

Annual Offset Equivalency Demonstration In-Depth

Emission Reduction Credit Program
Public Advisory Workgroup
Meeting #2

October 21, 2020

District Offset Equivalency Program

- District performs an annual demonstration that the District's ERC program is at least as stringent as federal offsetting requirements
 - Approach initially approved by EPA and CARB in 2001
 - Demonstration submitted to EPA and CARB annually for review and presented to Governing Board at public hearing
- Annual report must demonstrate both of the following:
 - The quantity of offsets required by Rule 2201 equals or exceeds the quantity of federal offsets that would have been required
 - The surplus value of offsets required by Rule 2201, plus the surplus value of additional creditable emission reductions, equals or exceeds the quantity of federal offsets that would have been required
- Should the system fail to demonstrate equivalency, Rule 2201 contains tailored remedies that are required to be enacted immediately

Components of Equivalency



Federal NSR (increases)

- Federal Offset Quantity for New Major Sources
- Federal Offset Quantity for Major Modifications



District NSR (decreases)

- ERCs Reserved/Withdrawn (District Offset Quantity)
- ERCs Surrendered
- ERCs Newly Issued (AQID)
- Orphan Facility Shutdowns
- *BACT on Existing Minor Sources*

Federal Offset Quantity

- Each project resulting in a New Major Source or Federal Major Modification is tracked based on the date the project is final
- The quantity of surplus at time of use offsets required under federal NSR is determined during the evaluation of the project prior to issuance of the Authorities to Construct (ATCs)
- New Major Sources or Federal Major Modifications projects are subject to public notification and review prior to ATC issuance and are concurrently submitted to EPA and ARB for review

ERCs Reserved/Withdrawn

- Each project requiring District offsets under Rule 2201 is tracked based on the date the project is final
- The ERCs reserved/withdrawn to satisfy the offsetting obligation are tracked
 - Quantity of ERCs (surplus value at time of banking)
 - Surplus value of ERCs at time of use & ongoing surplus value of ERCs
- The quantity of ERCs reserved/withdrawn is used to demonstrate Quantity of Offset Equivalency as necessary
 - Unused balance is carried forward
- The surplus value of ERCs reserved/withdrawn is used as necessary to demonstrate Surplus Value Equivalency
 - Unused balance is included in the surplus carry-over

ERCs Surrendered

- Each ERC that is surrendered to the District is tracked based on the date the ERC surrender project is final
 - Quantity of ERCs (surplus value at time of banking)
 - Surplus value of ERCs at time of use & ongoing surplus value of ERCs
- The surplus value of ERCs surrendered is used as necessary to demonstrate Surplus Value Equivalency
 - Unused balance is included in the surplus carry-over
- The surplus value of ERCs surrendered can also be used as necessary to satisfy Quantity of Offset Equivalency shortfalls

ERCs Issued

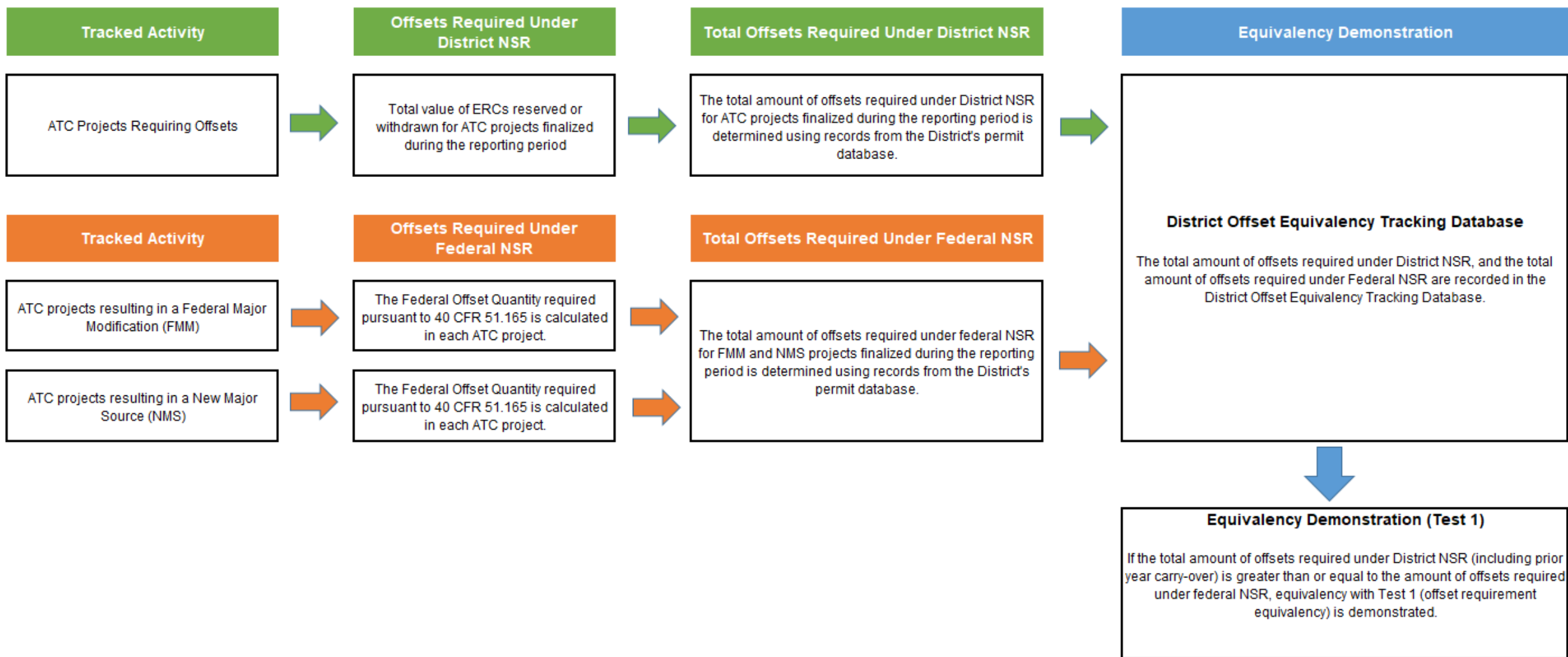
- Each newly issued ERC is tracked based on date banking project is final
- At time of banking, the actual emission reduction associated with the ERC is discounted by 10% and the District takes ownership in the form of the Air Quality Improvement Deduction (AQID)
- The surplus value of AQID is tracked over time and used as necessary to demonstrate Surplus Value equivalency
- Unused AQID is included in the surplus carry-over
- The surplus value of AQID can also be used as necessary to satisfy Quantity of Offset Equivalency shortfalls

Orphan Facility Shutdowns

- Reductions from facility shutdowns for which ERCs were not banked by the owner
 - Does not include facilities where source shifting may be an issue (gasoline stations, dry cleaners, etc.)
 - AG-ICE projects were treated as a type of orphan shutdown project
- Historically, each orphan shutdown (OSD) was tracked based on date the facility permits were surrendered
- The surplus value of OSDs were tracked over time and used as necessary to demonstrate Surplus Value equivalency
- Unused OSD was included in the surplus carry-over
- The surplus value of OSD could also be used as necessary to satisfy Quantity of Offset Equivalency shortfalls

Equivalency Demonstration

Offset Quantity Equivalency Demonstration Process Diagram (Test 1)



San Joaquin Valley APCD Annual Offset Equivalency Report

Summary for 08/20/2017 through 08/10/2018

Amount (running total) of reductions that the District has eliminated from its equivalency program due to the discounting of "surplus at time of issuance" reductions to meet the federal "surplus at time of use" requirement.

Pollutant	Number of New Major Sources	Number of Federal Major Mods	Offsets Required under Federal NSR*	Offset Requirement Equivalency *				Surplus at the Time of Use Equivalency				
				Offsets Required under District NSR	Excess or Shortfall this Year	Excess or Shortfall previous Year	Total Excess or Shortfall	Shortfall from Previous Year	Reduction (surplus at the time of use) used for equivalency this year	Shortfall this year	Reductions eliminated by discounting at the time of use**	Unused Carry-over Creditable Reductions
NOx	0	11	119.3	40.7	-78.6	4356.1	4277.5	0.0	119.3	0.0	5485.3	434.0
VOC	1	28	625.9	157.8	-468.1	1124.2	656.1	0.0	625.9	0.0	2263.8	1286.0
PM10	0	0	0.0	14.8	14.8	821.2	836.0	0.0	0.0	0.0	127.7	1854.0
PM2.5	0	0	0.0	0.0	0.0	370.9	370.9	0.0	0.0	0.0	0.0	991.0
CO	0	0	0.0	0.0	0.0	198.1	198.1	0.0	0.0	0.0	110.7	740.0
SOx	0	0	0.0	7.6	7.6	2856.0	2863.6	0.0	0.0	0.0	770.7	1987.0

Excess or Shortfall previous Year plus (+) the Excess or shortfall this Year.

* All numbers are in Tons per Year

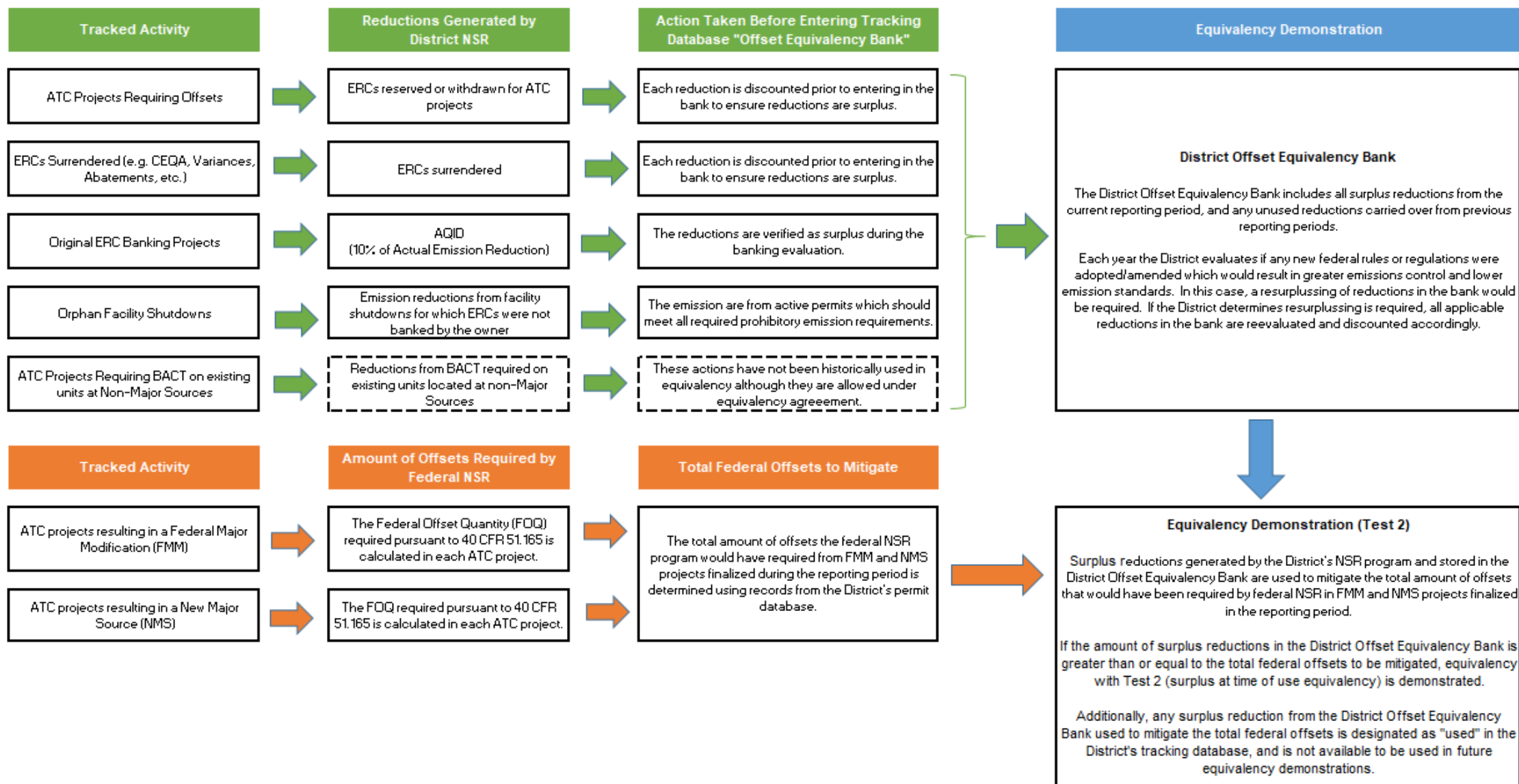
** Total quantity of discount since initiating tracking in August 2001

The total difference (running total) between the total offsets required under District NSR, and the total offsets required under Federal NSR. Due to adjustments to the tracking database (e.g. removal of offsets from unimplemented ATC project, etc.), this value may not be equal to the Total Excess of Shortfall value from the previous year's report.

Amount of surplus reductions used from the offset equivalency bank to mitigate the offsets required by federal NSR for FMM and NMS projects finalized during the reporting period.

Amount of surplus reductions available in the offset equivalency bank after mitigating all offsets required by federal NSR for this reporting period. These reductions can be used to mitigate offsets required by federal NSR in the future.

Surplus At Time of Use Offset Equivalency Demonstration Process Diagram (Test 2)



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San Joaquin Valley APCD

Annual Offset Equivalency Report - Detail

Transaction details for 08/20/2017 through 08/19/2018

Pollutant Company Name and Address

NOx

AERA ENERGY LLC
 HEAVY OIL WESTERN STATIONARY SOURCE,
 KERN COUNTY

Surplus at the time of use Reductions Used to Mitigate this Increase

<i>Tracking ID for ATC</i>	<i>Fed Offsets Req'd</i>	<i>ATC Date</i>	<i>Tracking ID for Reduction</i>	<i>Credit (t/y)</i>	<i>Time of Use</i>
2018-S-1171938-6943-0	0.400	11/15/2017	2010-S-1085134-4427-1	0.300	11/15/2017
2018-S-1171938-6943-0	0.100	11/15/2017	2019-S-1171326-6811-1	0.100	11/15/2017

Total Reductions, this reporting period, for this project 0.4

2020 Offset Equivalency Demonstration

Current Status of Equivalency

- On September 17, 2020, District Governing Board took action to:
 - Provisionally remove all emission reductions from orphan shutdowns and Ag-ICE projects from the equivalency system (used for surplus equivalency test 2)
 - Direct the reintroduction of the appropriate portion of the emission reductions from the projects once EPA and ARB accepted mechanisms and methodologies are developed
- Action allows the public process to inform the development of mechanisms and methodologies for the use of these and other types of creditable emission reductions in demonstrating equivalency
- With removal, system cannot demonstrate equivalency with the surplus value test for NO_x and VOC
 - Rule 2201 remedy enacted immediately on September 17, 2020
 - All new major sources of federal major modifications triggering NO_x or VOC offsets under the District NSR Rule require “surplus at time of use” ERCs

2020 Offset Equivalency Demonstration

- Tracking year: August 20, 2019 through August 19, 2020
- Tracked federal projects:
 - 14 Federal Major Modifications (2 NO_x only, 8 VOC only, and 4 both NO_x and VOC)
 - 0 New Major Sources
- Significant Adjustments Necessary:
 - Incorporate Board's action regarding removal of AG-ICE and orphan shutdown credits (affects all pollutants, affects surplus test)
 - Address cancelled/non-implemented projects (affects all pollutants; affects tracked increases and decreases; affects quantity and surplus tests)
 - Federal Offset Ratio correction (affects NO_x and VOC tracked increases from 8/20/2010 to 8/19/2014; affects quantity and surplus tests)
- Finalizing equivalency demonstrations for PM₁₀, PM_{2.5}, and SO_x surplus value test and offset quantity test for all pollutants

2020 Offset Equivalency Demonstration

- New public engagement and transparency enhancements
 - Enhancing the annual demonstration report to make the report more understandable, including more fully characterizing adjustments made to year-to-year carry-overs to ensure the public can better understand all adjustments effective in a tracking year
 - Public workshop to review and receive comment on draft annual equivalency demonstration report

2020 Offset Equivalency Report Timeline

