term for this meaning: A regulatory body overseeing specified utility matters in its jurisdiction. Which term fits?

C. public utilities commission

A Not here. docket: The official record or identifier for a proceeding. The usual combination is "locate the docket".

B Not here. test year: A period used as a basis for the relevant rate-case analysis. The usual combination is "identify the test year".

C Correct. public utilities commission: A regulatory body overseeing specified utility matters in its jurisdiction. The usual combination is "identify the public utilities commission".

D Not here. customer class: A grouping of customers used for service or rate treatment. The usual combination is "identify the customer class".

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2. A colleague needs the term for this meaning: The application's place under the applicable queue rules. Which term fits?

C. queue position

A Not here. interconnection agreement: The applicable agreement defining the terms of a connection. The usual combination is "review the interconnection agreement".

B Not here. interconnection: The arrangement and process for connecting a generating resource to an electrical network. The usual combination is "review the interconnection".

C Correct. queue position: The application's place under the applicable queue rules. The usual combination is "confirm queue position".

D Not here. export limit: A limit on the power a resource may send to the network under applicable terms. The usual combination is "verify the export limit".

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Review 2 / Explanations / continued

3. Rebuild the exchange from "Two identifiers must not be treated as interchangeable". Luis: "I will tell the incoming lead you received the mismatch but have not released the task. Both identifiers will stay in the handover." Farah: [missing response] Luis: "Should I label the equipment deenergized? The public outage map shows customers without supply nearby, but that is a different source." Which response belongs in the gap?

C. Keep the hold point visible in the handover. My acknowledgement means I received the discrepancy. It is not a release, a clearance, or an instruction to perform switching.

A Not here. This line belongs to turn 8, after Luis says: "Let me read the distinction again: Q two seven in the package; Q seven two in the request. The affected task remains on hold." It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 2, after Luis says: "The affected task is on hold. Our work package identifies Q two seven, but the switching request identifies Q seven two. We have not established the correct reference." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Farah's response in turn 10. It connects Luis's preceding point with Luis's follow-up. The hold point prevents the affected activity from proceeding until the specified review and authorization requirements have been satisfied.

D Not here. This line belongs to turn 14, after Luis says: "I will leave the equipment state unconfirmed. We need to communicate the document problem, not create our own technical work sequence." It addresses that point, not the missing turn in the supplied exchange.

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Review 2 / Explanations / continued

4. Rebuild the exchange from "In the queue does not mean connected". Elena: "What can I put in the next-actions box? The investors need to see which submission our team is preparing and which review remains open." Amir: [missing response] Elena: "My revised slide will distinguish proposed power, acknowledged application, open technical items, unconfirmed costs and timing, and the absence of operating permission." Which response belongs in the gap?

C. Say the team is submitting the missing data for review while the metering arrangement is being assessed. That is concrete progress, with the open items visible, and does not imply that either review has reached a favorable decision.

A Not here. This line belongs to turn 6, after Elena says: "I will replace secured with application submitted and acknowledged, technical review ongoing. What should I say about the 120 kW figure beside the project name?" It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 8, after Elena says: "I will change the label. The slide currently uses the same 120 figure under annual generation, which the rating does not support." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Amir's response in turn 18. It connects Elena's preceding point with Elena's follow-up. The metering arrangement remains under review, separate from the completed administrative receipt of the application.

D Not here. This line belongs to turn 12, after Elena says: "The investor slide also shows our internal operating target. We have no confirmation that the required reviews will finish by then." It addresses that point, not the missing turn in the supplied exchange.

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Review 3 / Explanations

Cumulative review

1. A colleague needs the term for this meaning: Spending on acquiring or improving long-lived assets under the applicable accounting treatment. Which term fits?

C. capital expenditure (CAPEX)

A Not here. failure mode: A particular way an asset or component can fail. The usual combination is "assess a failure mode".

B Not here. maintenance interval: The period or usage between planned maintenance actions. The usual combination is "review the maintenance interval".

C Correct. capital expenditure (CAPEX): Spending on acquiring or improving long-lived assets under the applicable accounting treatment. The usual combination is "assess capital expenditure".

D Not here. discounted cash flow: Evaluation of future cash flows using an explicit discount-rate basis. The usual combination is "distinguish discounted cash flow".

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2. A colleague needs the term for this meaning: Organized release and return of resources when no longer required. Which term fits?

C. demobilization

A Not here. credential verification: Checking the relevant qualifications or authorizations of personnel. The usual combination is "complete credential verification".

B Not here. resource shortfall: The gap between required or requested resources and those available or confirmed. The usual combination is "identify a resource shortfall".

C Correct. demobilization: Organized release and return of resources when no longer required. The usual combination is "plan demobilization".

D Not here. emergency operations center (EOC): A location or function coordinating information and resources during an emergency. The usual combination is "support the emergency operations center".

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Review 3 / Explanations / continued

3. Rebuild the exchange from "In the queue does not mean connected". Elena: "The technical team is preparing the missing inverter information. I can give them the action, but I should not promise that supplying it completes every review." Amir: [missing response] Elena: "The investor slide also shows our internal operating target. We have no confirmation that the required reviews will finish by then." Which response belongs in the gap?

A. Exactly. The inverter data are one open input. The metering review remains separate, and other applicable requirements still need their own verified status under the actual utility process.

A Correct. This is Amir's response in turn 10. It connects Elena's preceding point with Elena's follow-up. Inverter data are one outstanding input; submitting them does not automatically close metering review or other requirements.

B Not here. This line belongs to turn 16, after Elena says: "I will separate the engineering questions from the commercial ones. A technical answer might identify work, but the responsibility for its cost still needs its own basis." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 4, after Elena says: "Can I describe our queue status as capacity reserved, or would that imply a commitment the record does not establish?" It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 8, after Elena says: "I will change the label. The slide currently uses the same 120 figure under annual generation, which the rating does not support." It addresses that point, not the missing turn in the supplied exchange.

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Review 3 / Explanations / continued

4. Rebuild the exchange from "Requested resources are not all available". Daniel: "The next shift also asked when the two traveling crews will arrive. I have no verified ETA to hand over." Sofia: [missing response] Daniel: "Please read the final numbers back so I can close the administrative handover without leaving a different version in my outgoing report." Which response belongs in the gap?

A. I will mark the estimated time of arrival as unverified. Any update needs its source and time basis, particularly if access restrictions or other conditions change during the response.

A Correct. This is Sofia's response in turn 18. It connects Daniel's preceding point with Daniel's follow-up. Estimated time of arrival concerns reaching the destination; confirmed participation does not establish that estimate.

B Not here. This line belongs to turn 8, after Daniel says: "Lodging also needs a qualification: twenty spaces requested, twelve confirmed, eight pending. The request remains open." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 4, after Daniel says: "One is at staging and two are en route. Three requested crews remain unconfirmed. Arrival times for the traveling crews are unverified." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 2, after Daniel says: "This is the resource position at nineteen thirty local time. Six external crews were requested, and three are confirmed. I need to hand over the remaining requests." It addresses that point, not the missing turn in the supplied exchange.

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Review 4 / Explanations

Cumulative review

1. A colleague needs the term for this meaning: A modification or addition to improve an existing system or building. Which term fits?

A. retrofit

A Correct. retrofit: A modification or addition to improve an existing system or building. The usual combination is "assess an efficiency retrofit".

B Not here. measurement and verification (M&V): A defined process for assessing and verifying savings against an appropriate basis. The usual combination is "develop a measurement and verification plan".

C Not here. operating hours: The time during which a facility or system is operated. The usual combination is "document operating hours".

D Not here. net savings: Program savings after the relevant adjustments for attribution and other specified effects. The usual combination is "assess net savings".

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2. A colleague needs the term for this meaning: A short interruption classified under the applicable reporting definition. Which term fits?

A. momentary interruption

A Correct. momentary interruption: A short interruption classified under the applicable reporting definition. The usual combination is "distinguish momentary interruptions".

B Not here. investment proposal: A plan requesting resources for a specified project or improvement. The usual combination is "assess an investment proposal".

C Not here. frequency: How often counted events occur over the stated period or basis. The usual combination is "explain interruption frequency".

D Not here. System Average Interruption Duration Index (SAIDI): Average total sustained-interruption time per customer over a stated period. The usual combination is "explain SAIDI in minutes".

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Review 4 / Explanations / continued

3. Rebuild the exchange from "Requested resources are not all available". Daniel: "Please take ownership of both the unconfirmed crews and the pending lodging spaces. I want the outgoing record to identify who is following them up." Sofia: [missing response] Daniel: "When is your next update? The coordination lead needs a consistent time to refresh the resource summary across the response team." Which response belongs in the gap?

A. I accept that as the request owner. My acceptance transfers coordination responsibility, not supplier confirmation. The open requests remain open until their status is verified and recorded.

A Correct. This is Sofia's response in turn 10. It connects Daniel's preceding point with Daniel's follow-up. The request owner accepts follow-up responsibility, which does not itself confirm the missing crews or lodging.

B Not here. This line belongs to turn 16, after Daniel says: "Someone may ask whether these crews will restore a neighborhood tonight. Our logistics counts cannot support that promise, and no such assignment is established." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 6, after Daniel says: "Please correct the earlier six-available line. It appears to count the same three crews twice, once as confirmed and again by travel status." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 4, after Daniel says: "One is at staging and two are en route. Three requested crews remain unconfirmed. Arrival times for the traveling crews are unverified." It addresses that point, not the missing turn in the supplied exchange.

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Review 4 / Explanations / continued

4. Rebuild the exchange from "Fewer interruptions, more total outage minutes".

Celia: "The investment slide promises fewer interruptions next year, but we have no validated estimate explaining the size or certainty of that effect." **Ravi:** [missing response] **Celia:** "I will present the two measured trends, explain the averages, and place the investment proposal in a separate section with its remaining evidence needs." Which response belongs in the gap?

B. Then label it a target outcome, not a guarantee. The business case needs a supported benefit estimate, assumptions, costs, and risks; these historical indices cannot supply that causal forecast by themselves.

A Not here. This line belongs to turn 16, after Celia says: "Please put the major-event treatment next to the chart. If that changes between years, we need to explain it before comparing the trend." It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Ravi's response in turn 18. It connects Celia's preceding point with Celia's follow-up. A target outcome is an intended result, not a guaranteed effect; the supplied proposal lacks a validated impact estimate.

C Not here. This line belongs to turn 20, after Celia says: "I will present the two measured trends, explain the averages, and place the investment proposal in a separate section with its remaining evidence needs." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 12, after Celia says: "Someone may ask how long an interruption lasted on average. That requires a different denominator from the number of customers served, does it not?" It addresses that point, not the missing turn in the supplied exchange.

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Additional case 1 / Explanations

Extended conversation

1. energy charge

Turn 2. The energy charge follows total monthly kWh, giving \$900 this month rather than the previous \$1,000.

2. demand interval

Turn 4. The stated demand interval is fifteen minutes, or one quarter of an hour, over which average power is calculated.

3. billing-demand values

Turn 6. The fictional tariff uses the maximum fifteen-minute average: 60 kW previously and 72 kW now, with no ratchet.

4. peak demand

Turn 10. Peak demand here is the highest interval-average power, not total monthly energy or a momentary equipment reading.

5. Load shifting

Turn 14. Load shifting changes when demand occurs; it may move rather than reduce the highest billed interval.

6. demand ratchet

Turn 18. A demand ratchet can link billed demand to earlier demand or another contractual floor; the fictional tariff expressly excludes it.

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Transfer exchange

1. 80

Specialist: The highest average demand is 80 kW.

Turn 1. Twenty kilowatt-hours divided by one quarter-hour equals eighty kilowatts.

Additional case 1 / Explanations / continued

2. 800

Customer: The monthly energy component is \$800.

Turn 2. Eight thousand kilowatt-hours at ten cents each gives eight hundred dollars.

3. 960

Specialist: The demand component is \$960.

Turn 3. Eighty billed kilowatts multiplied by twelve dollars gives nine hundred sixty dollars.

4. 1,760

Customer: The combined total is \$1,760.

Turn 4. Eight hundred plus nine hundred sixty equals seventeen hundred sixty dollars.

[Return to the conversation., page 122](#)

Additional case 2 / Explanations

Extended conversation

1. cumulative register

Turn 2. The cumulative register records the meter's running total; period usage comes from a difference between comparable readings.

2. actual reading

Turn 4. The 1 April figure of 1,060 is measured, unlike the estimated intermediate figure of 1,030.

3. previously billed quantity

Turn 6. Thirty cubic metres have already been billed; subtracting them from sixty leaves thirty to reconcile rather than charging sixty again.

4. catch-up adjustment

Turn 10. A catch-up adjustment reconciles the cumulative actual total with earlier estimated billing; it does not establish one month's measured usage.

5. unit conversion

Turn 14. One cubic metre equals one thousand litres; sixty cubic metres therefore equals sixty thousand litres.

6. billing calculation

Turn 18. The monetary calculation requires applicable rates, billing periods, and other charges; the supplied volume alone does not determine the amount due.

[Return to the conversation, page 124](#)

Transfer exchange

1. 38

Adviser: Actual use between January and April totals 38 cubic metres.

Turn 1. The difference between the actual readings is 3,038 minus 3,000, or thirty-eight.

Additional case 2 / Explanations / continued

2. 13

Manager: The remaining quantity to reconcile is 13 cubic metres.

Turn 2. Thirty-eight total minus twenty-five previously billed leaves thirteen, without billing the earlier quantity twice.

3. estimated

Adviser: The intermediate March figure was estimated.

Turn 3. The supplied March register figure was estimated rather than independently measured.

4. monthly

Manager: These readings do not establish an exact monthly split.

Turn 4. Two actual readings with an estimated point between them do not determine each month's actual usage.

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Additional case 3 / Explanations

Extended conversation

1. Power capacity

Turn 2. Power capacity describes the rate of output, in MW; it cannot by itself specify how many hours the battery can deliver energy.

2. usable energy

Turn 4. Usable energy is the 60 MWh engineers make available at the AC boundary after losses and reserves, not the 80 MWh nameplate figure.

3. discharge duration

Turn 6. The conditional duration is usable energy divided by constant output: 60 MWh divided by 20 MW equals three hours.

4. round-trip efficiency

Turn 8. Round-trip efficiency compares delivered energy with charging input; 60 divided by 75 is 80%, not another deduction from already-net usable energy.

5. power limit

Turn 14. The 25 MW request exceeds the 20 MW power rating; dividing energy by an unsupported output rate cannot establish capability.

6. operating assumptions

Turn 18. Operating assumptions state the supplied usable-energy boundary, constant output, and absence of further derating; the calculated duration is conditional on them.

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Transfer exchange

1. 2.5

Analyst: The conditional duration is 2.5 hours.

Turn 1. Fifteen usable megawatt-hours divided by six megawatts gives two and a half hours.

Additional case 3 / Explanations / continued

2. 150

Manager: That duration equals 150 minutes.

Turn 2. Two and a half hours multiplied by sixty gives one hundred fifty minutes.

3. 75

Analyst: The measured round-trip efficiency is 75 percent.

Turn 3. Fifteen delivered megawatt-hours divided by twenty charging megawatt-hours equals seventy-five percent.

4. double-count

Manager: Applying that efficiency again would double-count the losses.

Turn 4. The fifteen-MWh usable figure is already net of the stated losses, so another deduction repeats them.

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Find a phrase by purpose

Grid Reliability and Outage Response

Timestamp the message: This is the verified status as of 16:10 local time.

Name the scope: The update lists 420 affected service points in the Oak district.

Limit the count: That is the current snapshot, not a final impact total.

[Full phrase bank, page 8](#)

Safety, Field Work, and Switching

State the discrepancy: The work package says Q27; the switching request says Q72.

Keep the hold explicit: The affected task remains on hold.

Avoid choosing by appearance: We have not established which identifier is correct.

[Full phrase bank, page 21](#)

Regulatory Affairs and Rate Cases

Name the status first: The notice describes a proposal that is still under review.

Avoid implied approval: No approval or effective date is established in this case.

Identify the component: The five percent refers to the energy-charge rate.

[Full phrase bank, page 36](#)

Renewables Integration and Interconnection

Report the completed step: Application Q314 has been submitted and acknowledged.

State the current stage: The application is in the review queue.

Correct the slide: Connection secured overstates the current status.

[Full phrase bank, page 50](#)

Find a phrase by purpose / continued

Asset Management and Maintenance

Identify the narrow comparison: The slide compares purchase prices only.

State the higher upfront amount: B costs four thousand dollars more to purchase.

Name the horizon: We are comparing ten years.

[Full phrase bank, page 65](#)

Emergency Preparedness and Storm Response

Timestamp the handover: This is the resource position at 19:30 local time.

State the request total: Six external crews were requested.

Separate confirmations: Three crews are confirmed and three remain unconfirmed.

[Full phrase bank, page 76](#)

Customer Programs and Energy Efficiency

State the readings: Consumption fell from ten thousand to eight thousand five hundred kilowatt-hours.

Name the period: Both readings cover thirty days.

Calculate the difference: The observed reduction is fifteen hundred kilowatt-hours.

[Full phrase bank, page 92](#)

Executive Reliability and Investment Updates

Define frequency: SAIFI describes average sustained interruptions per customer.

Define total duration: SAIDI describes average total sustained-interruption minutes per customer.

State the period: These figures cover each full reporting year.

[Full phrase bank, page 106](#)

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References and publication notes

All cases, organizations, figures, and conversations are fictional teaching material, not transcripts. Communication practice does not replace qualified advice or current workplace procedures.

[1] U.S. Energy Information Administration. Reliability metrics, Electric Power Annual, Table 11.3.

Background for SAIDI, SAIFI, CAIDI, reporting scope, and major-event distinctions. All reliability figures in this book are invented teaching examples, not reported utility performance. Source checked 1 October 2026.

https://www.eia.gov/electricity/annual/html/epa_11_03.html

[2] U.S. Department of Energy. Measurement and Verification Options for Federal Energy- and Water-Saving Projects.

Background for measurement, baseline adjustments, weather, and occupancy. The book does not prescribe an actual savings-verification method or certify program results. Source checked 1 October 2026.

<https://www.energy.gov/cmei/femp/measurement-and-verification-options-federal-energy-and-water-saving-projects>

[3] U.S. Department of Energy. Solar Energy Guide for Homebuilders.

Background for separating applications, interconnection arrangements, and permission to operate. Actual requirements vary by utility, project, and jurisdiction. Source checked 1 October 2026.

<https://www.energy.gov/cmei/systems/solar-energy-guide-homebuilders>

[4] California Public Utilities Commission. Understanding How the CPUC Processes a General Rate Case.

A jurisdiction-specific example of reviewing utility proposals and customer impacts. The fictional rate case does not reproduce California rates, procedures, or a real customer bill. Source checked 1 October 2026.

<https://www.cpuc.ca.gov/news-and-updates/all-news/understanding-how-the-cpuc-processes-a-general-rate-case>

Companion course

The website offers the eight-lesson course and related practice. This book can be used independently. No audio access or external account is needed for its exercises.

<https://englishladder.com/efsp-energy-utilities.html>

Explain the status. Name the uncertainty. Make the measure clear.

Eight utility exchanges: correct an outage update, escalate an identifier conflict, explain a rate proposal, report an interconnection review, compare asset costs, hand over storm resources, qualify efficiency claims, and interpret reliability measures.

Grid Reliability and Outage Response

A service-point count is not necessarily a count of individual people. The 420 figure describes the verified snapshot at 16:10. Do not turn it into a final impact total or silently change the population being counted.

Regulatory Affairs and Rate Cases

The example energy charge rises from \$50 to \$52.50. With the unchanged \$20 fixed charge, the total rises from \$70 to \$72.50: \$2.50, or about 3.57%, not 5%. All proposed figures are conditional.

Safety, Field Work, and Switching

Q27 and Q72 contain the same digits in a different order. That resemblance does not prove a harmless typo or identify the correct asset. Keep both references intact in the discrepancy report until authorized reconciliation is complete.

Renewables Integration and Interconnection

Kilowatts describe power; kilowatt-hours describe energy over time. Proposed nameplate power does not establish annual output, hosting capacity, approved export, or permission to operate. Each needs its own basis and, where relevant, decision.

Explain the status. Name the uncertainty. Make the measure clear. / continued

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