



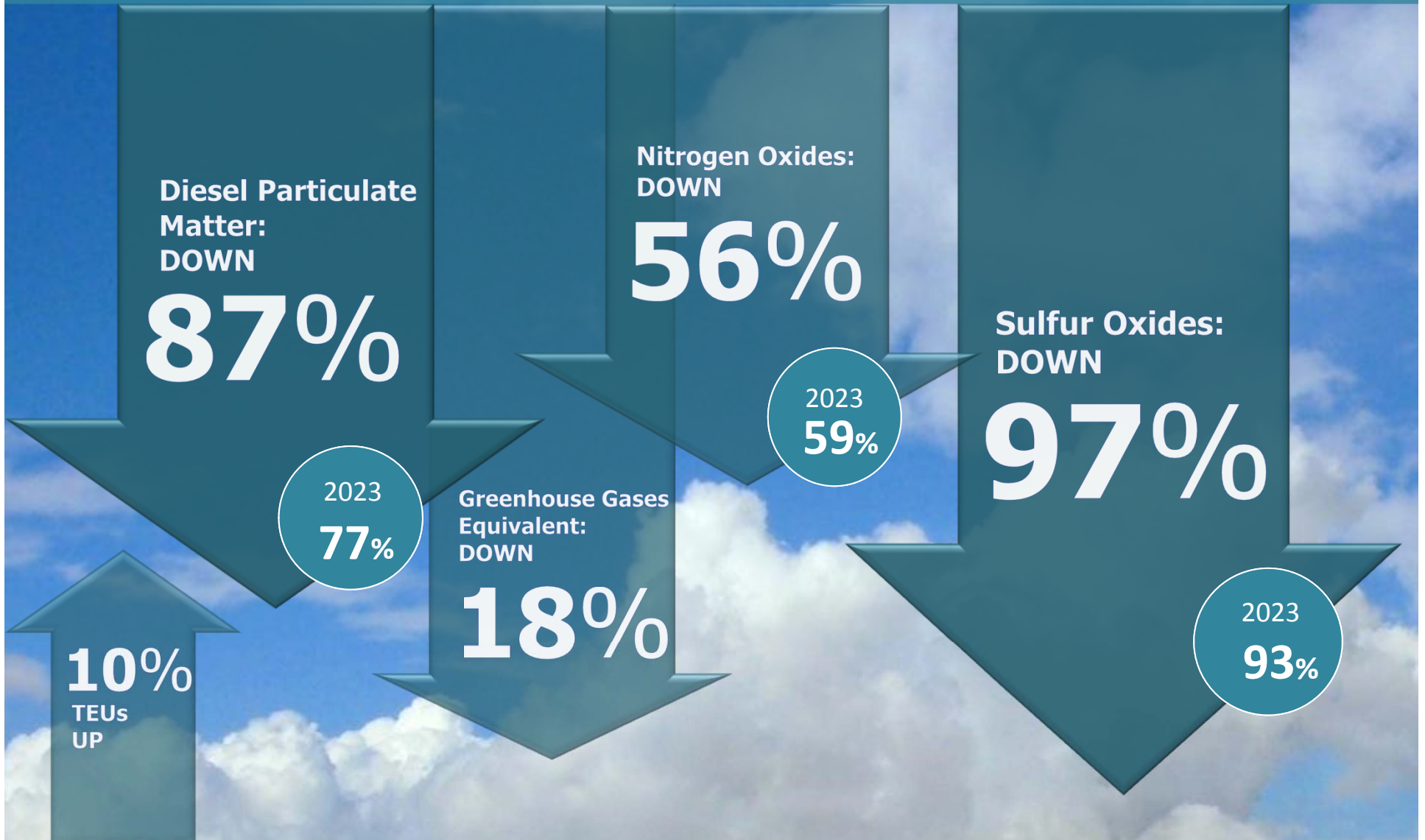
SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN

November 2017
FINAL CAAP 2017 UPDATE

Chris Cannon
Chief Sustainability Officer
Director of Environmental Management
Port of Los Angeles

Heather Tomley
Director of Environmental Planning
Port of Long Beach

San Pedro Bay Ports Air Quality Context for 2017 CAAP Update





2017 CAAP Update – Background and Purpose

- Build on successes and plan for the future
 - Cleanest Port complex in the world
 - Leaders in strategies to reduce environmental impacts
- Ports must be green in order to continue to grow
 - Need to balance environmental stewardship, economic competitiveness, and jobs
- Must continue to reduce pollutants and health risk



2017 CAAP Update – Background and Purpose

- New danger from Climate Change
 - Must commit to reduce greenhouse gases
 - Importance of zero emission technologies, as emphasized by Mayors' declaration
- CAAP is a planning document
 - Sets framework and guidelines
 - Details will be developed as part of CAAP implementation process

New CAAP Focus on Greenhouse Gases

2005

18%

2016

1990

2030

40%

1990

2050

80%



2017 CAAP Update Schedule

Public Comment and Over 70 Stakeholder Meetings
2015 - Ongoing





Recurring Comment Themes

stakeholder process

carbon footprint

accountability

interim milestones

emission reductions

infrastructure

costs

zero-emissions

CLIMATE CHANGE

workforce

community health

economic competitiveness

near-zero emissions

funding

feasibility assessments



Guiding Principles

- Expediently reduce air emissions and associated health risk
- Remain economically competitive and maintain our market position
- Support our vibrant workforce
- Continue to develop and foster strong partnerships with all stakeholders
- CAAP implementation process must be transparent and responsive to input

Overview



2017 CAAP Update Strategies

Ocean-Going Vessels



- Capture up to 100% of vessel at-berth emissions by 2030
- Modify Vessel Speed Reduction Program to maximize participation to 40 nm
- Incentivize energy-efficiency improvements and use of cleaner technologies
- Impose differential rate system to incentivize newer, cleaner vessels

Heavy-Duty Trucks



- Transition trucks to near-zero in the near-term and ultimately zero emissions by 2035
- Implement Port Truck Reservation System

Terminal Equipment



- Transition terminal equipment to zero emissions by 2030
- Establish a terminal equipment idling reduction program
- Develop charging standards for electric terminal equipment



Additional 2017 CAAP Update Strategies

- Incentivize harbor craft repowers to Tier 3 and Tier 4
- Expand use of on-dock rail
- Develop a Green Terminal Program
- Identify and implement supply chain efficiencies
- Develop and implement energy strategies and supporting infrastructure

Updates and Clarifications



Response to Comments on the Draft



Feasibility Assessments

- Technical Viability
- Operational Feasibility
- Availability of Supporting Infrastructure and Fuels
- Economic Considerations
- Commercial Availability



Cargo Handling Equipment

- Goal of zero emission cargo handling equipment by 2030
- Participate in development of CARB's regulation to achieve up to 100% ZE for CHE by 2030
- Conduct feasibility assessments starting in 2018 and updating every three years



Cargo Handling Equipment

- Terminals to submit an equipment inventory and 10-year procurement schedule for new equipment starting January 1, 2019.
- Beginning in 2020, new purchases must be zero-emission, or best available if zero-emission is not yet feasible, as determined by the Feasibility Assessment.
- Accelerate deployment of near-zero and zero-emission equipment through leases and grants.

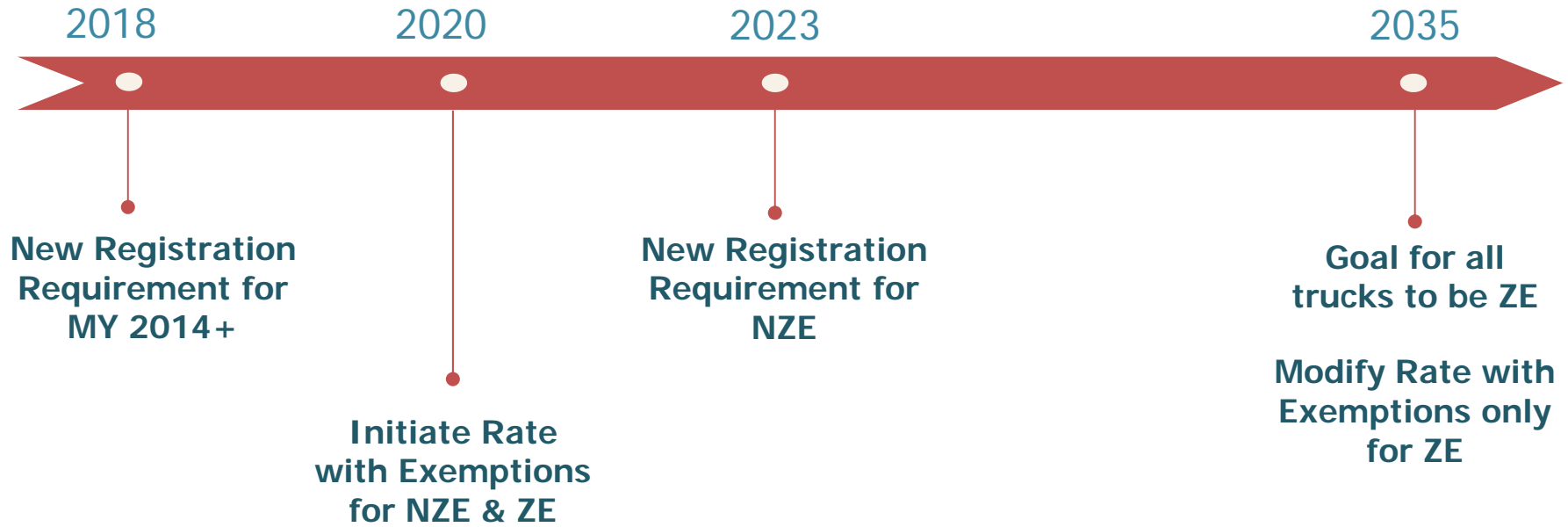


Previous Clean Trucks Program Timeline





New Clean Trucks Program Timeline





Additional Key Comments and Clarifications

- Economic Competitiveness
- Truck Driver Conditions and Financing
- Implementation Milestones
- Transparency and Reporting



Next Steps

- We're at the starting point
- Near-Term Actions
 - CAAP Implementation Advisory Workgroup
 - Technology Demonstrations
 - Feasibility Assessments
 - Clean Trucks Program
 - Port Truck Reservation System
 - Terminal Equipment



Next Steps

- Funding Advocacy
 - Education and Engagement
 - Grant Opportunities
 - U.S. Environmental Protection Agency
 - California Air Resources Board
 - California Energy Commission
 - South Coast Air Quality Management District



Port of
LONG BEACH

The Green Port



THE PORT
OF LOS ANGELES