

Concepts to Reduce the Community Health Impacts from Large Freight Facilities



Objectives for Freight Transport



Cut community health risk



Attain regional air standards



Mitigate climate change

CALIFORNIA
**SUSTAINABLE
FREIGHT**
ACTION PLAN



- Zero-emission (ZE) operation
- Efficiency
- Economy/competitiveness

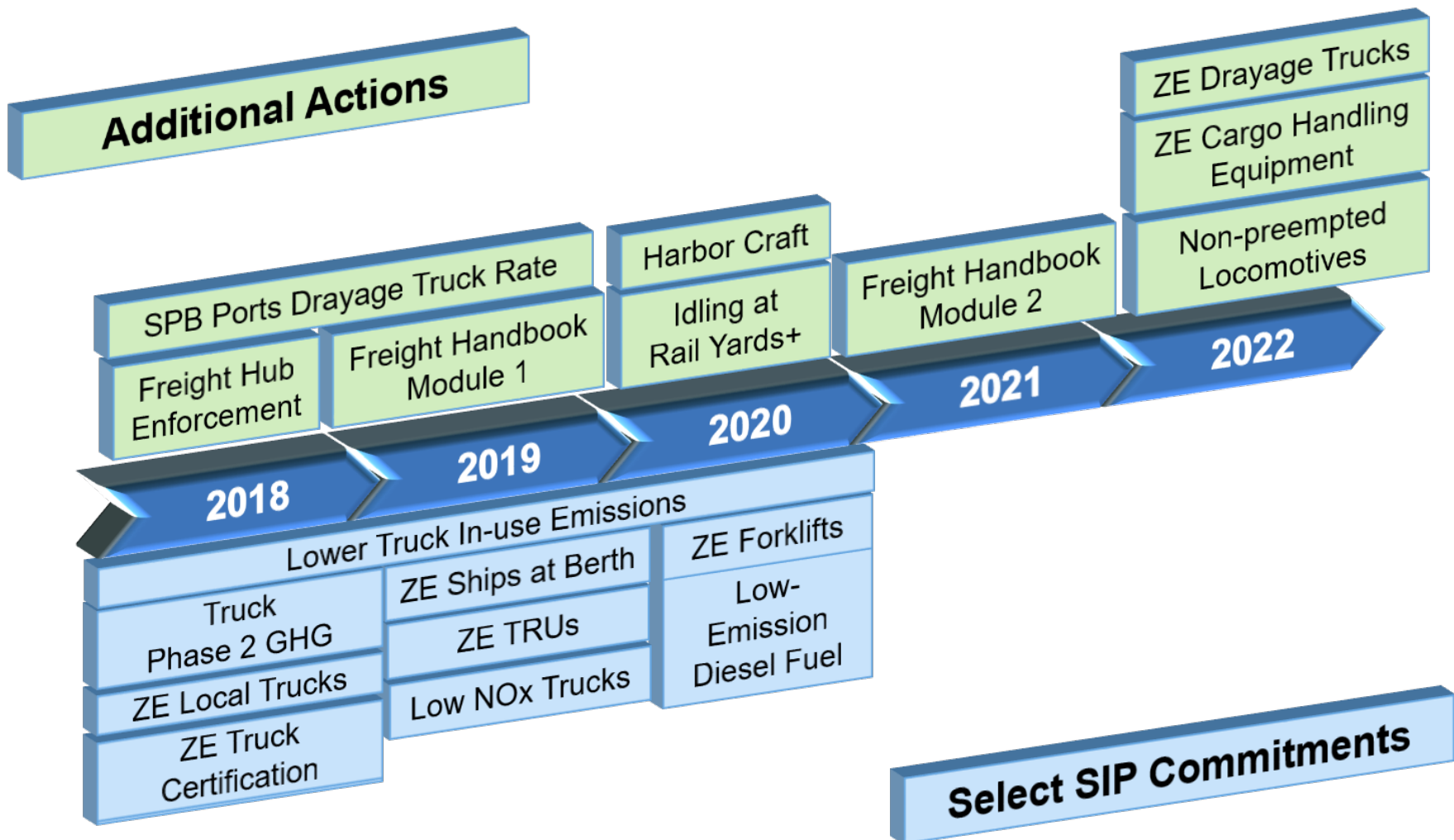
Board Direction on Freight (March 2017)

- Resolutions directed that

“...within 12 months, staff shall return to the Board with concepts for an Indirect Source [Review] Rule to control pollution from large freight facilities including ports, rail yards, warehouses and distribution centers, as well as any identified alternatives capable of achieving similar levels of emission reductions...”
- Develop rules to further reduce pollution from ships and cargo equipment
- Coordinate with South Coast District on related facility-based efforts

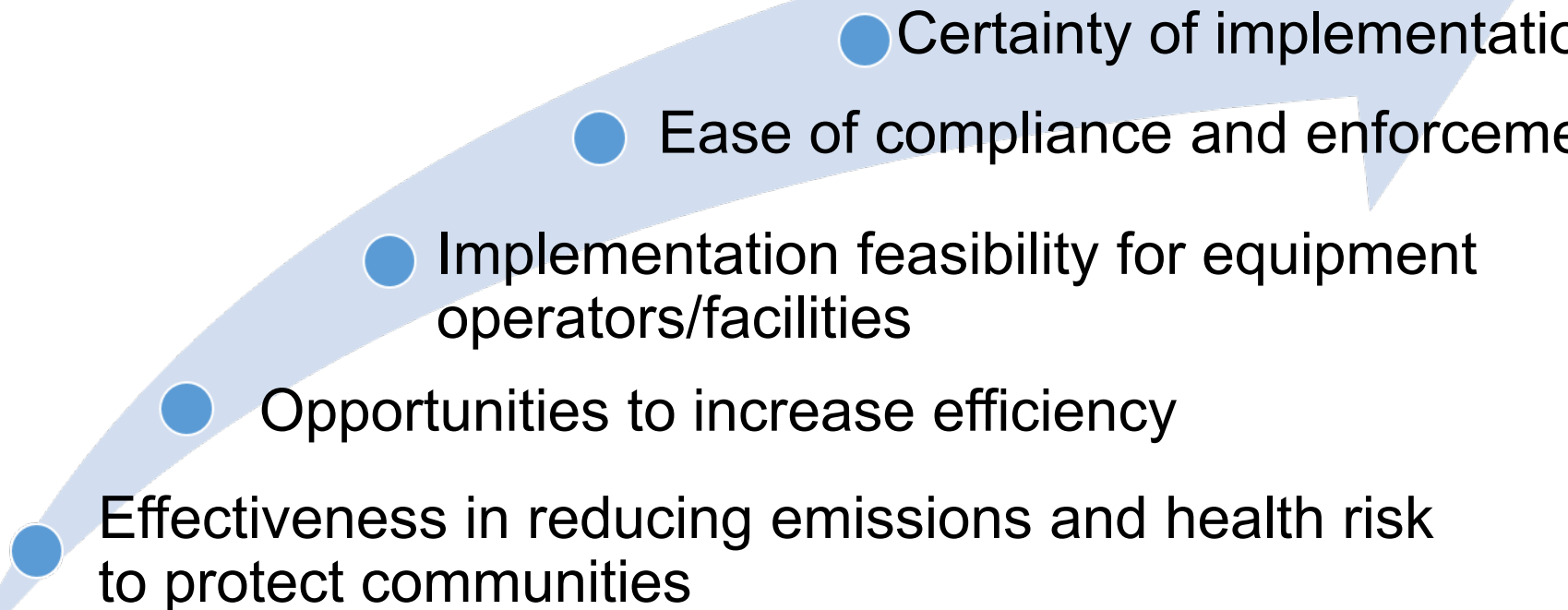
Milestones for Freight Actions

(Board consideration)



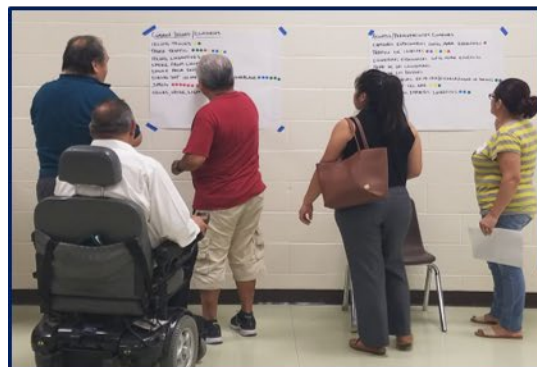
Evaluating Concepts

Staff focused on these outcomes:

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- Certainty of implementation
 - Ease of compliance and enforcement
 - Implementation feasibility for equipment operators/facilities
 - Opportunities to increase efficiency
 - Effectiveness in reducing emissions and health risk to protect communities

Public Engagement

Impacted communities and stakeholders identified concerns and contributed ideas



Feedback at Community Meetings

Oakland: “Because of increased enforcement at the Port, trucks are idling all throughout West Oakland.”

Fresno: “Fresno has lots of rail siding and spur lines, and old technology. We don’t want old technology to get pushed [here]”

Fontana: “We need to figure out how to manage the increasing number of trucks and warehouses in our neighborhoods.”

Los Angeles: “These changes can’t wait, we need earlier timelines to reduce burdens on health.”



Facility-Based Approaches

Enforceable agreements

Project design & mitigation measures

Incentives

Pros

- Air district ISRs may regulate all sources at facility
- May require infrastructure
- Can reward efficiency

CARB & district regulations

Cons

- Potential for delays
- May be complex for facilities to comply and agencies to enforce

ISR Rule Concepts *(examples)*

- Best practices or mitigation fees (San Joaquin Valley)
- Facilitywide emissions target
- Facilitywide emissions per unit of cargo
- x% zero emission operation onsite
- Facility clean air action plan staff concepts (South Coast)
- Voluntary fleet certification with facility requirement staff concepts (South Coast)

Sector-Based Approaches

Enforceable agreements

**National/
international
standards**

Incentives

Pros

- CARB history/expertise
- Clarity for equipment owners
- Easier to determine compliance on site

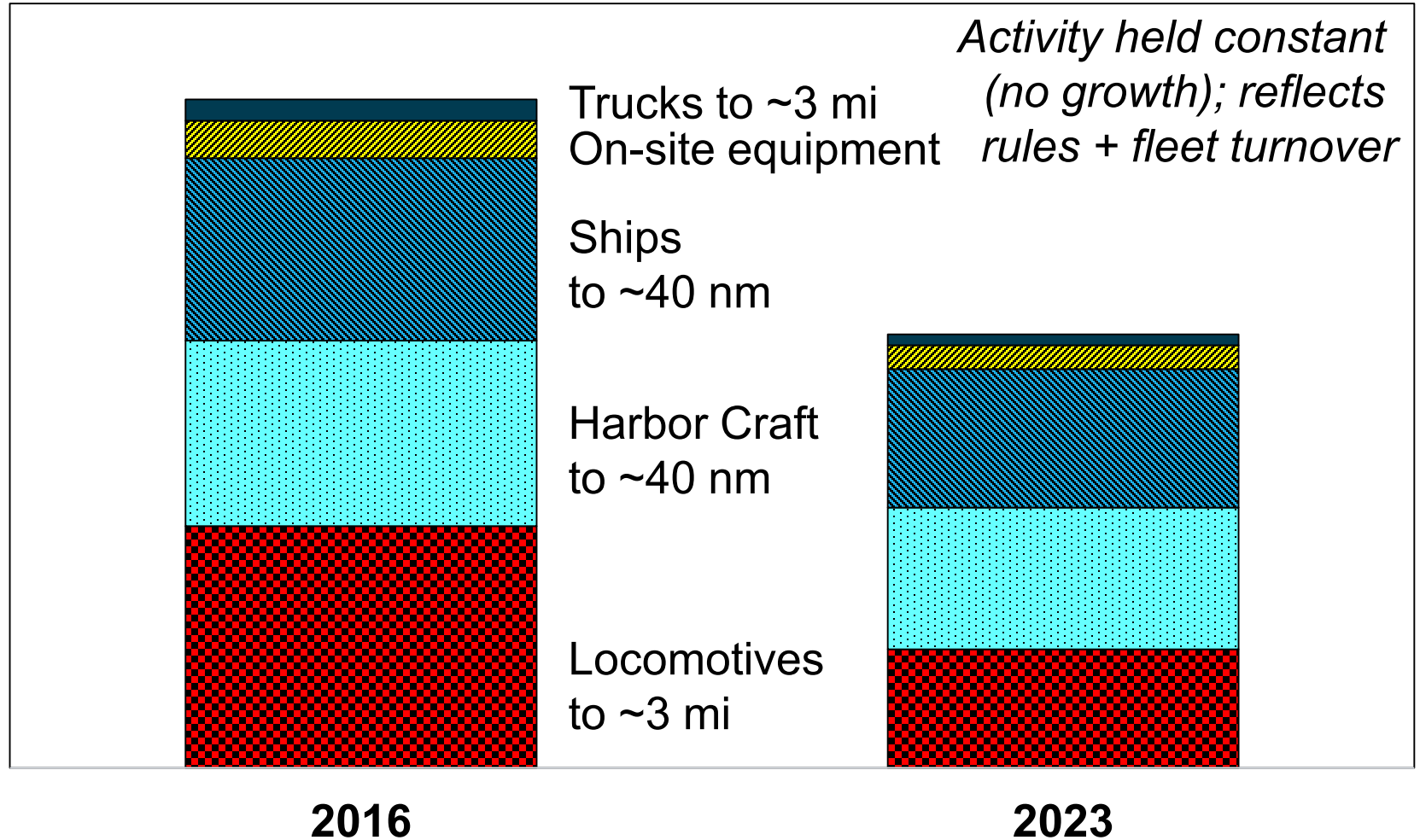
**CARB
regulations**

Cons

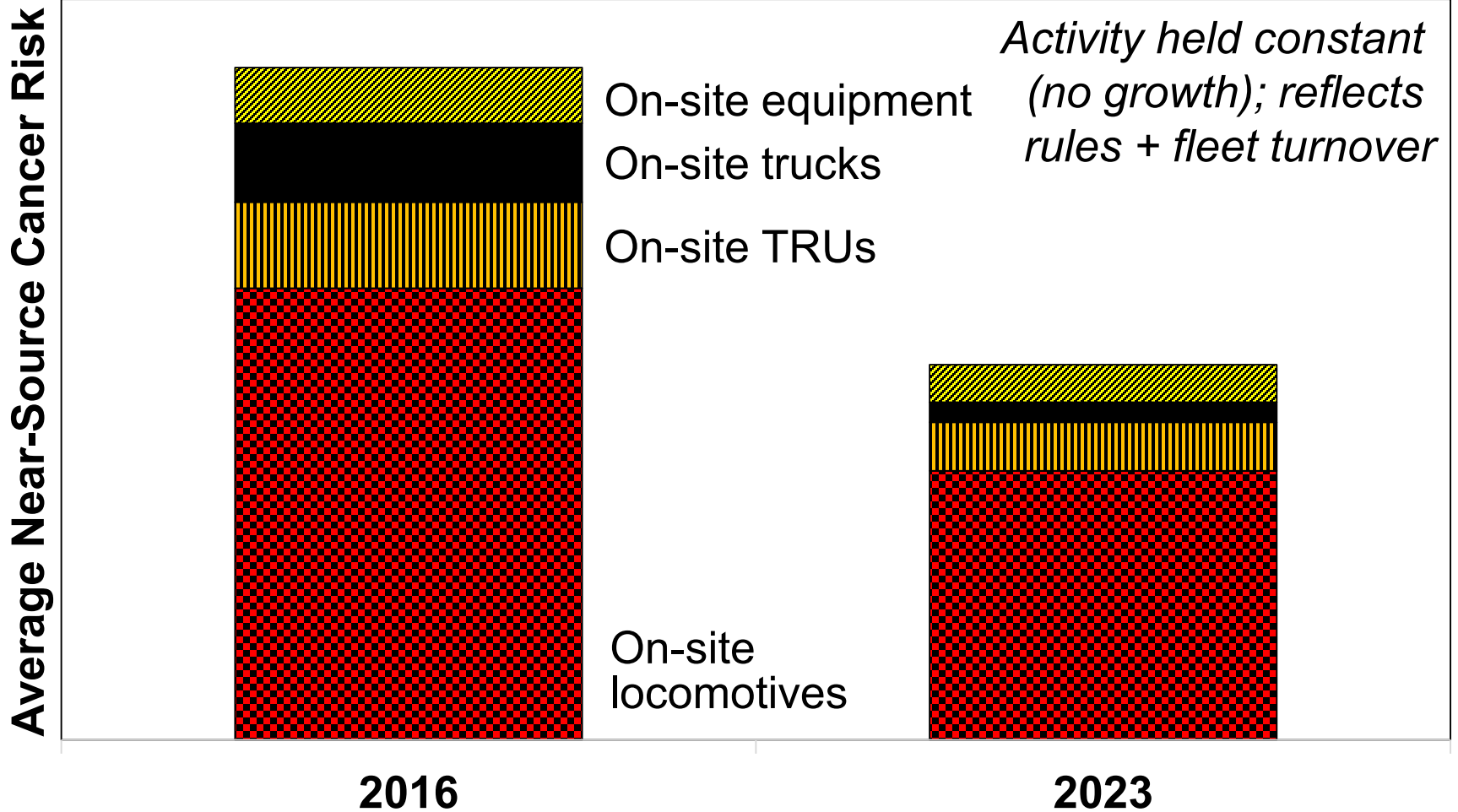
- May not address fueling, charging infrastructure
- Harder to assess total impacts from facility

Seaport – Contribution to Near-Source Cancer Risk

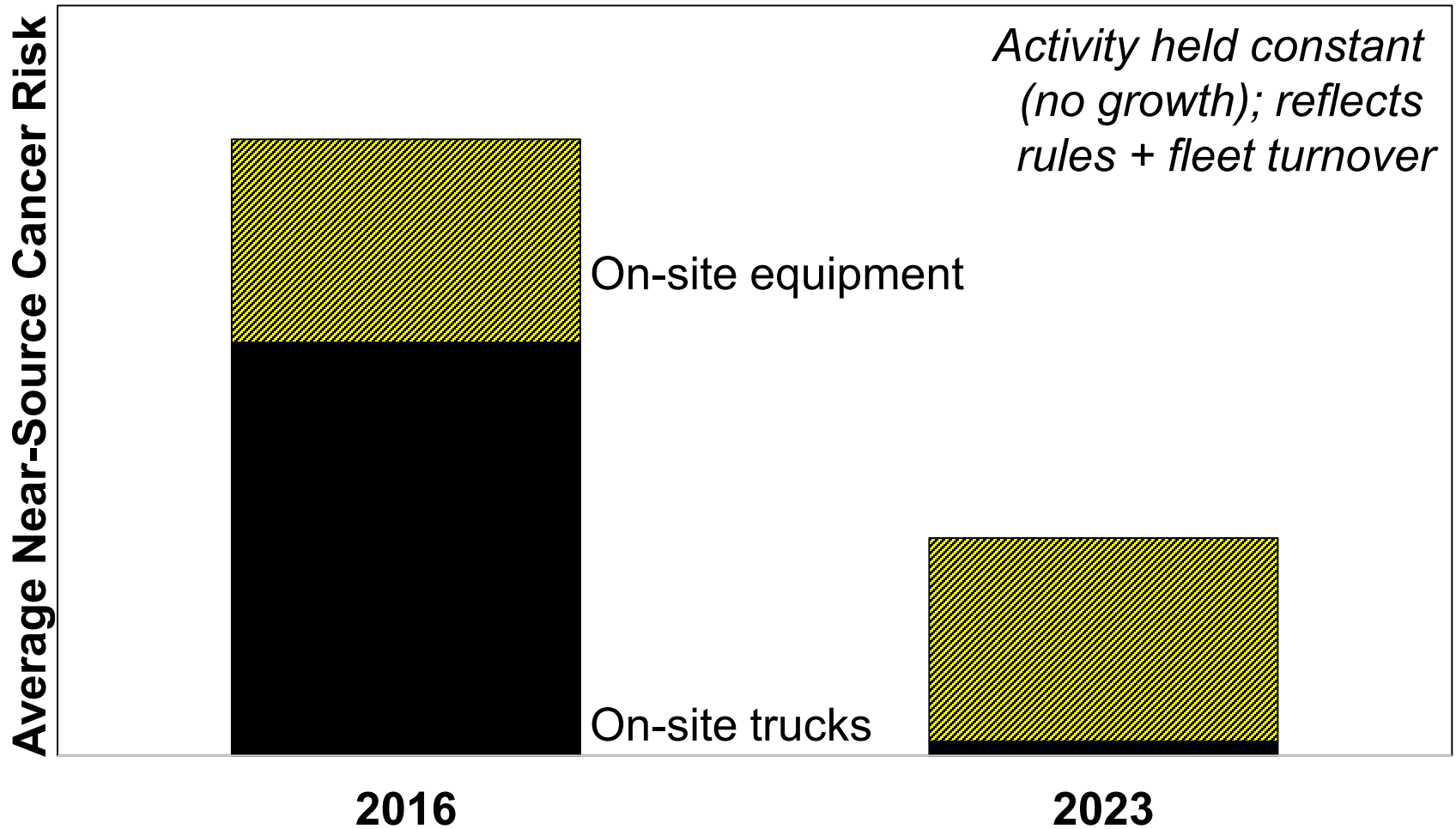
Average Near-Source Cancer Risk



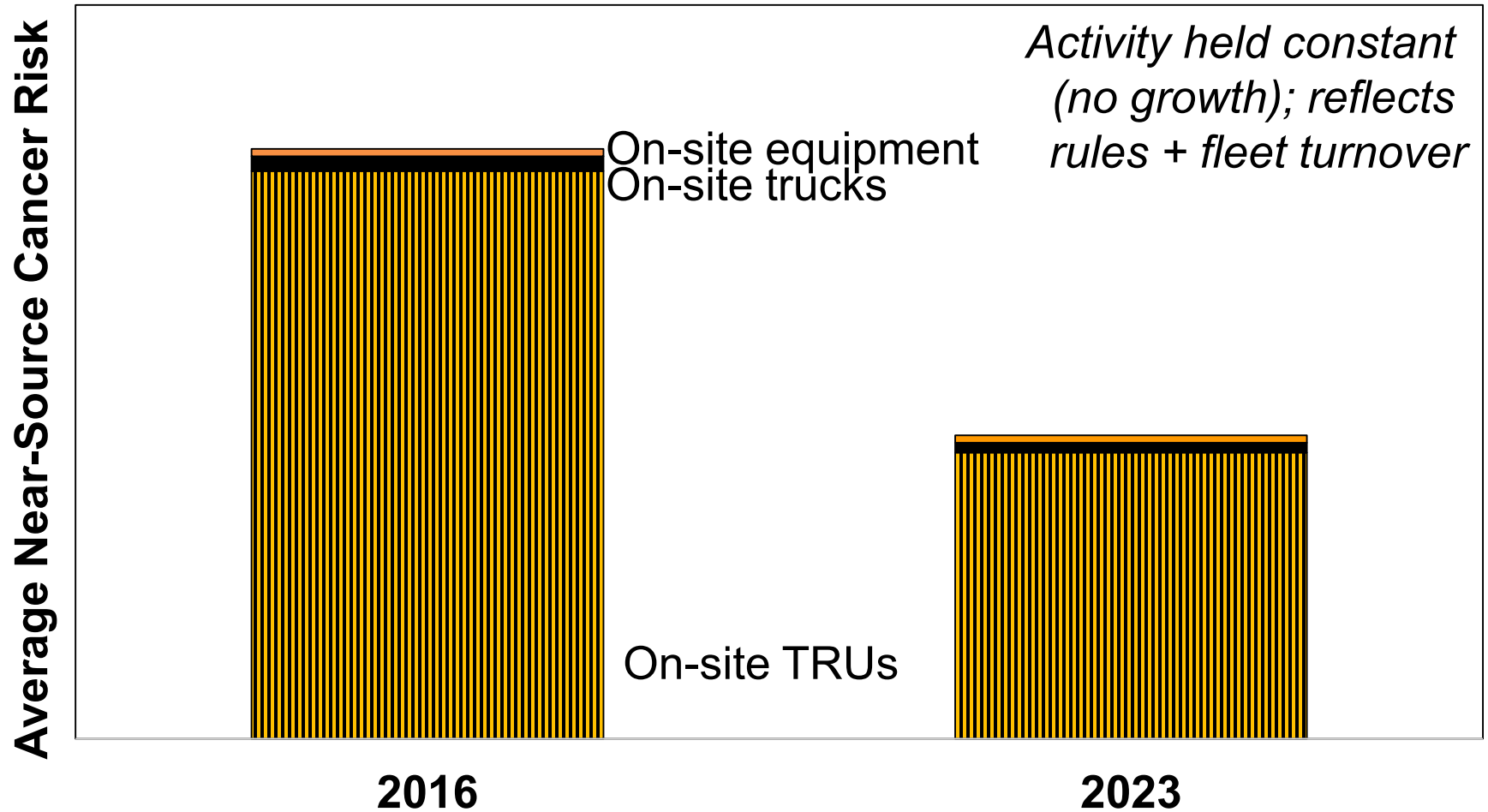
Intermodal Rail Yard – Contribution to Near-Source Cancer Risk



Distribution Center – Contribution to Near-Source Cancer Risk



Cold Storage - Contribution to Near-Source Cancer Risk



CARB Staff's Conclusion on Concepts

Most effective approach for CARB to achieve significant, enforceable reductions:

- Develop CARB freight rules using a hybrid approach affecting both equipment and facilities
 - Transition to ZE, supplemented with near-zero
 - Facility requirements for fueling/charging infrastructure and compliant equipment
 - Priorities based on community risk
- Work closely with districts to weave together CARB sector rules and any air district ISR rules

ZE Drayage Trucks

1. Participate in the San Pedro Bay Ports' determination of drayage truck rates to incentivize ZE/near-zero emission truck trips
2. CARB rule to transition drayage trucks to ZE or ZE operation

Considerations:

- Return on investment
- Cost & innovative financing
- Demonstrations underway
- Preferred access (ports, I-710)

Harbor Craft and ZE Cargo Equipment

3. CARB rule for cleaner combustion in commercial harbor craft (in-use and new); freight-related and passenger vessels
4. CARB rule to transition cargo handling equipment to ZE

Considerations:

- Return on investment
- Feasibility of Tier 4 marine retrofits
- ZE potential
- Planning/funding for infrastructure
- Labor
- Automation

Rail Operations and Locomotives

(freight & passenger rail)

5. CARB rule or alternative to reduce idling from rail operations and emissions from other stationary locomotive operations
6. CARB rule or alternative to accelerate upgrade of locomotives not preempted under the Clean Air Act

Considerations:

- Federally mandated activities
- Funding
- Technology for stationary locomotive control

Freight Handbook

7. CARB handbook that identifies best practices and guidance for the siting, design, construction, and operation of freight facilities

First module: warehouses and distribution centers

8. Additional modules: seaports, rail yards, others

Considerations:

- State partners
- Extensive engagement
- Freight clusters & pollution burden
- Sensitivity to local authority
- State & district CEQA guidelines

Freight Hub Enforcement Team

9. Form a new team focused on enforcement at warehouses and distribution centers to ensure compliance at freight hubs across the state

Considerations:

- Responsiveness to community concerns
- Additional enforcement partnerships
- Level playing field within the supply chain (vehicle operators, brokers, shippers, and receiving facilities)

Next Steps

<u>New CARB Rules and Other Actions</u>	<u>To Board</u>	<u>Implement</u>
Freight Hub Enforcement Team	---	2018
San Pedro Ports' drayage truck rates	---	2018-19
Freight Handbook – Module 1	2019	2019
Harbor craft	2020	2023+
Rail yard idling and other operations	2020	2023+
Freight Handbook – Module 2+	2021+	2021+
Non-preempted locomotives	2022	2025+
ZE Cargo handling equipment	2022	2026+
ZE Drayage trucks	2022	2026-28+
Plus annual update to the Board	2019+	

Summary: Path Forward on Freight

Tighten CARB rules & add facility infrastructure/compliance

Support district facility-based measures & port initiatives

Protect communities near freight facilities

Pursue stricter federal & international standards

Coordinate & expand incentives for freight transition to zero emission operations