

EPIC PROGRAM

HYDROGEN OPPORTUNITIES AND CHALLENGES

Sept. 19, 2023

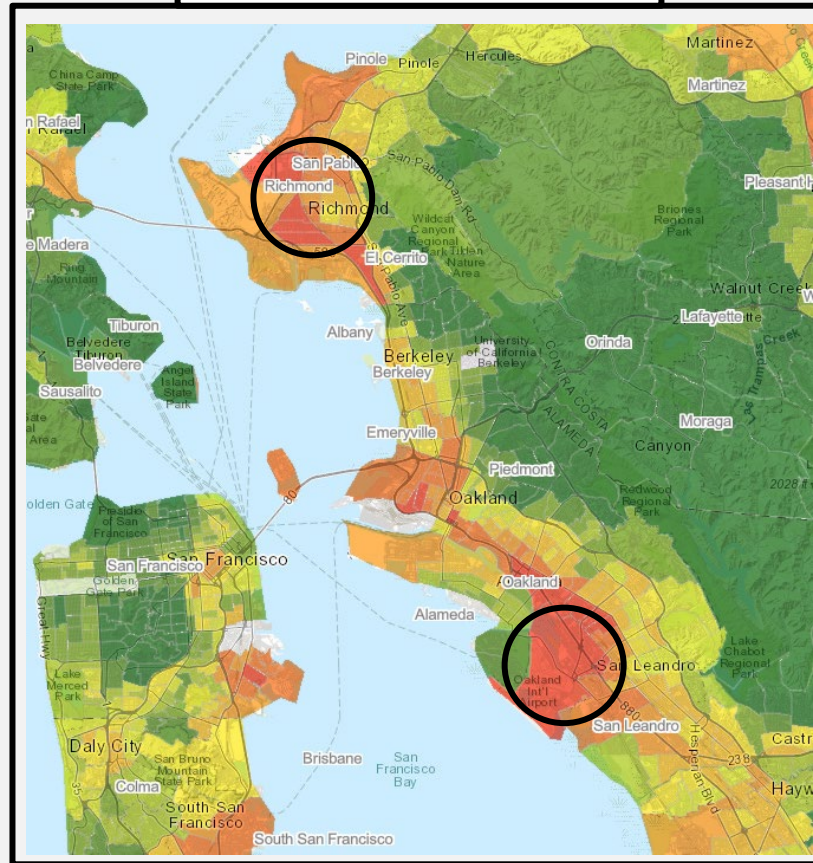
COMMUNITIES
FOR A BETTER
ENVIRONMENT
established 1978

Presenter: Theo Caretto (he/him)

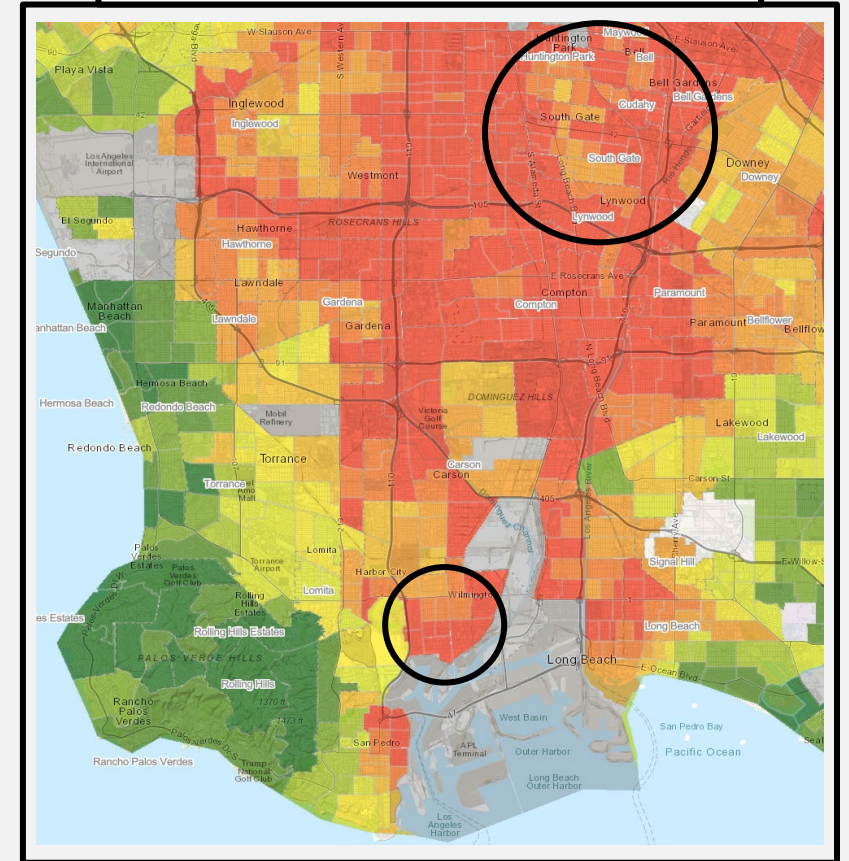
WHO IS COMMUNITIES FOR A BETTER ENVIRONMENT

- Communities
 - Richmond
 - East Oakland
 - Wilmington, Los Angeles
 - Southeast Los Angeles County
- Pollution in CBE communities
 - Oil refining
 - Industrial manufacturing
 - Good movement
 - Oil and gas extraction
 - Waste processing
 - Industrial brownfields

Bay Area Communities



Los Angeles Area Communities



Images taken from CalEPA's CalEnviroScreen 4.0 tool

HYDROGEN LANDSCAPE – ENVIRONMENTAL JUSTICE PERSPECTIVE

- Historical context of hydrogen
 - Produced primarily through the reformation of methane gas
 - Used in oil refining, fertilizer production, manufacturing, etc.
- Hydrogen in 2023
 - Greatly increased financial investment
 - Proposed change in production methods and scale
 - Push for “clean hydrogen” to power goods movement, produce electricity, provide residential heating, industrial manufacturing...
 - Technological and logistical hurdles abound

OPPORTUNITIES

- A just transition for fossil fuel workers to new, well-paying jobs
- Dispatchable energy that does not rely on fossil fuels
- Support for Distributed Energy Resources development
- Alternative to electrification for certain energy demands
- Opportunity to transition away from fossil fuels for hard to electrify end uses

CHALLENGES

- Performance, Cost, Safety, and NOx emissions
- Unclear electricity ratepayer benefits
- Community consent
- Energy efficiency & energy demand
- Dirty hydrogen production
- Hydrogen movement and storage
- End-to-end GHG emissions in hydrogen production and use
- Extended lifespan for polluters

POWERING AND EMPOWERING COMMUNITIES

“It sounds like they're doing the wrong thing for the right reason and using us as the guinea pigs.”

-Roslyn Broadnax of the Community Asset Development Re-defining Education (CADRE)

- Community self-determination
- No residential “sacrifice zones”
- A just transition for energy workers
- Building decarbonization and electrification
- Clean up of existing gas infrastructure, polluting industry