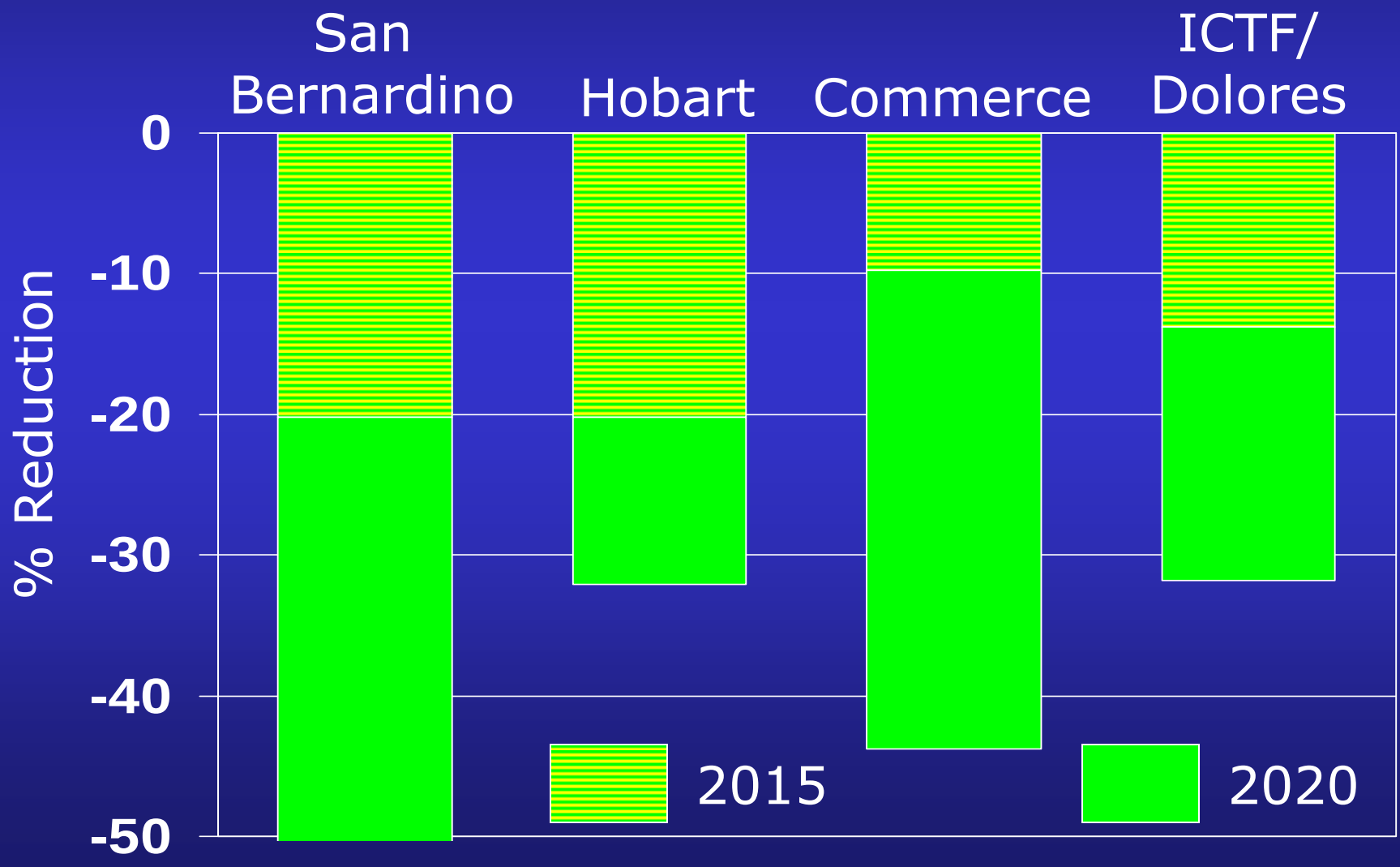
Commitments Would Cut Diesel PM Beyond Existing Program



Proposed Commitments to Reduce Diesel Particulate Matter at Four High Priority Railyards

Air Resources Board Meeting

June 24, 2010

California Environmental Protection Agency
Air Resources Board

Presentation Outline

- Key elements of proposal
- Basis - all feasible measures
- Railyard-specific benefits
- Response to public comments
- Staff recommendations

Key Elements of Staff Proposal

4 Railyards with Highest Health Risks

BNSF San Bernardino

UP Commerce

BNSF Hobart

UP ICTF/Dolores

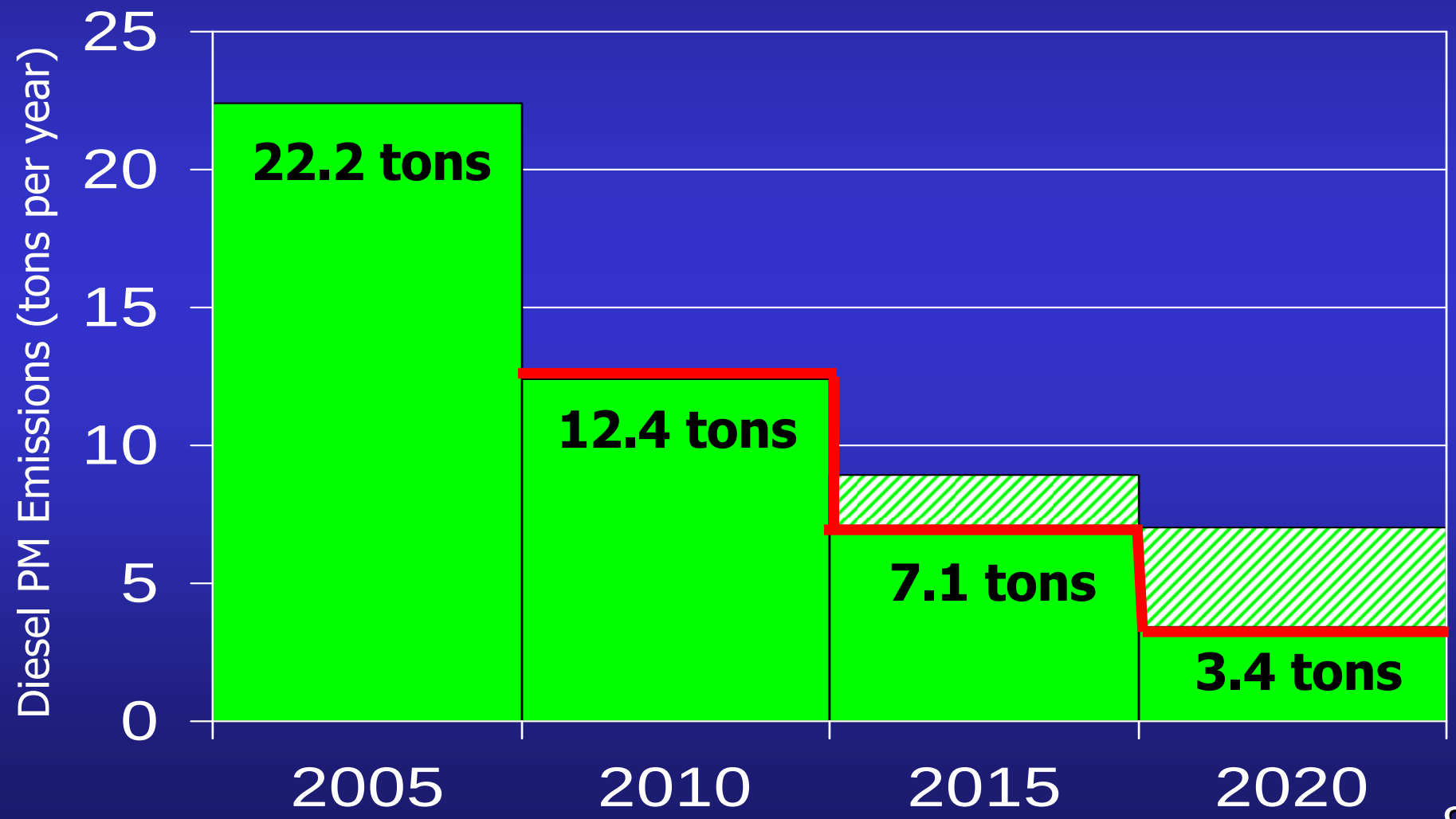
Benefits

- Reduce diesel PM emissions and health risk by 85% between 2005 and 2020
- Ensure that growth does not slow air quality improvements
- Provide supplemental benefits in rest of South Coast Air Basin and California

Summary of Railroad Obligations

- Comply with enforceable emission reductions 2011-2020 (despite growth)
- Submit annual emission inventories and periodic emission reduction plans
- Evaluate specific operational changes
- Help test advanced technology
- Hold public meetings

Commitments Cap Emissions, Despite Growth *(ex: BNSF San Bernardino)*



What public incentives are available?

$13M Federal ARRA/DERA

- ✓ 5 switchers in San Bernardino
- ✓ 6 switchers in Hobart

$33M State/Prop 1B through South Coast

- ✓ 4 switchers in San Bernardino (2010)
- 8 switchers in South Coast (2010)
- 30 locomotives in South Coast (2011)

Summary of ARB Obligations

- Prepare health risk assessments
- Evaluate inventories/plans
- Independently verify compliance
- Pursue regulations if railroads fail to meet commitments
- Provide documents to the public
- Add 2 community air quality monitors
  - Collaborate with South Coast AQMD

How will ARB assure the commitments are reducing health risk?

- Verify emission reductions are real
- Every 2 years, assess changes in health risk at each yard (current through 2020)
- In 2011-2012, quantify health risk impacts of potential operational changes
- Highlight any issues in public letters to railroads and in reports to the Board

How will ARB verify railroad compliance?

- Inspections inside the railyards
- Unannounced field surveys
- Photo-tracking of locomotives
- Cross-checks of railroad data

Railyard Inspections


Field Surveys

How will ARB provide transparency?

- Railyard materials on web
- Annual inventory reports will expand the yard-specific data to supplement ARB inspections and tracking/verification
- Need to increase data and ease of use
- Staff will begin improvements this summer

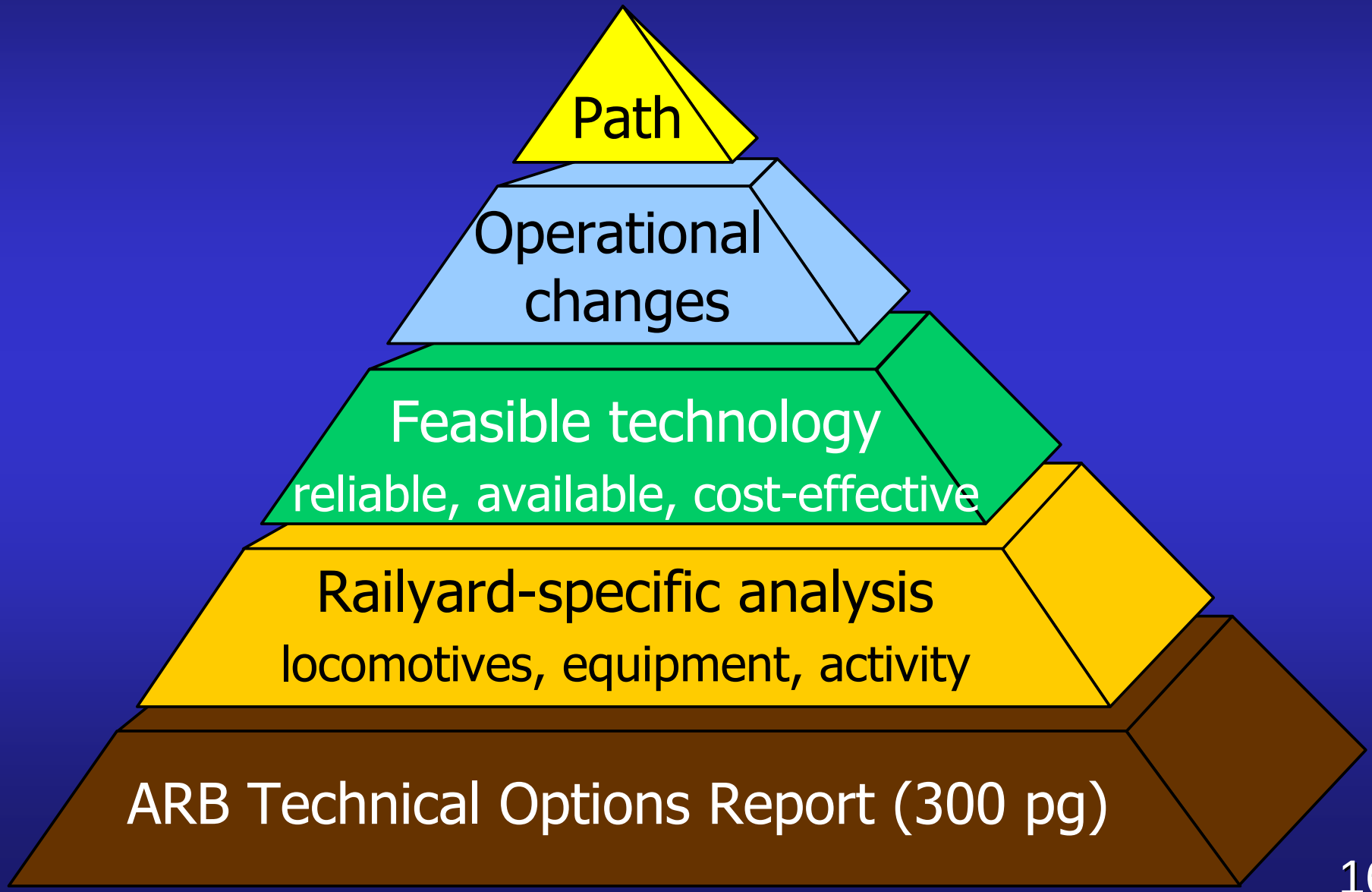
What is the backstop?

- Trigger ARB rulemaking if a railroad fails to meet its commitments
  - Non-preempted (Pre-Tier 0) locomotives
  - Railyard risk reduction audits and plans
- Seek greater authority to regulate locomotives
- Petition US EPA to tighten its locomotive emission standards

Basis for Proposal:

All Feasible Measures

% Reduction Performance Standard



"Tiers" of Cleaner Locomotives
(U.S. EPA Emission Standards for PM)

Pre Tier 0 *(non-preempted)*

Tier 0 *(no control)*

Tier 1 *(25% control)*

Tier 2 *(67% control)*

Tier 3 *(83% control)*

Tier 4 *(95% control)*

Examples of Operational Changes

- Relocation of truck gate, yard tractors, transport refrigeration units (TRUs), locomotive maintenance facilities
- Reduction in TRU operating hours
- Installation of hood system
- Electric infrastructure for cranes & TRUs

What is the possible path that staff identified to meet the commitments?

- Container growth – 3% per year
- Upgrade switch locomotives
- Retrofit switch locomotives with PM filters
- Upgrade line-haul locomotives
  - Ex: 100% Tier 4 line haul in San Bernardino
- Implement operational changes to meet emissions cap
-

Railyard-Specific Benefits

San Bernardino with Commitments

	2005	2010	2015	2020
Diesel PM (tons/yr)	22.2	12.4	7.1	3.4
Maximum Cancer Risk (70-yr exposure)	2,500	1,400	800	400

Hobart with Commitments

	2005	2010	2015	2020
Diesel PM (tons/yr)	24.2	10.3	5.9	3.6
Maximum Cancer Risk (70-yr exposure)	500	215	120	75

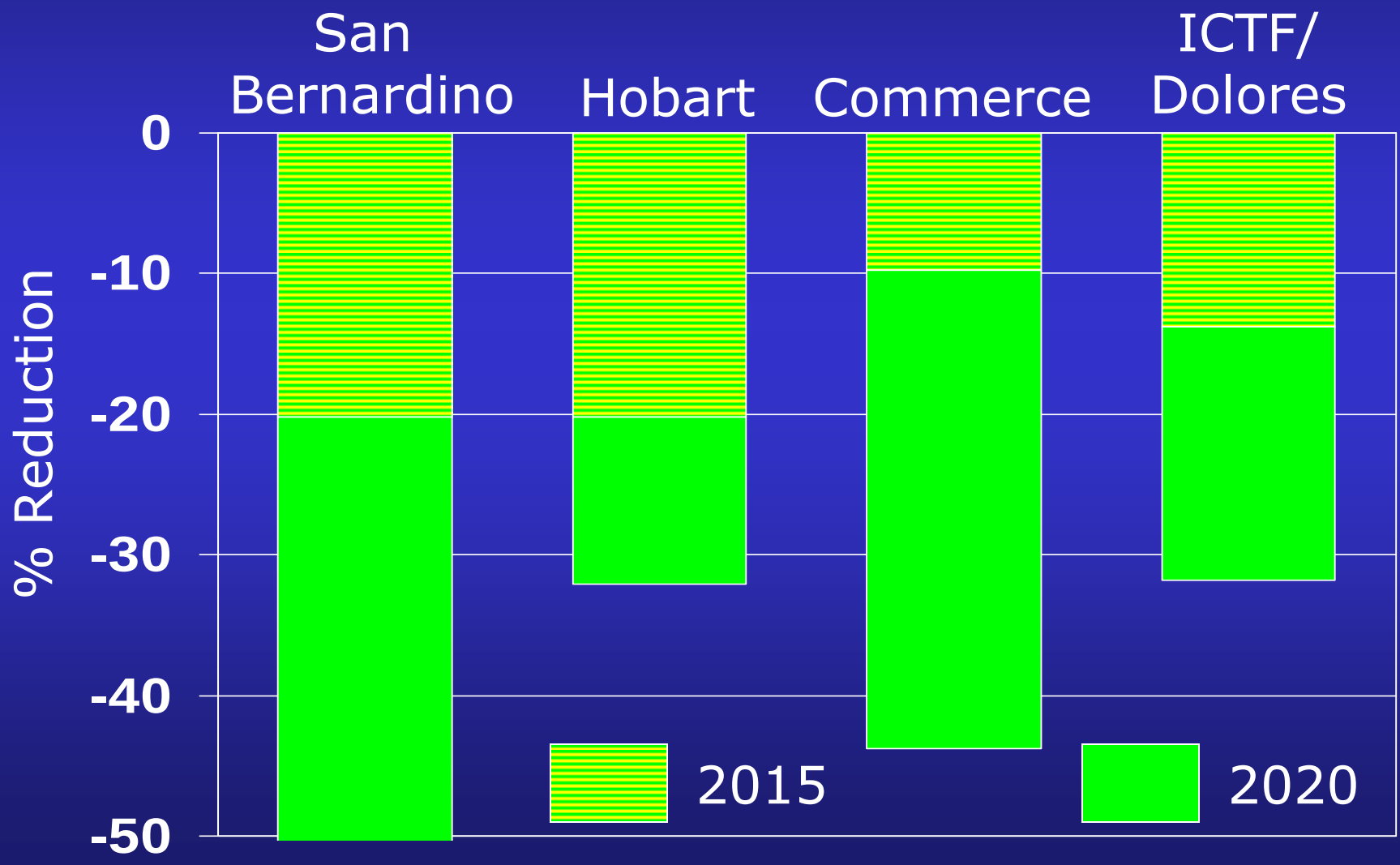
Commerce with Commitments

	2005	2010	2015	2020
Diesel PM (tons/yr)	12.1	5.9	3.7	1.8
Maximum Cancer Risk (70-yr exposure)	500	240	155	75

ICTF/Dolores with Commitments

	2005	2010	2015	2020
Diesel PM (tons/yr)	20.3	7.5	5.3	3.0
Maximum Cancer Risk (70-yr exposure)	800	300	210	120

Commitments Would Cut Diesel PM Beyond Existing Program



Beyond the Four High Priority Yards

- Supplemental benefits of cleaner locomotives in other communities
- Next priority railyards:
  - UP Roseville, UP Oakland, BNSF Barstow
  - Year 2011 emission inventories in 2012


UP Roseville Railyard

Response to Public Comments

Changes in Response to Comments from Early June Public Meetings

- Increased near-term reductions
- Accelerated evaluation of operational changes
- Emphasized ARB commitment to make compliance data available to the public

Why not just regulate now?

- ARB has already adopted every cost-effective measure for railyards, except for locomotives due to federal preemption
- Regulating non-preempted locomotives would achieve virtually no emission reductions at these yards

Why not require natural gas/electric yard trucks, and electric gantry cranes?

- ARB analysis shows these are not cost effective today
- Reconfiguring an existing railyard for electric cranes may pose operational difficulties

Why is the risk in San Bernardino with the commitments still high?

- The required 85% emission reduction assumes use of all technologies and operational changes that we know of today
  - 100% Tier 4 line haul, switch and medium HP locomotives
  - Electric rail mounted gantry cranes and TRUs
  - Reduced TRU operating hours

What will ARB do to achieve reductions beyond the commitments?

- Future freight transport system
  - Work with South Coast, ports, railroads, transportation agencies
  - Southern California National Freight Gateway Collaborative
- ARB Climate Change Scoping Plan Measure T-6: Freight Efficiency

Staff Recommendation

- Approve Resolution 10-29
- Move forward expeditiously to achieve the benefits