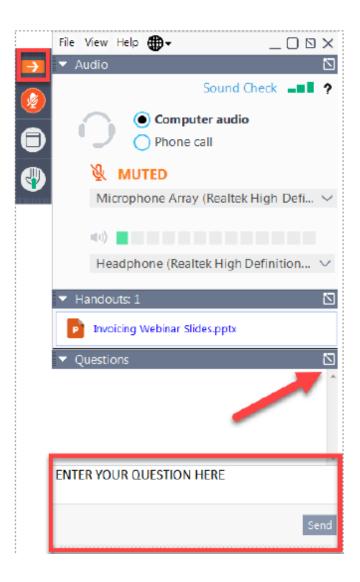


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- A copy of the slide deck is in the "Handouts" section of webinar panel.



Today's Speakers

John Putman

Senior Program Analyst | High Cost

Ajay Ramesh

Product Owner | IT

High Cost and the Connect America Fund (CAF)

The **High Cost** program ensures universal availability of essential and affordable telecommunications services in rural America. A centerpiece of the program is the **Connect America Fund.**

- Subsidizes broadband to help close the digital divide in rural America
- Consists of roughly a dozen modernized funds that give carriers fixed monthly payments to deploy and maintain robust communications networks - which provide voice service and broadband at required speeds - in eligible areas over defined timelines
- Requires carriers with fixed broadband deployment obligations to connect a specific number of locations by interim and final milestone deadlines
- Provides support to traditional rural phone companies, rural electric cooperatives, cable operators, wireless operators, wireless Internet service providers, satellite providers
- Subjects carriers to extensive compliance framework to ensure required deployment

Connect America Fund Compliance

USAC closely monitors carrier compliance with broadband deployment obligations to ensure that carriers are using CAF support to build out high-speed Internet access that meets minimum speed and latency standards to required location counts by relevant deployment milestone deadlines in rural areas eligible for funding.

Compliance process consists of several steps:

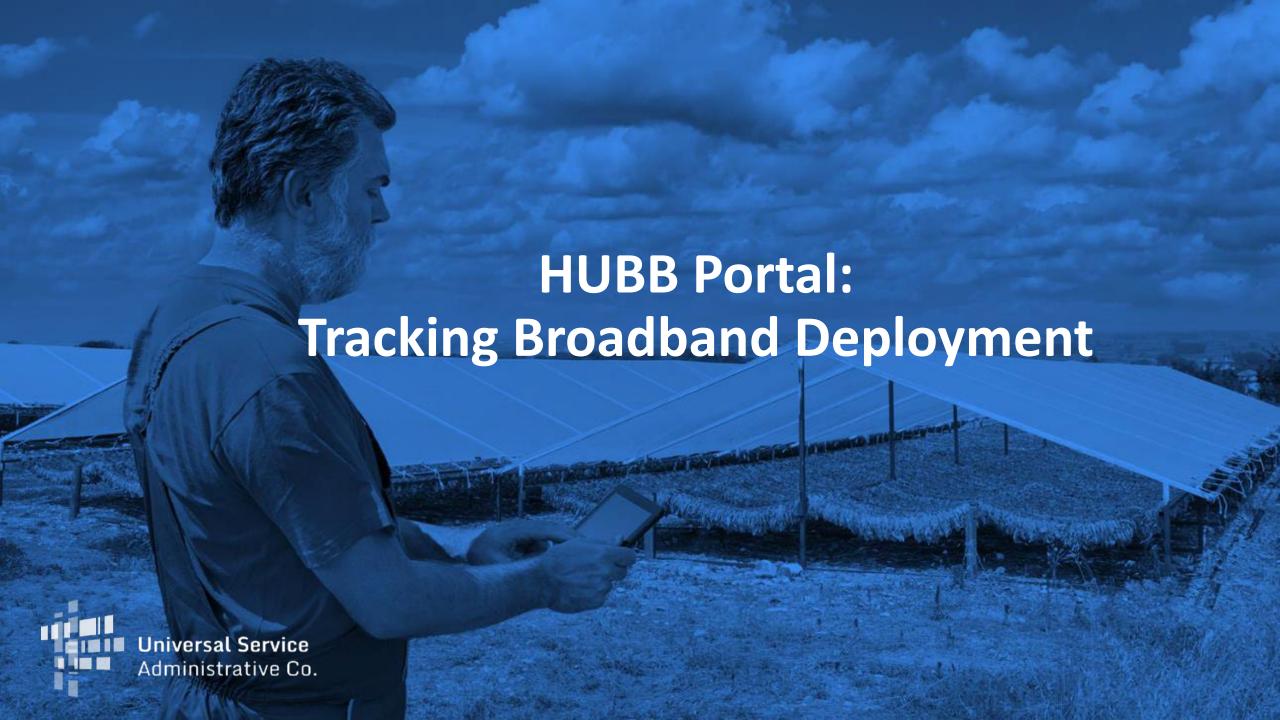
HUBB Portal: Tracking Broadband Deployment

Verification Reviews: Confirming Broadband Deployment

Network Performance Testing: Measuring Speed and Latency

(Carriers may also be subject to site visit audits following final deployment milestones.)

This compliance framework safeguards Connect America Fund accountability, transparency and integrity.



HUBB Portal: Tracking Broadband Deployment

- Carriers in modernized funds with defined fixed broadband build-out obligations must file deployment data annually with the HUBB
- Annual HUBB filing deadline is March 1 for carriers to report broadband deployed with CAF support in the prior calendar year or certify "no locations" to upload for the year
 - Filing deadline in 2025 is March 3 since March 1 falls on a weekend
- HUBB collects: geographic coordinates (latitude/longitude) of locations where carriers have deployed broadband with CAF support, speeds available, deployment dates and unit counts
 - Enhanced ACAM data collection works differently Carriers report deployment by Fabric ID
- HUBB performs automated, real-time data validation checks and only accepts locations that pass:
 - Checks that lat/long of a reported location fall within area eligible for funding
 - Checks that the location is not a duplicate of one already submitted
 - Checks that date of deployment falls within fund timeline
- HUBB tracks carrier progress toward meeting interim and final deployment milestones.
- Accurate geolocation data is key to filing successfully in the HUBB
 - See USAC guide on geolocation best practices

HUBB Portal: Filing Obligations by Fund

Carriers in these funds (and ACS) have until March 3, 2025, to file data for locations deployed in 2024 or certify "no locations to upload":

- Connect America Fund (CAF) Phase II Auction (CAF II Auction)
- Alternative Connect America Cost Model (Original ACAM), Revised ACAM and ACAM II
- Connect America Fund Broadband Loop Support (CAF BLS)
 - HUBB will only accept CAF BLS locations deployed since May 25, 2016
- Rural Broadband Experiments (RBE)
- Rural Digital Opportunity Fund (RDOF)
 - RDOF carriers must submit any locations deployed since July 1, 2019
- Alaska Plan
 - Alaska Plan carriers must also submit node and link data for middle mile fiber and microwave networks
- Bringing Puerto Rico Together (Uniendo a Puerto Rico) and Connect USVI Fund (PR/USVI) Stage 2
 Fixed Support

HUBB Portal: Filing Obligations by Fund (Cont.)

Carriers in these funds (and ACS) have until March 3, 2025, to file data for locations deployed in 2024 or certify "no locations to upload":

Enhanced ACAM

- Enhanced ACAM is first CAF program to report deployment data in the HUBB using the Broadband Serviceable Location Fabric
 - Fabric is a single, standardized dataset of all locations in the U.S. where fixed broadband access is available or could be installed
- Enhanced ACAM relies on the Fabric to determine broadband deployment obligations and each Enhanced ACAM carrier has a list of required locations
 - List of required locations contains the Location IDs from the Fabric that identify the locations where the carrier must offer service
- Enhanced ACAM carriers must report deployment data in the HUBB using Fabric Location IDs and HUBB validates that the reported Fabric Location IDs are included in the carrier's list of required locations

HUBB Portal: Certifying Broadband Deployment

- Carriers have until March 3, 2025, to file and certify data for locations deployed in 2024
 - Carriers can file and certify locations throughout the year
- Carriers with 2024 deployment milestones must also complete a <u>separate milestone certification</u> as part of the annual HUBB filing
 - Includes separate milestone certifications for separate deployment obligations by speed tier
 - Carriers may face verification reviews of their 2024 milestones in 2025 to confirm deployment to a random sample of reported locations
 - Carriers found to have missed deployment milestones have increased reporting obligations and potential withholding/recovery of support
- All carriers must also complete a <u>separate annual certification</u> in the HUBB between Jan. 1, 2025, and March 3, 2025, to confirm that their filing activity for 2024 is complete
 - Carriers that did not deploy any locations in 2024 must still log into the HUBB and certify "no locations to upload" between Jan. 1, 2025, and March 3, 2025
 - "No locations to upload" certification functionality is only turned on in the HUBB between Jan. 1, 2025, and March 3, 2025

HUBB Portal: Tracking Broadband Deployment

For more information about filing in the HUBB,

please visit the HUBB resources webpage:

https://www.usac.org/high-cost/annual-requirements/submit-data-in-the-hubb/

Resources include:

HUBB FAQs

USAC **Guide** to Geolocation Practices

FCC **Guidance** on Location Reporting

HUBB User Guide and Data Formatting Instructions

Templates for Non-Fabric <u>data uploads</u>, <u>bulk deletions</u> and <u>bulk modifications</u>

<u>Fabric Data Formatting Instructions</u> and templates for <u>Fabric Bulk Deletions</u>, <u>Fabric Bulk Modifications</u> and <u>Fabric Location Uploads</u>

HUBB webinar <u>recording</u>

HUBB webinar <u>presentation</u>



All carriers participating in CAF programs with defined broadband build-out obligations are subject to verification reviews to confirm reported deployment. Verification reviews fall into three main categories:

- Reviews tied to <u>mandatory</u> annual deployment milestones that begin following the annual March 1
 HUBB filing deadline
 - Original/Revised ACAM, ACAM II, CAF II Auction, PR/USVI and RDOF (authorized in 2021) carriers have mandatory deployment milestones at end of 2024 and may face reviews in 2025
 - CAF BLS carriers faced a five-year deployment milestone as of year-end 2023. Carriers that were out of compliance have a one-year "cure period" to make up shortfalls/address gaps
- Reviews conducted at the request of carriers that complete deployment ahead of required milestones (meet optional milestones) and are seeking to reduce their Letters of Credit (LOC) values
 - RDOF carriers authorized in 2022 can request review of optional 20 percent deployment milestone by the end of the second year of support (2024 for carriers authorized in 2022)
- Reviews conducted as part of the FCC Rural Broadband Accountability Plan (RBAP)
 - These reviews can occur before required deployment milestones even if a carrier does not request a review to reduce a LOC

Carriers found to have missed deployment milestones face increased reporting obligations and potential withholding/recovery of support

The goal of the verification review process is to confirm that a carrier deployed broadband service meeting the FCC's performance standards to a qualifying number of locations by the relevant deployment milestone deadline. USAC selects a statistically valid, random sample of locations certified in the HUBB by carriers chosen for review and seeks to verify that:

- The structure at the reported location is eligible for CAF support
- The reported service address accurately corresponds with the reported lat/long coordinates
- The upload and download speeds available are at or above the speeds the carrier must deliver
- The carrier deployed service at the required speeds in time to meet the deployment milestone
- The actual number of units or dwellings at the location accurately ties back to the reported number of units or dwellings for the location record

Carriers must submit documentation that serves as proof of deployment for each location record in the HUBB selected for verification review. Examples of acceptable documentation include:

- Subscriber bills
- Screen shots from public-facing service availability tool showing upload/download speeds available at a particular address
- Letters of certification certified by an outside engineer licensed by the state (including Professional Engineer number) where service was deployed
- Screen shots from an internal provisioning system showing the broadband speeds available at a particular service address (and associated geo-coordinates if available)
- DSLAM construction project completion sign-off sheets that releases all locations tied to this DSLAM to sales for marketing
- Engineering team emails showing that all locations tied to a particular DSLAM are released to sales for marketing

For more information about the verification review process, please visit the verification resources webpage:

https://www.usac.org/high-cost/resources/fund-verification-reviews/

Resources include:

Verification webinar recording

Verification webinar <u>presentation</u>

Verification review schedule (by fund)

Examples of the types of documentation that carriers can supply to prove deployment



Network Performance Testing: Measuring Speed and Latency

- Framework ensures that CAF-supported broadband service meets basic performance standards
- Carriers must conduct one week of speed and latency testing at random sample of CAFsupported subscriber locations in each quarter of the year (unless subject to FCC waiver)
 - FCC has waived testing requirements in the fourth quarter of 2024 for carriers in areas impacted by Hurricanes Helene and Milton
- Under current rules, carriers have until July 1 annually to submit and certify all results from testing conducted at the the full sample of locations in all four quarters of the previous year
 - Carriers currently in testing have until July 1, 2025, to submit and certify all results from testing conducted at the full sample of locations in all four quarters of 2024
 - Starting in 2025, carriers and must file and certify all test results for the full sample of locations within two weeks of the end of each quarter More in coming slides
- At least 80 percent of speed measurements must be at 80 percent of required speeds and 95 percent of low-latency measurements must fall at or below 100 milliseconds round-trip time
 - FCC considers failure to meet speed and latency standards as a failure to deploy and may withhold support

Network Performance Testing: Measuring Speed and Latency

- Before official testing begins, carriers must conduct a year of quarterly "pre-testing"
 - Carriers must conduct one week of speed and latency pre-testing at a random sample of CAF-supported subscriber locations in each quarter of the year (unless subject to waiver)
 - Carriers must submit and certify all results from pre-testing conducted at the full sample of locations on a quarterly basis, but will not face withholding of support for failing to meet speed and latency standards
 - Carriers currently in pre-testing must submit and certify test results within one week of the end of the quarter through the end of 2024
 - This will change to two weeks next year More in coming slides
- USAC encourages all carriers to submit and certify results as soon as testing is complete each quarter (Still optional for carriers in official testing in 2024)
- USAC provides quarterly compliance reports to carriers during pre-testing and to carriers that submit and certify data quarterly during official testing to help them track their progress in meeting FCC metrics, address shortfalls and submit missing data
- Compliance reports include details at the SAC level about the percent of upload and download speed tests and latency tests conducted in the quarter that met FCC performance standards

Network Performance Testing: Performance Measures Module

- Lets carriers identify which locations deployed with CAF support and reported in the HUBB have active subscribers
- Generates a random sample of locations for speed and latency testing and provides the obligated speed tiers to be tested (based on the speed tiers reported for those locations in the HUBB compared with the speeds carriers are required to deliver)
 - For funds with multiple speed tiers, the obligated speed tier to be tested for some locations may not be the same as speed tier reported for that location in HUBB
 - Carriers must obtain a new sample after two years of pre-testing/testing More in coming slides
- Collects the speed and latency test results from carriers
- Calculates compliance with performance measures standards based on <u>certified</u> test results
 - Carriers can download compliance reports that provide details at the SAC level about the percent of upload and download speed tests and latency tests that met FCC network performance standards
 - See USAC website for a detailed explanation of how the PMM calculates compliance

Network Performance Testing: Testing Obligations by Fund

Carriers in these funds are now finishing their second year of quarterly official testing with their current random samples of subscriber locations (PMM cycle year 2023_2024) and <u>must obtain new samples for ongoing testing that starts in first quarter of 2025</u> (PMM cycle year 2025_2026):

- Alternative Connect America Cost Model (ACAM) and Revised ACAM
- Rural Broadband Experiments (RBE)
- Alaska Plan

Carriers in these funds and are now in their first year of quarterly official testing with their current random samples of subscriber locations (PMM cycle year 2024_2025) and will need to obtain new random for ongoing testing that starts in the first quarter of 2026 (PMM cycle year 2026_2027):

- Alternative Connect America Cost Model II (ACAM II)
- Connect America Fund-Broadband Loop Support (CAF BLS)
- Connect America Fund (CAF) Phase II Auction

Carriers in all these funds have until Dec. 31, 2024, to complete one week of fourth quarter testing (unless subject to waiver).

Network Performance Testing: Testing Obligations by Fund (Cont.)

Carriers participating in the **Bringing Puerto Rico Together (Uniendo a Puerto Rico) and Connect U.S. Virgin Islands (PR/USVI)** programs began quarterly pre-testing in 2024 and should <u>start quarterly official testing in 2025</u> (PMM cycle year 2024_2025)

Carriers participating in the **Rural Digital Opportunity Fund (RDOF)** should begin quarterly pretesting in 2025 and quarterly official testing in 2026. <u>RDOF carriers must obtain their first random samples of subscriber locations for quarterly pre-testing starting next year</u> (PMM cycle year 2025_2026)

Carriers participating in the **Enhanced Alternative Connect America Cost Model (Enhanced ACAM)** program should begin quarterly pre-testing in 2026 and quarterly official testing 2027 (PMM cycle year 2026_2027)

 Enhanced ACAM carriers that are found to be out of compliance for 2023 testing with their previous funds (Original ACAM, Revised ACAM or CAF BLS) and did not continue testing with those funds in 2024 must resume testing with their previous funds in 2025 or wait until Enhanced ACAM pre-testing starts in 2026 to get back into compliance.

Network Performance Testing: Obtaining Random Samples

To generate random subscriber location samples for testing, carriers must do the following:

- Download their certified HUBB locations into a comma separated value (CSV) file
- Determine which HUBB locations have active subscribers
- Add a carrier-generated, alpha-numeric subscriber ID to the CSV template to serve as a unique identifier for each HUBB location with an active subscriber
 - Carriers should not use any personally identifiable information (such as a customer phone number or social security number) in a subscriber ID
- Upload the CSV template to PMM
- Once all subscriber location data has been uploaded and certified, select "Submit to Randomizer" in PMM
- Generate a random sample of locations in PMM
- Download the sample with the locations and obligated speed tiers to be tested

Network Performance Testing: Obtaining Random Samples

- Carriers should be certain that their broadband deployment information in the HUBB is as upto-date, accurate and complete as possible <u>before</u> obtaining random samples from the PMM
 - Carriers that don't have locations in HUBB yet must start testing within one quarter after they do
- Carriers cannot delete HUBB records, or edit or modify the number of units for HUBB records, for subscriber locations that have been randomly selected for speed and latency testing during the two years when those locations are part of the testing sample
- Carriers should only request a random sample one time and should not alter uploaded subscriber location data or request a new sample once a sample is generated for a SAC
- Sample sizes are determined by number of active subscribers submitted to the PMM up to 50 locations
- For funds with multiple speed tiers, the obligated speed tier to be tested for some locations may not be the same as the speed tier reported for that location in the HUBB
- New sample may contain some of the same subscriber locations that are in existing sample
- Carriers must obtain a new random sample after two years of pre-testing/testing

Network Performance Testing: Measuring Speed and Latency

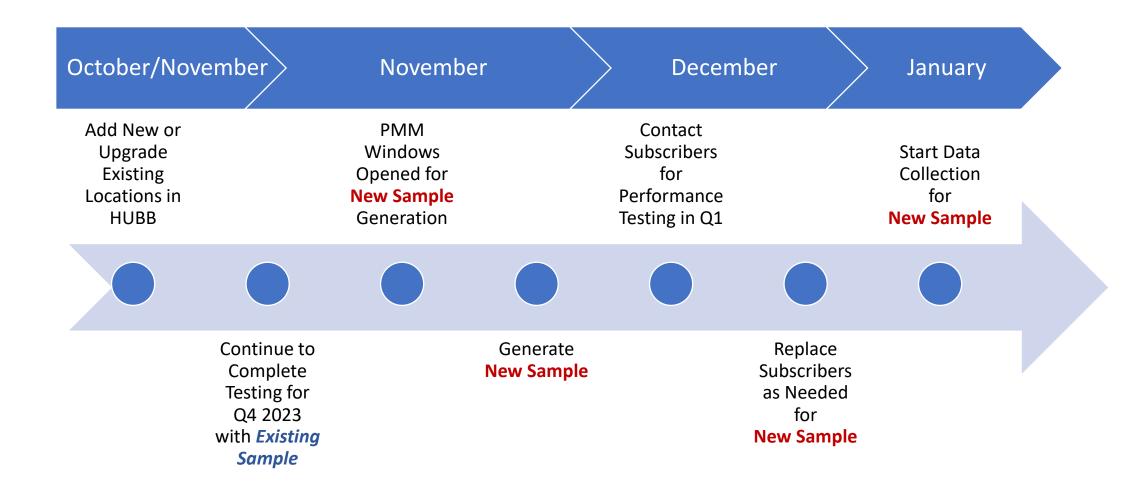
Carriers must:

- Test up to 50 locations for each speed tier they are required to deploy to in each state where they receive support
 - Sample sizes are determined by the number of active subscribers submitted to PMM
- Conduct testing at all selected locations (unless subject to FCC waiver)
- Meet separate testing requirements for each fund in which they participate
- Use the same subscriber locations for both speed and latency testing
- Provide subscribers at selected locations with necessary CPE (modem, router) at no extra cost
- Test from customer premises to a remote test server located at, or reached by passing through,
 FCC-designated IXP
 - FCC rules provide allowance for crosstalk caused by consumer activity
- Conduct all speed tests in same week and all latency tests in same week
 - Speed and latency tests may take place in different weeks
- Conduct testing between 6 p.m. and 12 a.m. local time
- Certify all test results for all locations using separate CSV files for speed and latency results

Network Performance Testing: Obtaining New Samples

- PMM is ready to accept subscriber location data from Original and Revised ACAM, Alaska Plan, RBE and RDOF carriers and generate random subscriber location samples for these carriers to continue or begin quarterly speed and latency testing in 2025.
 - Carriers can now upload all subscriber locations, submit to randomizer and generate/download sample(s)
- Carriers should start this process ASAP to have enough time to prepare for testing in 2025!
 - Carriers must complete a week of testing with their new samples by March 31, 2025
- Carriers should be sure that their broadband deployment information in the HUBB is as up-todate, accurate and complete as possible <u>before</u> requesting a new sample
 - New samples should reflect new deployments, new subscribers and network upgrades
 - Obligated speed tiers for locations already in the HUBB are now locked, but carriers can edit lat/long coordinates and address information and add new deployments
 - While carriers have until March 3, 2025 to submit broadband locations built in 2024 to the HUBB, USAC encourages carriers to file 2024 deployments as soon as possible so those locations can potentially be included in random samples

Network Performance Testing: Timeline for Obtaining New Samples



Network Performance Testing: Current Filing Requirements

- Carriers in <u>pre-testing</u> must complete testing quarterly, and must submit and certify all test results for full sample of locations within one week of the end of each quarter
 - Carriers do not face withholding of support for failing to meet speed and latency standards during pre-testing, but do face potential withholding of support if they do not submit and certify all required test data by quarterly deadline
- Carriers in <u>official testing</u> must complete testing quarterly, and have until the following July 1 to submit and certify all test results for full sample of locations from all four quarters of the previous calendar year
 - USAC encourages carriers to file and certify quarterly and provides compliance reports to carriers that submit and certify test data within one week of the end of the quarter to help them track their progress, address any shortfalls and submit missing data
 - USAC will not withhold support for quarterly data submissions that fail to meet speed and latency metrics before evaluating certified data for the full year
 - USAC will only calculate final performance compliance and withhold support from carriers that fail meet speed and latency requirements – after carriers submit and certify test data for all four quarters of the year

Network Performance Testing: Current Filing Requirements

- Carriers in official testing currently have until July 1, 2025, to submit and certify all test results for the full sample of locations for all four quarters of 2024 (unless subject to FCC waiver), but USAC encourages carriers to file and certify quarterly
- USAC provides quarterly compliance reports to carriers that file and certify test results within one week of the end of the quarter to help them track their progress and address any shortfalls
 - First quarter compliance reports are available in the PMM for carriers that submitted their first quarter test data by April 12, 2024
 - Second and third quarter compliance reports will be available soon for carriers that submitted and certified those test results within one week of the end of those quarters
 - Carriers should check these compliance to find out if their test results did not meet FCC standards or if they didn't submit all required test data
 - Carriers that have not met FCC speed and latency standards for 2024 testing so far can potentially avoid penalties by submitting passing quarterly results moving forward
 - Carriers still have time to submit missing data before July 1, 2025
- USAC will also soon release annual compliance reports for testing conducted in all four quarters of 2023
 - 2023 test results were due by July of 2024

Network Performance Testing: Upcoming Filing Requirements

- FCC Administrative Order goes into effect in January of 2025
- Carriers in <u>pre-testing</u> must complete testing quarterly, and must submit and certify all test results for full sample of locations within two weeks of the end of each quarter
 - Carriers do not face withholding of support for failing to meet speed and latency standards during pre-testing, but do face potential withholding of support if they do not submit and certify all required test data by quarterly deadline
- Carriers in <u>official testing</u> must complete testing quarterly, and submit and certify all test results for full sample of locations within two weeks of the end of each quarter
 - Carriers face potential reduction in support if they do not submit and certify all required test data by quarterly deadline
 - USAC will not withhold support for quarterly data submissions that fail to meet speed and latency metrics before evaluating certified data for the full year
 - USAC will only calculate final compliance based on test results for all four quarters combined
 - Any carrier found to be out of compliance for official testing will have monthly support withheld until it has a quarter of test results that meet FCC metrics
- Test data for the fourth quarter of 2025 will be due Jan. 15, 2026
 - USAC will calculate final compliance for the 2025 testing year after that deadline

Performance Testing: Filing Summary

Date	PMM Test Data Due	Filing Type	Funds	Comments
1/7/25	Q4 24 Pre-Test Data Q4 24 Official Test Data	Required Optional	PR and USVI All Funds	
4/15/25	Q1 25 Pre-Test Data Q1 25 Official Test Data	Required Required	RDOF All Funds	1 st Admin Order Filing
7/1/25	Annual 2024 Official Test Data	Required	All Funds	Close out 2024
7/15/25	Q2 25 Pre-Test Data Q2 25 Official Test Data	Required Required	RDOF All Funds	
10/15/25	Q3 25 Pre-Test Data Q3 25 Official Test Data	Required Required	RDOF All Funds	
1/15/26	Q4 25 Pre-Test Data Q4 25 Official Test Data	Required Required	RDOF All Funds	

Network Performance Testing: Measuring Speed and Latency

For more information about performance measures testing,

please visit the performance measures resources webpage:

https://www.usac.org/high-cost/annual-requirements/performance-measures-testing/

Resources include:

Performance Measures testing schedule (by fund)

FCC information about the performance measures testing program

<u>Charts</u> showing acceptable test paths and remote server locations

List of <u>vendors</u> that are helping carriers with speed and latency testing

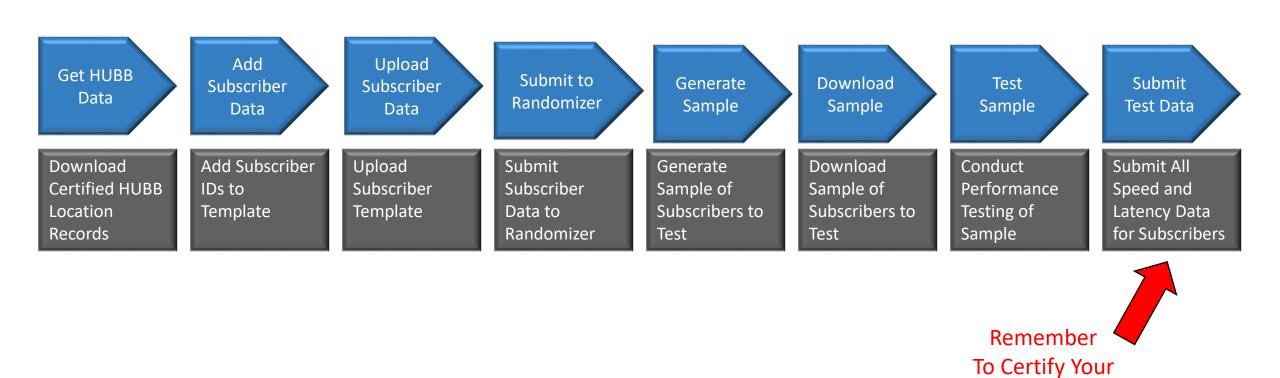
Quick tips guide to the PMM

Performance measures testing webinar recording

Performance measures testing webinar <u>presentation</u>

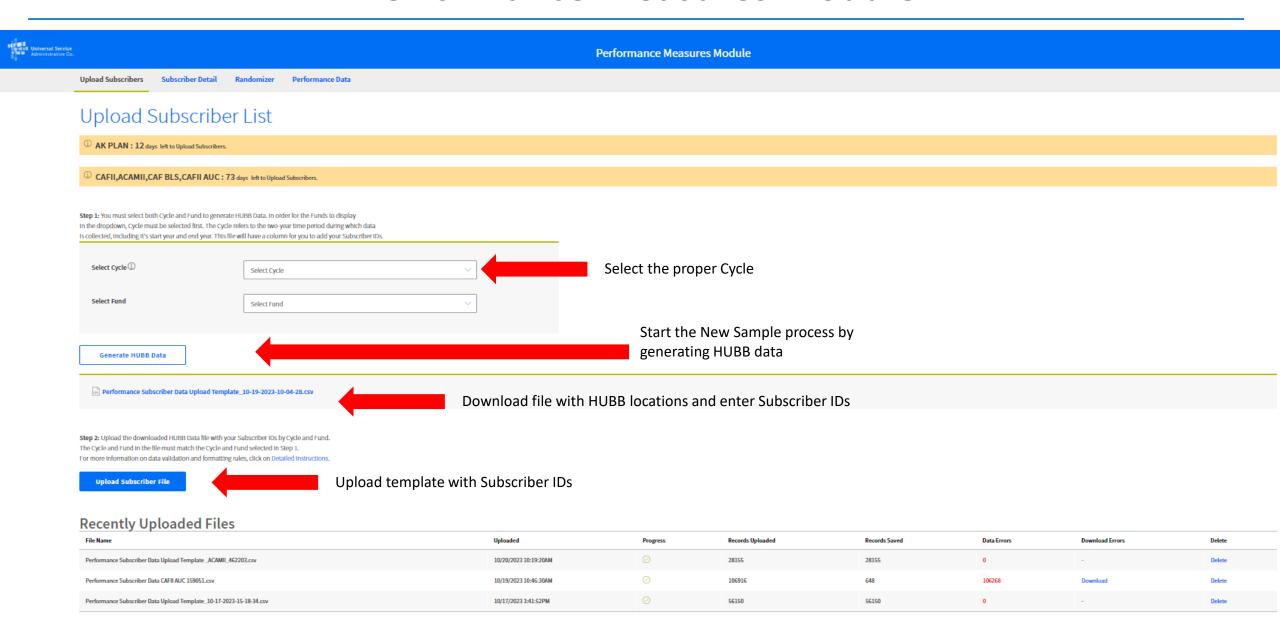
An <u>explanation</u> of PMM compliance calculations

Network Performance Testing: PMM Process Flow



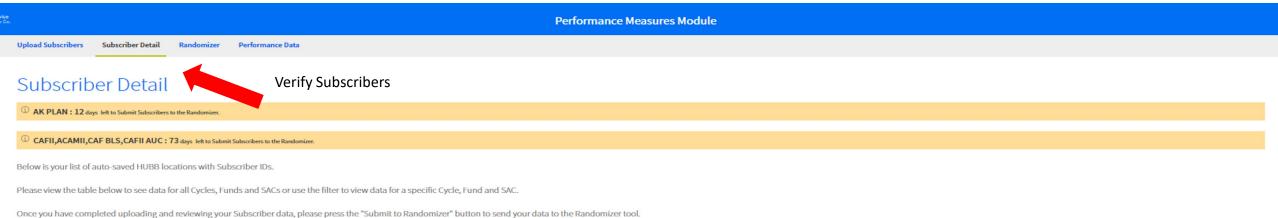
PMM Data

Performance Measures Module



Subscriber Data Upload Template File

4	А	В	С	D	E	F	G	Н	I	J	K	L	М
1	Cycle	Fund	SAC	Latitude	Longitude	Address	State	Speed Tie	# of Units	Carrier Lo	HUBB Loca	Subscribe	r ID(s)
2	CY2021_22	AK PLAN	613015	61.46269	-149.356	1472 MAIN	AK	12	62070	555	65149866		
3	CY2021_22	AK PLAN	613015	61.45808	-149.37	1472 MAIN	AK	12	62070	555	65149867		
4	CY2021_22	AK PLAN	613015	61.4537	-149.378	1472 MAIN	AK	12	62070	555	65149868		
5	CY2021_22	AK PLAN	613015	61.46065	-149.357	1472 MAIN	AK	12	62070	555	65149869		
6	CY2021_22	AK PLAN	613015	61.45813	-149.352	1472 MAIN	AK	12	62070	555	65149870		
7	CY2021_22	AK PLAN	613015	61.45808	-149.356	1472 MAIN	AK	12	62070	555	65149871		
8	CY2021_22	AK PLAN	613015	61.45395	-149.351	1472 MAIN	AK	12	62070	555	65149872		
9	CY2021_22	AK PLAN	613015	61.41771	-149.179	1472 MAIN	AK	12	62070	555	65149873		
10	CY2021_22	AK PLAN	613015	61.44517	-149.368	1472 MAIN	AK	12	62070	555	65149874		
11	CY2021_22	AK PLAN	613015	61.44282	-149.367	1472 MAIN	AK	12	62070	555	65149875		



After you have clicked "Submit to Randomizer", all subscriber data will be sent to the Randomizer tool and will no longer be visible on this page.

Test subjects must be randomly selected every two years from among the provider's active subscribers in each service tier in each state. Once subscribers are uploaded for the cycle, carriers can not add additional subscribers until the next sample is generated with the new two-year cycle.



Land Download Filtered Data

Displaying 1-10 of 145 reco

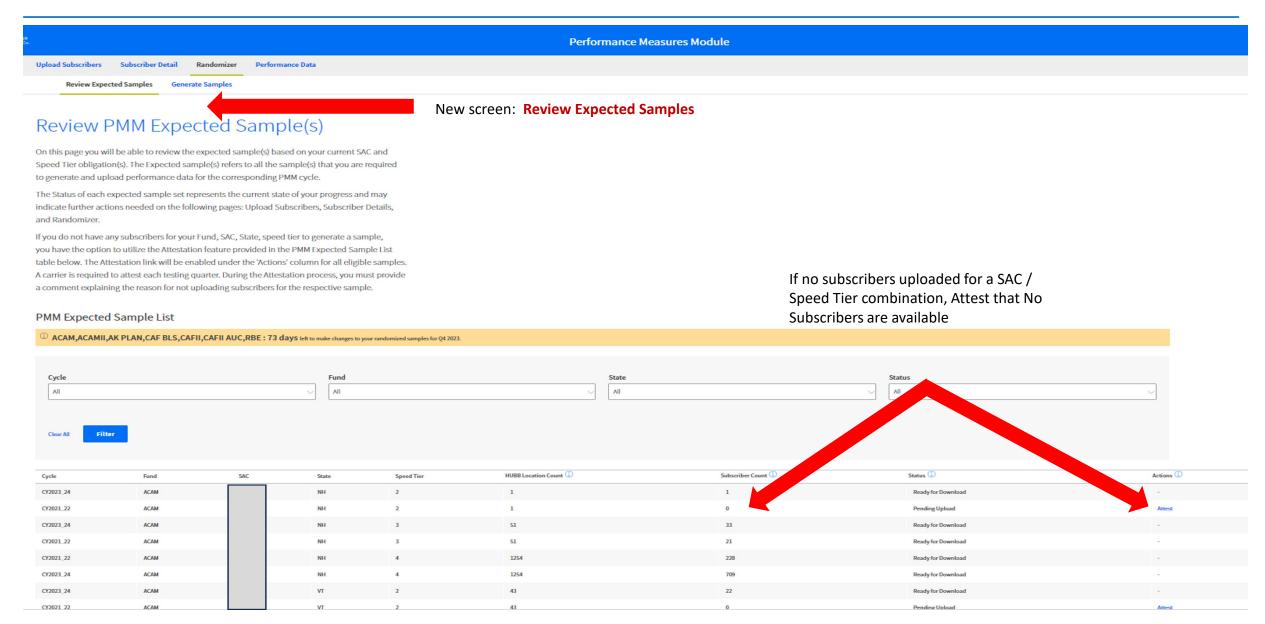
Cycle	Fund	SAC	Latitude	Longitude	State	Address	Speed Tier	# of Units	Carrier Location ID	HUBB Location ID	# of Subscriber IDs
CY2021_22	AK PLAN		58.739979	-156.983901	AK	SCHOOL RD ELDERS 5		1		21968530	1
CY2021_22	AK PLAN		58.729772	-156.998303	AK	AGS BUNKHOUSE 85		1		21968540	1
CY2021_22	AK PLAN		58.738565	-156.977944	AK	MAIN OFFICE RED SALMON CANNERY		3		21968542	3
CY2021_22	AK PLAN		58.729646	-156.998195	AK	AGS BUNKHOUSE 86		1		21968549	1
CY2021_22	AK PLAN		58.745064	-156.955229	AK	FLEET OFFICE		1		21968553	1
CY2021_22	AK PLAN		58.745829	-156.952013	AK	NEW BUNKHOUSE DSL SB		2		21968555	2
CY2021_22	AK PLAN		58.744847	-156.995330	AK	MAIN OFFICE AT L&M WEST OF LEADER CREEK FISHERIES		1		21968561	1
CY2021_22	AK PLAN		58.675430	-156.655733	AK	CURRIERS TRIPLEX UNIT #1 ACCROSS FROM LAKE & PEN S APT 2		1		21968563	1
CY2021_22	AK PLAN		58.696349	-156.686613	AK	DIAMOND LODGE HOUSE OFF OF SOCKEYERD		1		21968567	1
CY2021_22	AK PLAN		58.742228	-156.989998	AK	LAST HOUSE ON SALMONBERRY RD NORTH OF CEDARVILLE		1		21968574	1

Show 10 V records/page

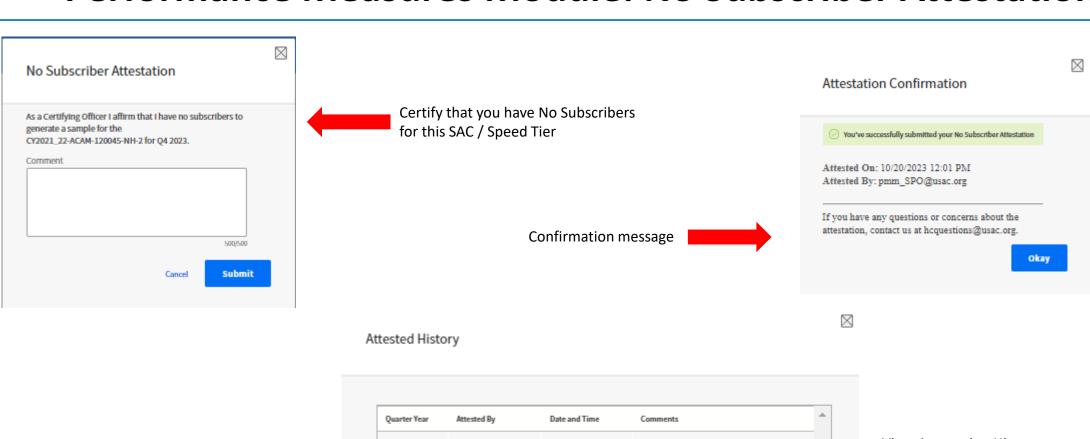
Performance Measures Module: Sample Functionality

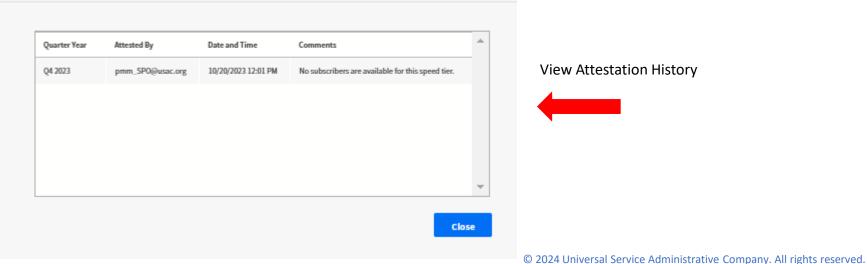
- Review Expected Sample page (located under the randomizer menu in the PMM)
 - Displays the samples that the system expects to generate based on a carrier's current SAC entitlements,
 speed tier obligations in the HUBB and uploaded subscriber location data
 - System now tracks carrier progress in uploading test data for each expected sample
- No Subscriber Attestation (quarterly)
 - Carriers attest that they do not have any active subscriber locations to upload and therefore cannot generate a sample for a particular cycle/fund/SAC/state/speed tier combination
 - Requires carrier to provide an explanation for lack of active subscribers

Performance Measures Module: Review Expected Sample



Performance Measures Module: No Subscriber Attestation





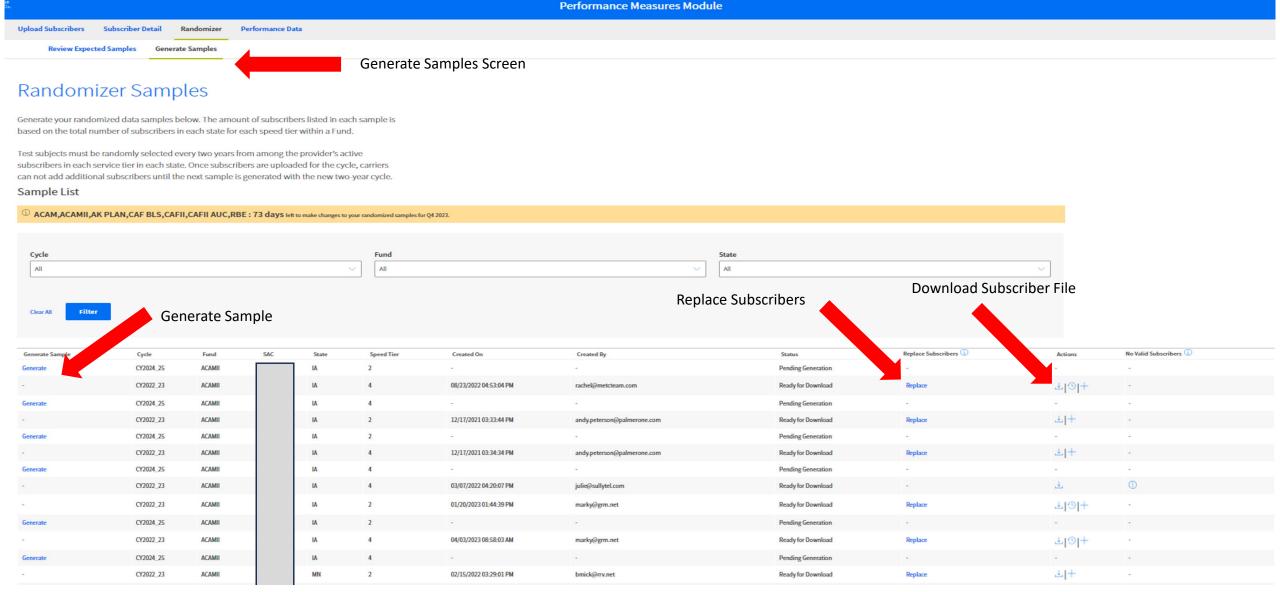
Network Performance Testing: Managing the Random Sample

- Replacing subscribers
 - To replace a selected subscriber with the next randomly selected one, a carrier must provide a reason:
 - Subscriber Refused to Allow Installation of Testing Equipment
 - Subscriber Dropped Service (no longer active)
 - Subscriber Demands Removal of Testing Equipment
 - Subscriber Subscribes to Lower Speed Than Being Tested
 - Natural Disaster
 - Other Requires Explanation and USAC / FCC Review
- Adding subscribers
 - Carriers may request additional randomly selected subscribers to test, but are responsible for submitting test data for any additional subscribers
- No Valid Subscribers
 - Carriers that cannot find five active subscribers to test are subject to verification that more subscribers are not available

Network Performance Testing: Replacing Subscriber Locations

Steps for replacing subscriber locations selected for testing:

- Carriers that are able to collect data for all subscriber locations selected for testing in quarter:
 - First submit and certify data for the quarter
 - Then request replacement of subscriber location with the next randomly selected one
 - Provide a reason for replacing the subscriber
 - See list of valid replacement reasons (next slide)
- Carriers that are unable to collect data for all subscriber locations selected for testing in quarter:
 - Request replacement of subscriber location with the next randomly selected one
 - Provide a reason for replacing the subscriber
 - See list of valid replacement reasons (next slide)
 - Submit all available data for active subscriber locations
 - Certify data for the quarter as the last step

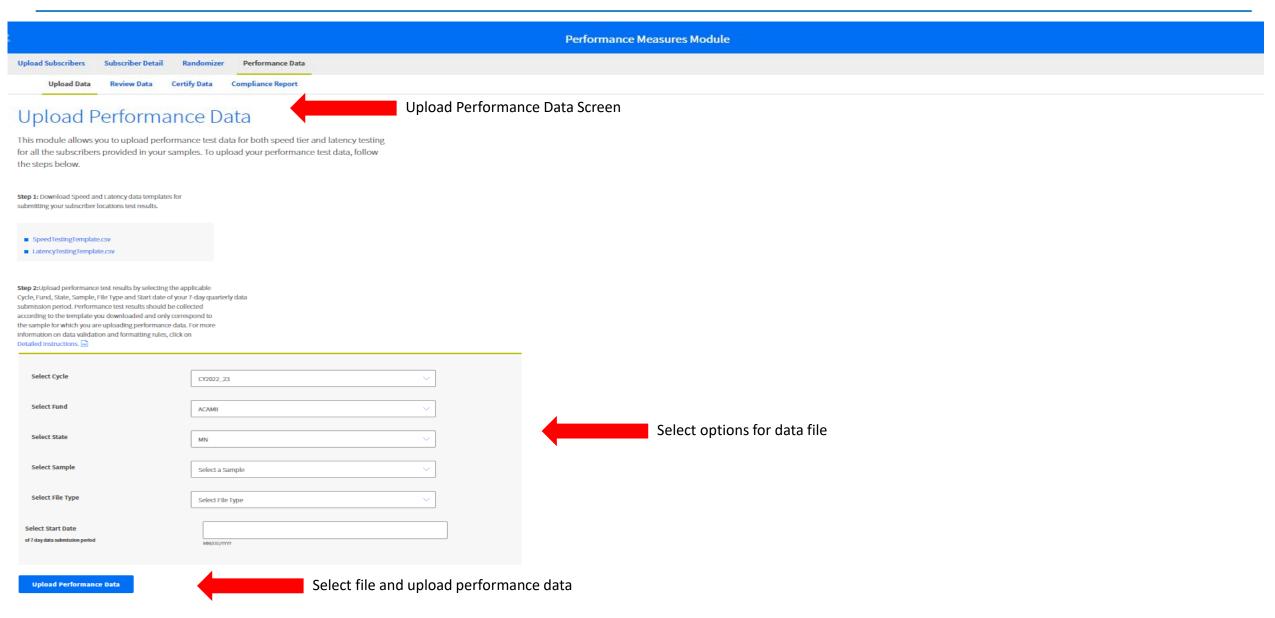


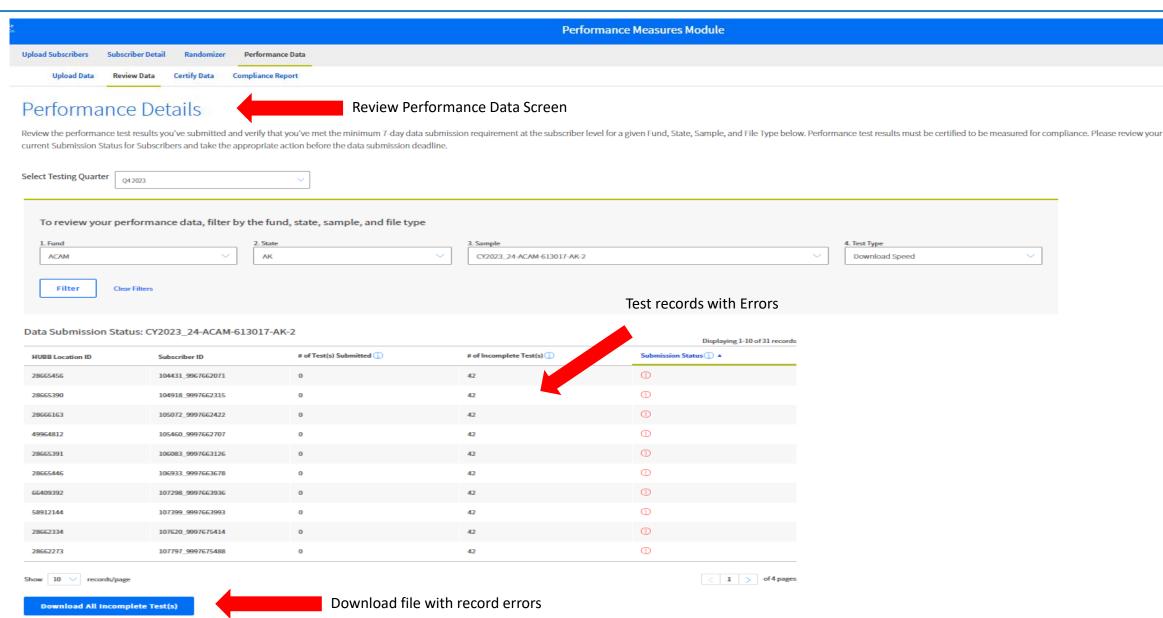
Network Performance Testing: Test Status Codes

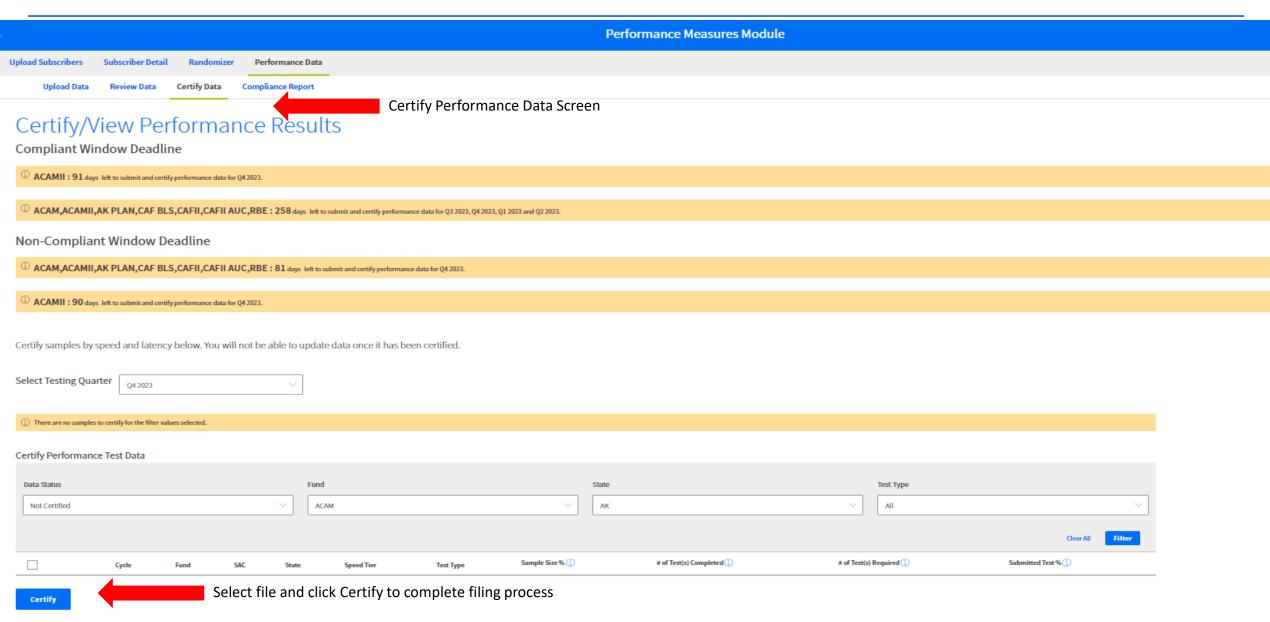
- Status Code 1 Successful
 - Successful test submitted to the PMM System are assigned status code 1. A successful test is defined as a single, discrete observation of speed or latency conducted from the customer premises of an active subscriber within the criteria above.
- Status Code 2 Failed Due to Cross-Talk
 - Deferred test, due to cross-talk, submitted to the PMM System are assigned status code 2. If the consumer load is greater than 64 Kbps downstream for download tests or 32 Kbps upstream for upload tests, the provider may defer the affected test for one minute and reevaluate whether the load exceeds the relevant 64 Kbps or 32 Kbps threshold before retrying the test.
 - This load check and-retry must continue at one-minute intervals until the speed test can be run or the one-hour test window ends. For speed tests, a carrier that begins attempting speed tests within the first fifteen minutes of a testing hour, and repeatedly retries and defers the test at one-minute intervals due to consumer load meeting the adopted cross-talk thresholds may report that no test was successfully completed during the test hour because of cross talk.
- Status Code 3 Failed (modem off, etc.)
 - Failed test submitted to the PMM System are assigned status code 3. For a failed test, a carrier was unable to conduct a single, discrete observation of speed or latency from an active subscriber within the criteria above.

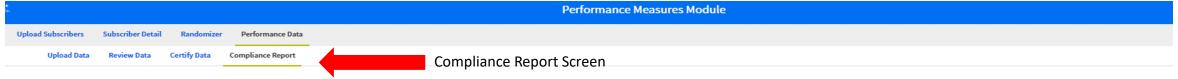
Network Performance Testing: Calculating Compliance

- The PMM totals all test status records (statuses 1, 2 and 3) to determine if the correct number of test records have been submitted
 - The system gives credit for subscribers replaced during the quarter
 - The system adds missing test records into the compliance calculations as zero records
- PMM uses <u>only</u> test status 1 records to calculate speed and latency compliance
- PMM calculates compliance using only certified data
- Reminders
 - Collect and submit ALL test records to PMM
 - When cross-talk or failed tests are detected, continue testing at one-minute intervals to ensure all data records are collected
- The PMM allows carriers to view and download quarterly compliance reports displaying details at the Study Area Code (SAC) level about the percent of upload and download speed tests and latency tests that met network performance standards set by the FCC
- For a detailed explanation of how the PMM calculates compliance, please see:
 https://www.usac.org/wp-content/uploads/high-cost/documents/Tools/PMM-Compliance-Calculations.pdf







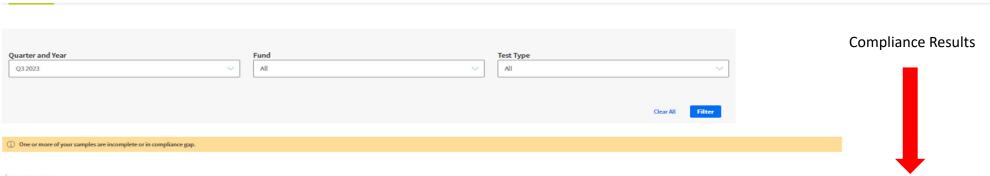


Compliance Report

Annual

View your quarterly or annual compliance report using the tabs to navigate between the desired reports. Based on your annual report, if your compliance level reflects "Full Compliance", performance data is due annually. However, it is recommended that performance data be submitted quarterly for fully compliant samples. Whereas, performance data for incomplete performance data submissions and for Levels 1-4 is due quarterly until a sample is fully compliant. See compliance levels and support reduction for Performance Measures Order for more information.

For CAFII AUC Carriers with High Latency, the MOS Data and Results are available for download and export. See the MOS test methodology on USAC's website for more information.



Quarterly

Fund	SAC	State	Speed Tier	Test Type	Sample Size Met	# of Tests Compliant	# of Tests Non-Compliant	# of Missed tests	Compliance %	Compliance Level	History
ACAM		AK	2	UL Speed	Passed	1207	1	0	100 %	Fully Compliant	-
CAM		AK	4	UL Speed	Passed	1898	1	0	100 %	Fully Compliant	-
ACAM		AK	3	UL Speed	Passed	1915	1	0	100 %	Fully Compliant	1
CAM		AK	4	DL Speed	Passed	1851	48	0	100 %	Fully Compliant	-
CAM		AK	2	DL Speed	Passed	1187	30	0	100 %	Fully Compliant	-
CAM		AK	3	DL Speed	Passed	1868	27	0	100 %	Fully Compliant	-
CAM		AK	2	Low Latency	Passed	40065	626	0	100 %	Fully Compliant	-
ACAM		AK	3	Low Latency	Passed	65341	120	0	100 %	Fully Compliant	-
CAM		AK	4	Low Latency	Passed	66061	35	0	100 %	Fully Compliant	-
CAM		AL	4	UL Speed	Passed	1049	0	0	100 %	Fully Compliant	-

Show 10 V records/page

Displaying 1-10 of 819 records

Questions?