

Facility-Based Mobile Source Measures

**Warehouse
Distribution
Centers**



**Commercial
Airports**



**New or
Redevelopment
Projects**



**Commercial
Marine Ports**



**Railyard &
Intermodal
Facilities**



**2nd Working Group Meeting
July 27, 2017**

FBMSM

Agenda

- Introduction and Background
- Update on the FBMSM Framework
- State Implementation Plan (SIP) Credit Considerations
- Potential Mechanisms for SIP Creditable Emission Reductions
- Examples of Emission Reduction Opportunities and Potential Paths for SIP Credit
- Next Steps

Background – Comments

Eight Written Comments

California Railroad Industry / California Trucking Association /
NAIOP / Pacific Merchant Shipping Association

Building Industry of Southern California / NAIOP /
REALTORS Committee on Air Quality

San Bernardino County Transportation Authority

San Bernardino County Land Use Services Department

Port of Long Beach / Port of Los Angeles

City of Mission Viejo

Earthjustice

Concerned Citizen

Background – Comment Summary

- Encourage/discourage voluntary/flexible programs
- Incentive funding critical
- Recognize existing programs (e.g. clean HD trucks)
- Balance environmental and economic factors
- Additional metrics should include cost-effectiveness and emission/health risk reductions
- Clarify emission reduction goals/timing
- Local land use authority must be maintained

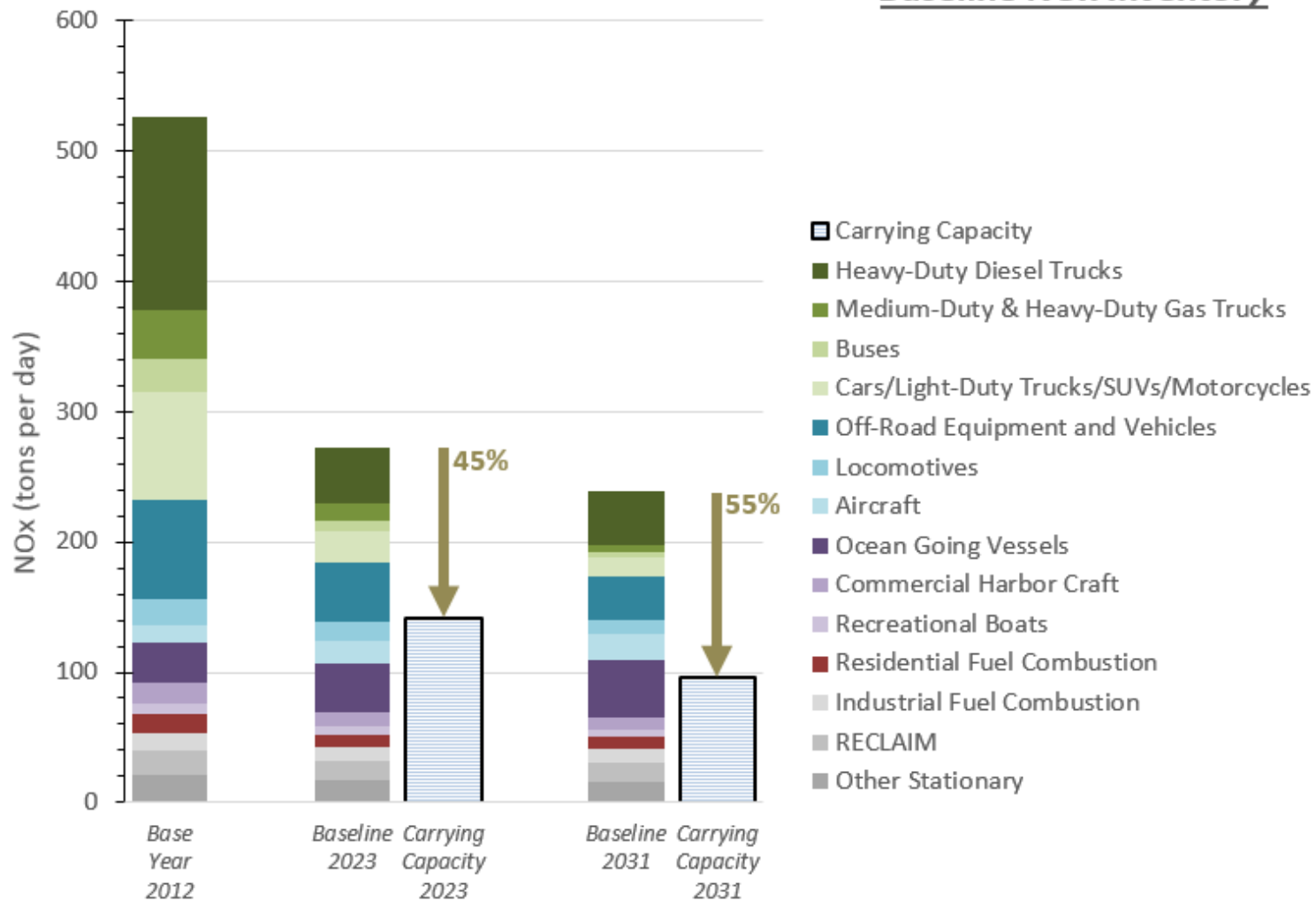
FBMSM Framework Update

➤ Website walkthrough

SIP Credit Considerations-

Baseline NOx Emissions & Air Basin Carrying Capacity

- Baseline inventory assumes full implementation of existing rules
- Carrying capacity based on modeling in 2016 AQMP

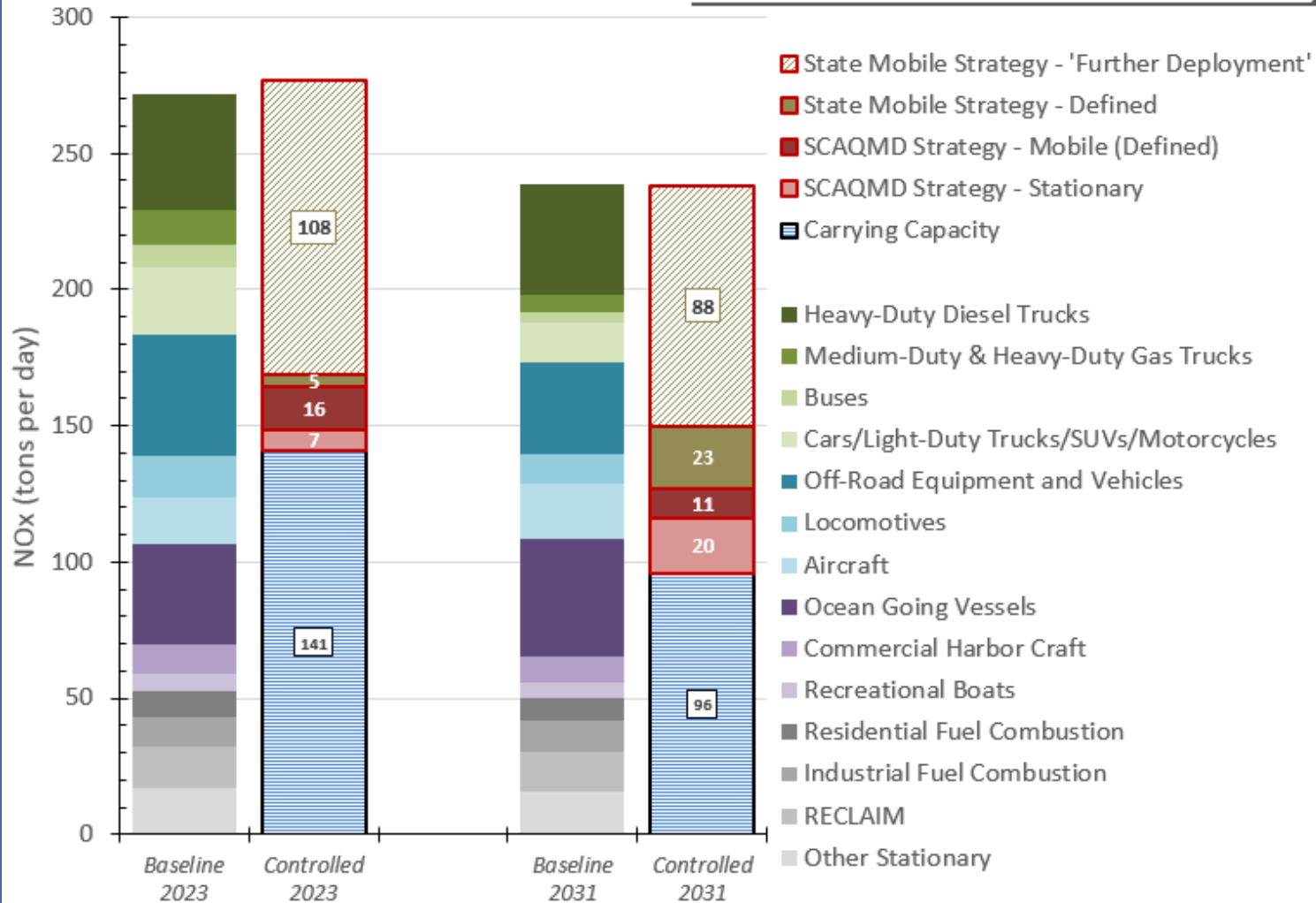


SIP Credit Considerations-

NOx Control Strategy

- CARB commitment:
 - 113 tons in 2023
 - 111 tons in 2031
- CARB reductions mostly through 'Further Deployment of Cleaner Technologies'
 - Incentives
 - Efficiency Improvements
 - Advanced Technology Penetration
 - Local Measures
- SCAQMD has committed to helping achieve these same reductions through its own efforts
 - Incentives
 - FBMSM
 - Fleet Rules

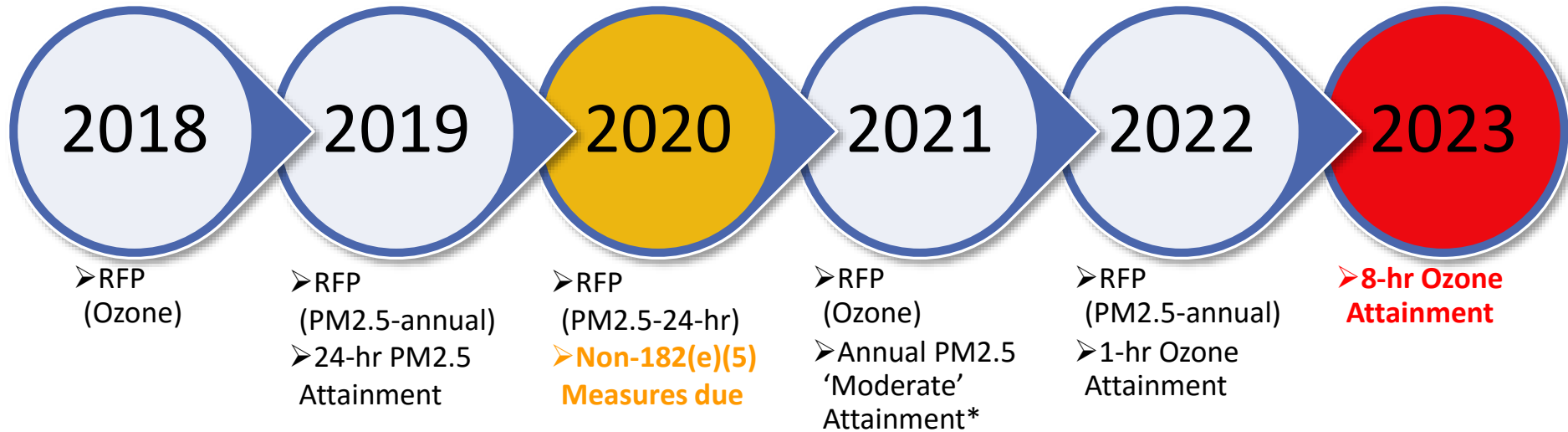
Baseline and Controlled NOx Inventory



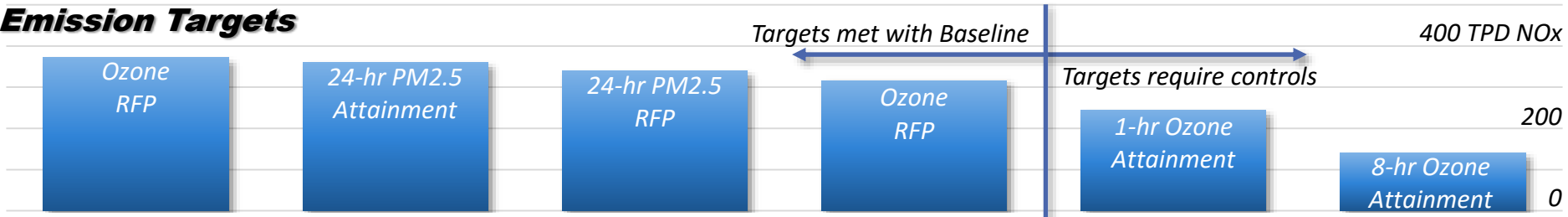
SIP Credit Considerations - Administrative Path to 2023*

- Attainment Dates
 - 1-hr and 8-hr ozone, 24-hr and annual PM2.5
- Ozone pre-attainment requirements
 - Reasonable Further Progress
 - 3% reduction from baseline per year until attainment, reported every 3 years
 - Backward looking emission reductions
 - Further Deployment Measures [potential need for 182(e)(5) flexibility]
 - Specific and defined measures due three years before attainment [no 182(e)(5)]
 - Forward looking emission reductions
- PM2.5 pre-attainment requirements
 - Reasonable Further Progress
 - Linear progress from baseline to attainment, reported every three years
 - No 182(e)(5) flexibility allowed

SIP Credit Considerations – Administrative Timeline to 2023



Emission Targets



*SCAQMD requesting bump up to 'Serious' – attainment date in 2025

SIP Credit Considerations Summary

- Defined measures due by 2020
 - Reaching Reasonable Further Progress milestones is not sufficient for attainment in 2023
 - RFP looks at past activity
 - 2016 AQMP demonstrates that RFP requirement will be satisfied
- CARB has committed to necessary emission reduction measures, but they are currently not specifically defined
 - SCAQMD has committed to take actions help achieve these reductions

Potential Mechanisms for SIP Creditable Emission Reductions

- EPA/CARB/SCAQMD regulations
 - Engine/Fuel Standards
 - In-Use Rules
 - Credit Generation Rules
 - Indirect Source Rules
- New information and assumptions on emissions and growth
 - Examples: SCAG RTP update, growth updates, etc.
- Voluntary incentive program
 - Examples: Funding, preferential rate structures, etc.
- Other voluntary measures
 - Examples: Local policies, CEQA, etc.

Key Considerations for Voluntary Measures

➤ Integrity Elements

➤ Limitations on amount of reductions

➤ 1997 EPA guidance

Voluntary mobile source emission reductions capped at 3% of total required emission reductions

➤ 2023 total reductions needed = ~131 tons/day, 3% = ~4 tons/day

➤ Cap set due to EPA inexperience with innovative new policy in 1997

➤ 2014 EPA guidance

Reductions >3% possible on a case-by-case basis



EPA Integrity Elements

*Integrity Elements
must be satisfied to
get 'prospective' or
forward-looking
credit*

Permanent

- Reductions must continue through attainment dates
- Progress of emission reduction programs must be tracked through attainment dates

Enforceable

- Reductions must be independently verifiable
- Program violations must be defined
- Citizens have access to emissions-related information
- Citizens have the ability to file suit against a responsible entity for violations
- EPA has the ability to apply penalties and secure corrective action

Quantifiable

- Reductions must be calculated by reliable and replicable means
- Analysis must be substantiated and documented

Surplus

- Emission reductions must not otherwise be required by or assumed in a SIP related program and any other adopted State air quality program or federal rule
- Analysis must be substantiated and documented

Mechanisms to Achieve Emission Reductions & SIP Credit From Facility Based Measures

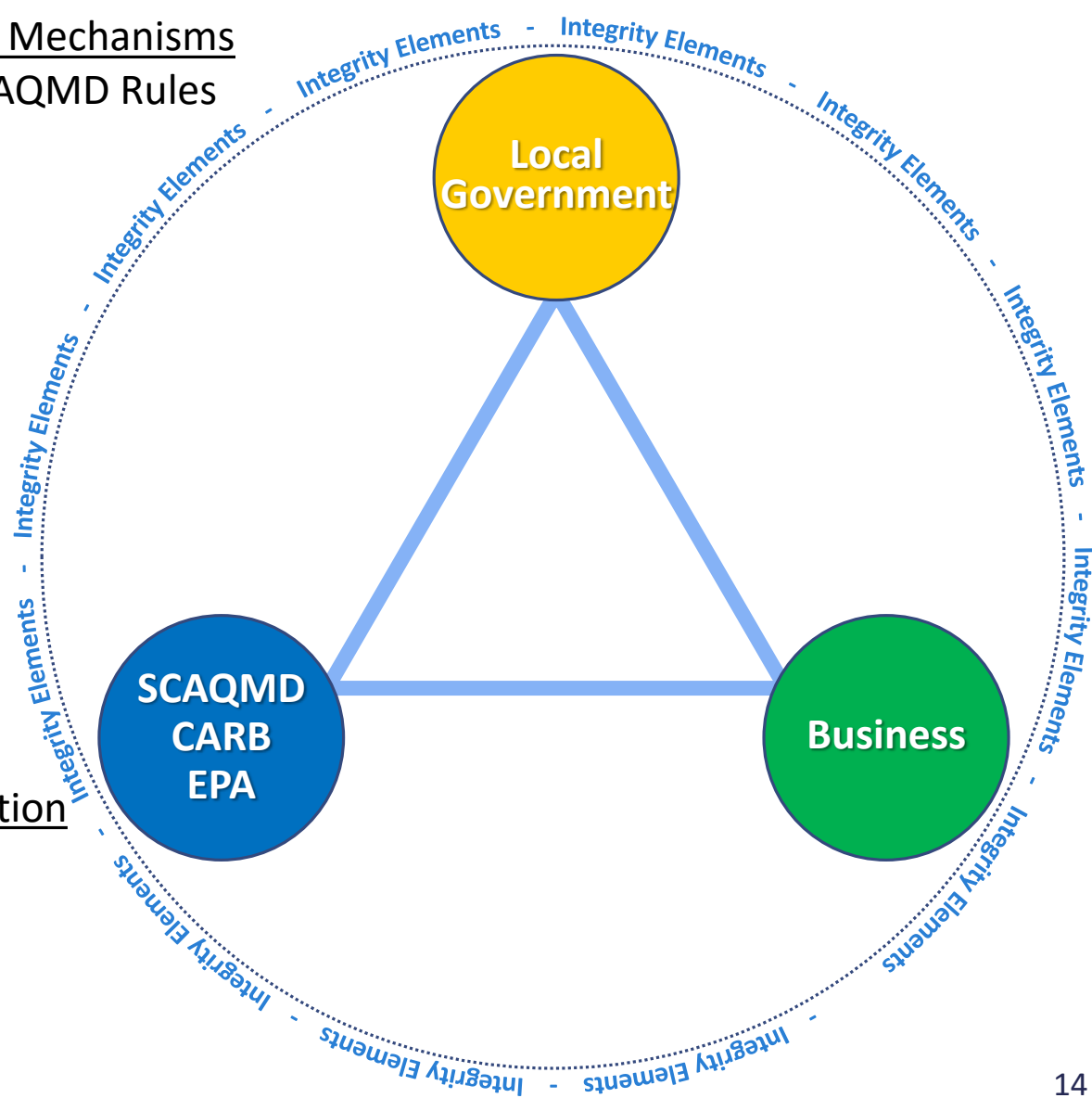
Many
Combinations
Possible

Examples of SIP Mechanisms

- EPA/ARB/SCAQMD Rules
- MOUs
- Contracts

Examples of Emission Reduction Mechanisms

- Ordinances
- Permits
- MOUs
- Contracts



EPA Guidance Documents

[Voluntary Mobile Source SIP Programs](#) (1997)

www.epa.gov/sites/production/files/2016-05/documents/vmep-gud.pdf

[Improving Air Quality with Economic Incentive Programs](#) (2001)

www.epa.gov/sites/production/files/2015-07/documents/eipfin.pdf

[Voluntary and Emerging SIP Measures](#) (2004)

www.epa.gov/sites/production/files/2016-05/documents/voluntarycontrolmeasurespolicyepa.pdf

[Energy Efficiency and Renewable Energy SIP Measures](#) (2004)

www.epa.gov/sites/production/files/2016-05/documents/ereseerem_gd.pdf

[Incorporating Bundled Measures in a SIP](#) (2005)

www3.epa.gov/ttn/naaqs/aqmguid/collection/cp2/20050816_page_incorporating_bundled_measure_sip.pdf

[Incorporating Energy Efficiency/Renewable Energy Policies and Programs into SIPs](#) (2012)

www.epa.gov/sites/production/files/2016-05/documents/eeremanual_0.pdf

[Diesel Retrofit SIP Programs](#) (2014)

<http://nepis.epa.gov/Exe/ZyPDF.cgi/P100HP2S.PDF?Dockey=P100HP2S.PD>

Break

Examples of Potentially SIP Creditable Measures



General Example – Portola PM2.5 Plan



Tier 2 MOU with Railroads and CARB



Clean Air Action Plan



Sustainable Community Strategy



World Logistics Center Settlement Agreement with SCAQMD



LAX Alternative Fuel Policy

Examples presented for discussion purposes and have not been approved by SCAQMD/ARB /EPA

General Example – Portola PM2.5 Plan

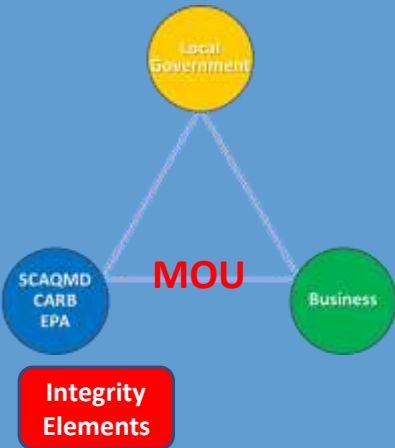


- Portola PM2.5 Attainment Plan (Northern Sierra AQMD)
 - Approved by CARB February 2017
 - Currently under review by EPA
- Greater Portola Wood Stove Change-out Program
 - Voluntary incentive measure
 - Potential prospective SIP creditable emission reductions
- Portola PM2.5 Attainment Plan available at: <https://www.arb.ca.gov/planning/sip/planarea/nsierra/nsierra.htm>

Portola PM 2.5 Plan – SIP Integrity Elements

SIP Integrity Element	Key Components of Demonstration
➤ Surplus	➤ No other state or federal requirements for replacing old wood stoves in the Portola nonattainment area
➤ Quantifiable	➤ Emission reductions calculated using an EPA-approved emissions calculator known as the EPA Burn Wise Wood Stove and Fireplace Emission Calculator
➤ Permanent	➤ Verification of destruction of old wood stoves to prevent reuse of older higher emitting appliances
➤ Enforceable	➤ Established application, certification, inspection and recordkeeping procedures ➤ Enforceable commitment to add substitute measures or rules that achieve emission reductions addressing any potential shortfall

SIP Credit Example: Tier 2 MOU Between ARB and Railroads



- 1998 Tier 2 MOU between ARB and rail operators requires improvements to SCAB locomotive fleet average from 2010-2030
 - Consistent with control measure in 1994 SIP
 - Locomotive fleet average must be no greater than Tier 2 standard
 - EPA has committed to backstop if necessary
 - MOU provided ~30% reduction in locomotive NOx beyond 1994 SIP baseline inventory for 2010



Tier 2 MOU: SIP Integrity Elements

SIP Integrity Element	Key Components of Demonstration
➤ Surplus	➤ Improves fleet-wide average emissions in SCAB through a commitment to the use of higher tiered locomotives
➤ Quantifiable	<ul style="list-style-type: none"> ➤ Emissions quantified based on committed average emission level equal to Tier 2 equivalent ➤ Calculation methodology provided for averaging provisions and crediting provisions for Ultra Low Emission Level locomotives
➤ Permanent	<ul style="list-style-type: none"> ➤ Requires preferential routing of higher tier engines between 2010-2030 ➤ Requires recordkeeping, tracking, and reporting of compliance
➤ Enforceable	<ul style="list-style-type: none"> ➤ MOU is enforceable between ARB and railroads ➤ EPA has committed to provide substitute measures or rules that achieve emission reductions addressing any potential shortfall

Potential for 'extra credit' for lower emissions beyond MOU?

SIP Credit Example: Vessel Speed Reduction



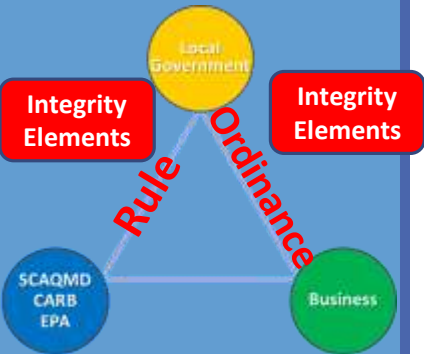
- Clean Air Action Plan (CAAP)
 - Multiple mechanisms possible
 - MOUs/Contracts between SCAQMD/Businesses
 - Umbrella MOU between SCAQMD/Ports
 - Measure-specific MOUs between SCAQMD/Ports
 - Rules (Indirect Source, Credit Generation, etc.)
- CAAP includes many measures
 - Vessel Speed Reduction example
 - Ports offer incentive to shippers if vessels reduce speeds
 - Lower speeds yields lower NO_x
 - Measure-specific MOU could be developed



Vessel Speed Reduction: SIP Integrity Elements

SIP Integrity Element	Key Components of Demonstration
<ul style="list-style-type: none"> ➤ Surplus 	<ul style="list-style-type: none"> ➤ Reductions must go beyond existing baseline emissions inventory ➤ Must demonstrate that incentive funding is available
<ul style="list-style-type: none"> ➤ Quantifiable 	<ul style="list-style-type: none"> ➤ Emissions must be quantified using approved methods that are consistent with current SIP inventory methods
<ul style="list-style-type: none"> ➤ Permanent 	<ul style="list-style-type: none"> ➤ VSR program must be available at least through attainment date ➤ Monitor and track emission reductions through recordkeeping
<ul style="list-style-type: none"> ➤ Enforceable 	<ul style="list-style-type: none"> ➤ SCAQMD makes commitment that can be enforced by EPA and/or citizen suit <ul style="list-style-type: none"> ➤ Commitment is for emission reductions from VSR program, or another measure if a shortfall occurs ➤ MOU can specify a different level of emission reductions than goal of program <ul style="list-style-type: none"> ➤ SIP Credit only for emission included in MOU commitment ➤ Resources must be dedicated to ensure compliance with program for shipping companies that choose to participate

SIP Credit
Example:
Local
Ordinance
Exceeding SCS
Assumptions



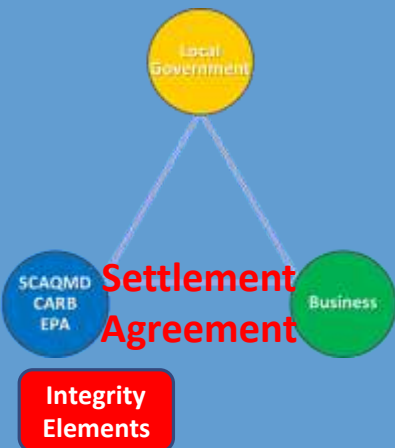
- Adoption of local ordinance that goes beyond strategies in the 2016 RTP/SCS
- For example, ordinance could require emission reductions via:
 - Transportation strategies
 - Land use strategies
 - Transit services
 - Other
- SCAQMD could develop a rule that allows cities/counties to opt-in
- Rule would provide framework and specific components needed for ordinance to get SIP credit



Local Ordinance Exceeding SCS Assumptions: SIP Integrity Elements

SIP Integrity Element	Key Components of Demonstration
➤ Surplus	➤ Must include demonstration that ordinance will reduce emissions beyond SIP baseline inventory
➤ Quantifiable	<ul style="list-style-type: none"> ➤ Quantify emissions with transportation models that are consistent with modeling efforts for development of the RTP/SCS ➤ Assumptions must be substantiated (e.g., future land use changes, ridership projections, etc.)
➤ Permanent	<ul style="list-style-type: none"> ➤ Develop and implement monitoring requirements that track emissions reductions ➤ Ordinance must yield definable emissions benefit in attainment year
➤ Enforceable	<ul style="list-style-type: none"> ➤ Resources must be dedicated to routinely inspect for compliance with ordinance requirements (e.g., recordkeeping requirements for transit services, ridership targets, etc.) ➤ Enforceable commitment to substitute measures or rules that achieve emission reductions addressing any shortfall

SIP Credit Example: Settlement Between SCAQMD and World Logistics Center



- World Logistics Center is an approved 40.6 million square foot warehouse project in city of Moreno Valley
- In 2016 SCAQMD settled CEQA lawsuit against developer of World Logistics Center and city
- With settlement, key components of project to reduce emissions beyond SIP baseline inventory include:
 - Commitment to use Tier 4 construction equipment
 - Commitment to pay into SCAQMD administered air quality improvement fund \$0.64/sq. ft. as project is developed
 - Up to \$26 million at full buildout

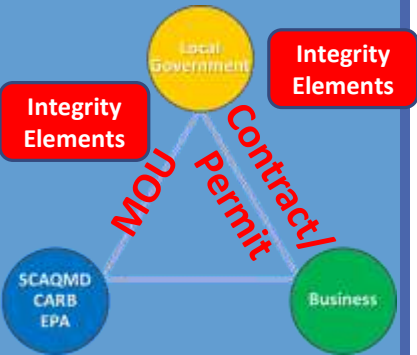


World Logistics Center Settlement Agreement: SIP Integrity Elements

SIP Integrity Element	Key Components of Demonstration
<ul style="list-style-type: none"> ➤ Surplus 	<ul style="list-style-type: none"> ➤ SCAQMD administered funds could go towards projects achieving emission reductions beyond SIP inventory <ul style="list-style-type: none"> ➤ Example: Near-zero/zero emission trucks ➤ Required fee program provides funding for air quality improvements
<ul style="list-style-type: none"> ➤ Quantifiable 	<ul style="list-style-type: none"> ➤ Emissions must be quantified based on type of project funded using EPA and/or CARB approved methodologies that are consistent with SIP inventory ➤ Guidelines could be developed for potential emission reduction projects
<ul style="list-style-type: none"> ➤ Permanent 	<ul style="list-style-type: none"> ➤ Emission reductions must occur during attainment years <ul style="list-style-type: none"> ➤ Project must be developed before attainment years to make funds available on time ➤ Recordkeeping and tracking requirements must be developed
<ul style="list-style-type: none"> ➤ Enforceable 	<ul style="list-style-type: none"> ➤ Fee program is enforceable through settlement agreement ➤ Emission reduction projects enforceable through contracts ➤ Enforceable commitment must be made to substitute measures or rules that achieve emission reductions addressing any shortfall ➤ Demonstration of program must be publicly accessible

SIP Credit Example: LAX Alternative Fuel Policy

- LAX existing alternative fuel policy requires:
 - 50% of covered vehicles shall be alt-fuel within five years of Community Benefits Agreement
 - 100% of covered vehicles shall be alt-fuel within ten years of Community Benefits Agreement
- Covered vehicles includes on-road vehicles >8,500 lbs and are used in operations at airport
- Details available here:
 - <http://www.lawa.org/alternativefuel/>
 - <http://www.laxsustainability.org/>
- Program is separate from SCAQMD Fleet Rule 1194
- MOU could be developed



LAX Alternative Fuel Policy: SIP Integrity Elements

SIP Integrity Element	Key Components of Demonstration
<ul style="list-style-type: none"> ➤ Surplus 	<ul style="list-style-type: none"> ➤ Demonstration must be made that policy goes beyond SCAQMD Rule 1194 and inventory included in SIP ➤ Must demonstrate that alt-fuel vehicles at LAX are not just displaced from another part of basin
<ul style="list-style-type: none"> ➤ Quantifiable 	<ul style="list-style-type: none"> ➤ Emissions must be quantified based on expected fleet mix (CNG, EV, etc.) ➤ MOU must include emission reductions and assumptions, but could be different than assumptions for LAX policy
<ul style="list-style-type: none"> ➤ Permanent 	<ul style="list-style-type: none"> ➤ Emissions reductions must be demonstrated through attainment years ➤ Recordkeeping, tracking required
<ul style="list-style-type: none"> ➤ Enforceable 	<ul style="list-style-type: none"> ➤ Alt-fuel policy enforceable by LAX on itself and permitted vendors ➤ SCAQMD MOU must make enforceable commitment to substitute measures or rules that achieve emission reductions addressing for any potential shortfall ➤ Program documentation must be publicly accessible

Next Steps

- Staff activities:
 - Continue meeting with stakeholders to identify voluntary programs/projects
 - ***Need assistance from stakeholders to identify potential projects***
 - Quantifying potential emission reductions
 - Working with ARB to continue to define state strategy
 - Continue to update website and Framework
- Next meeting(s) in mid-September (Sept. 21?)

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Questions or Comments?
