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South Coast AQMD Efforts on Energy Efficiency

California Energy Commission
Energy Efficiency Plan Workshop

April 30, 2019

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South Coast Air Quality Management District

Local air pollution control agency for all of Orange County and the urban portions of Los Angeles, Riverside and San Bernardino counties

- Largest of the 35 local air agencies in CA and in the U.S.
- 17 million residents

Responsibilities

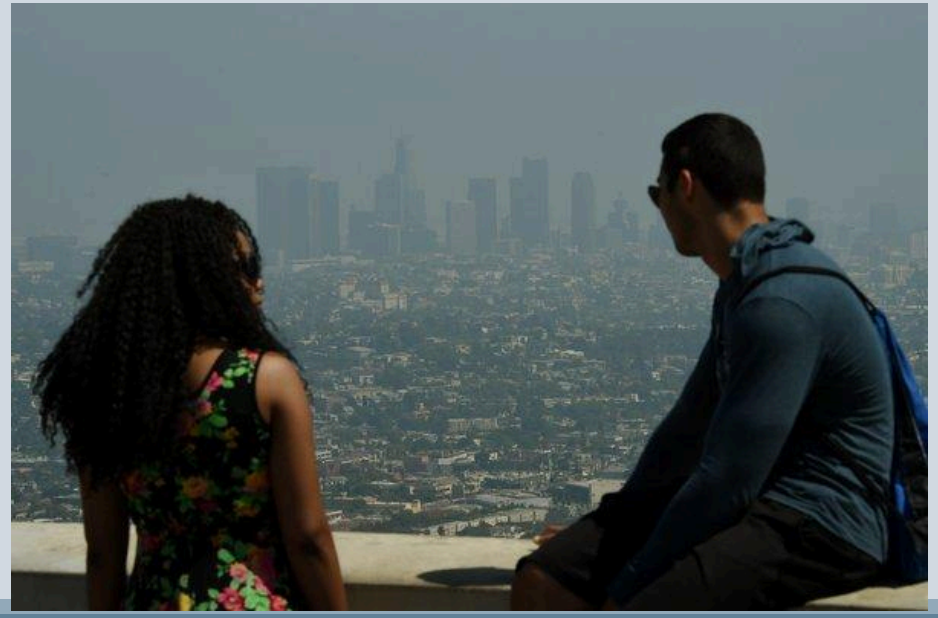
- Regulate emissions from stationary sources
- Develop and implement plans to meet national air quality standards
- Permit and inspect 28,400 affected businesses
- Administer over $100 million of incentive funding annually

Our Challenge

The Los Angeles area has historically suffered from some of the worst air quality in the country

Los Angeles c. 1950

Los Angeles 2017



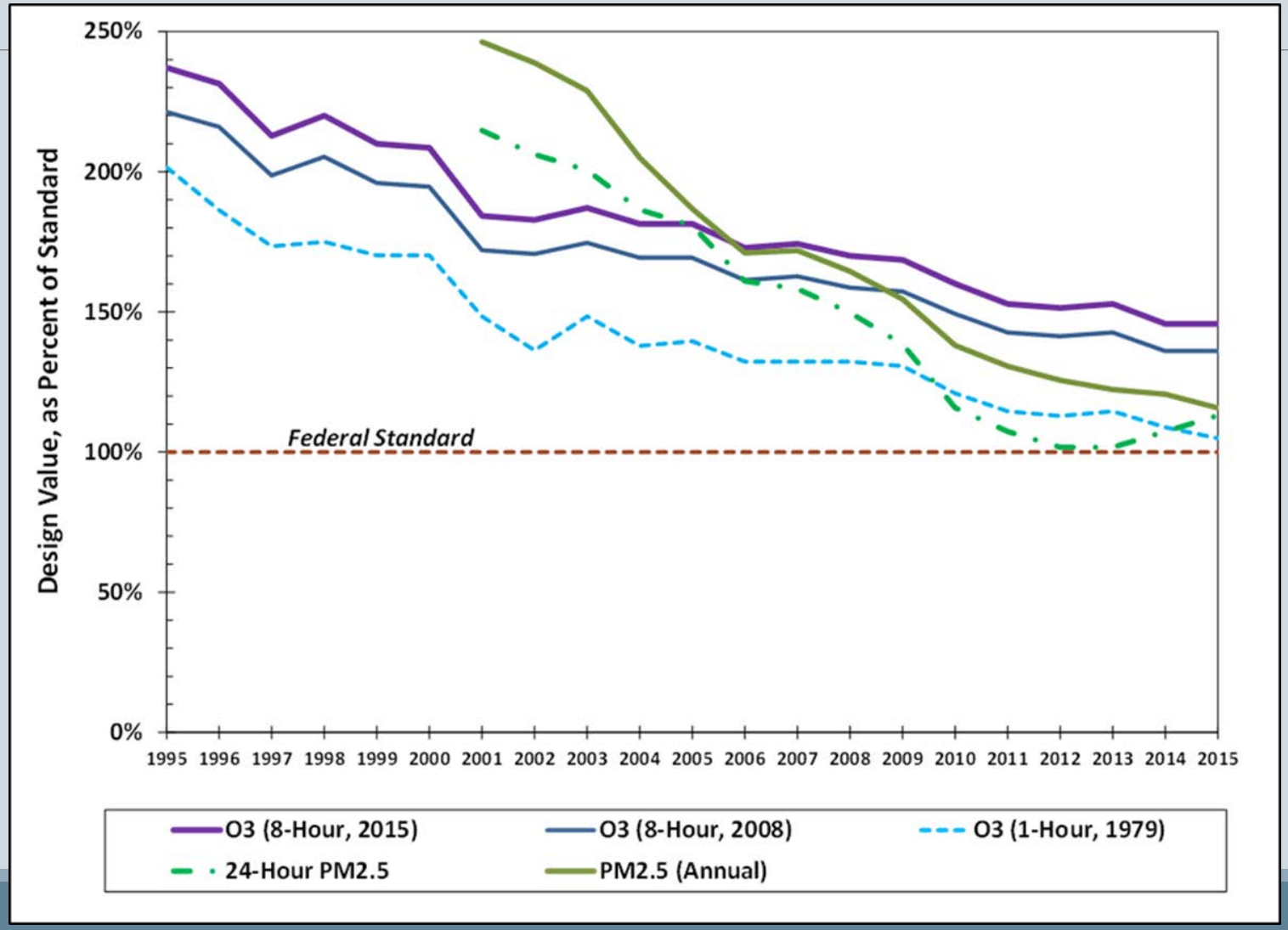
We've made significant progress, but still suffer from poor air quality

- Worst ozone in the country
- Second-worse fine particulate matter ($PM_{2.5}$)

Upcoming Deadlines to Attain National Standards

Standard	Concentration	Classification	Attainment Year
2008 8-hour Ozone	75 ppb	Extreme	2031
2012 Annual PM2.5	12 ug/m3	Moderate/Serious	2021/2025
2006 24-hour PM2.5	35 ug/m3	Serious	2019
1997 8-hour Ozone	80 ppb	Extreme	2023
1979 1-hour Ozone	120 ppb	Extreme	2022

Ozone and $PM_{2.5}$ Air Quality Trends in the South Coast Air Basin



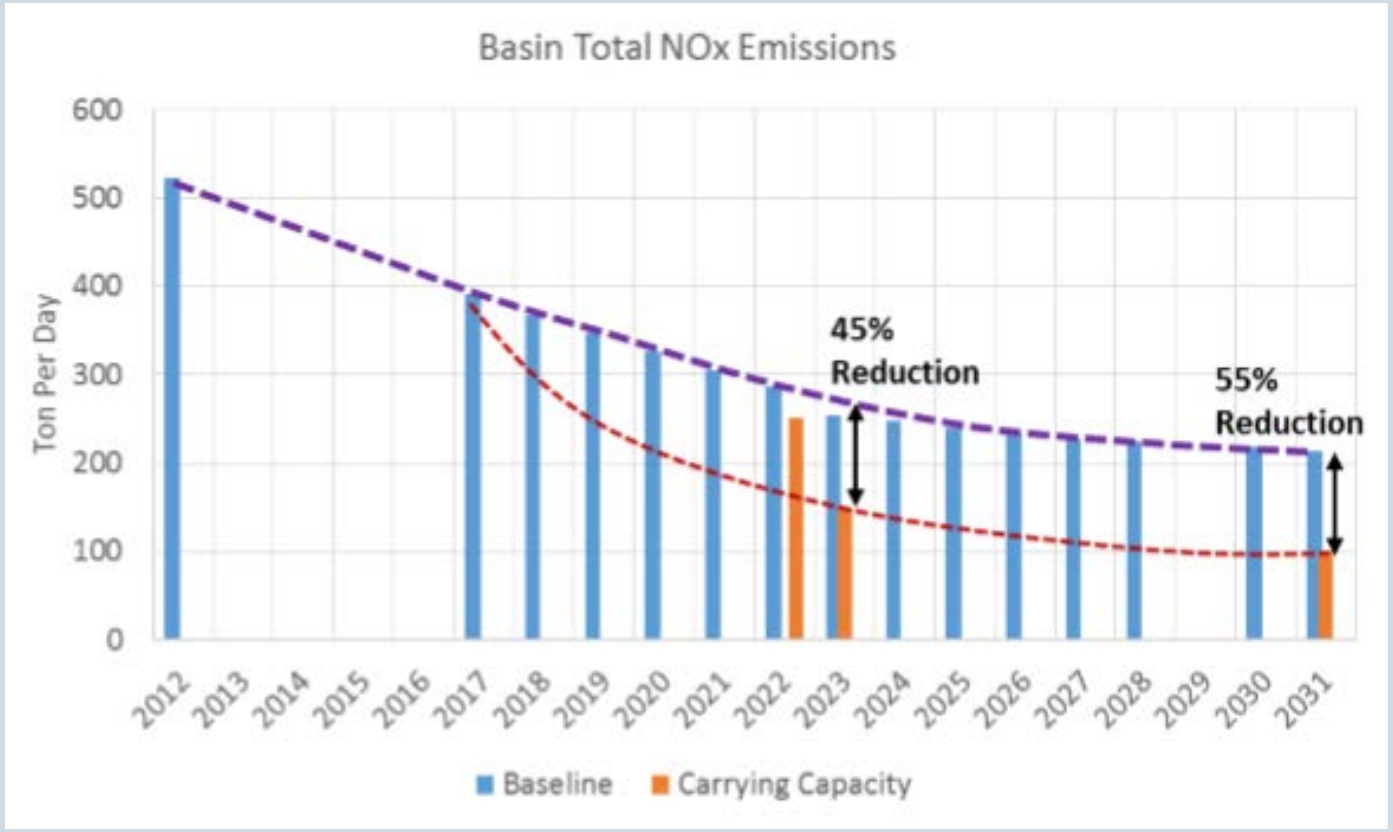
2016 Air Quality Management Plan (AQMP)

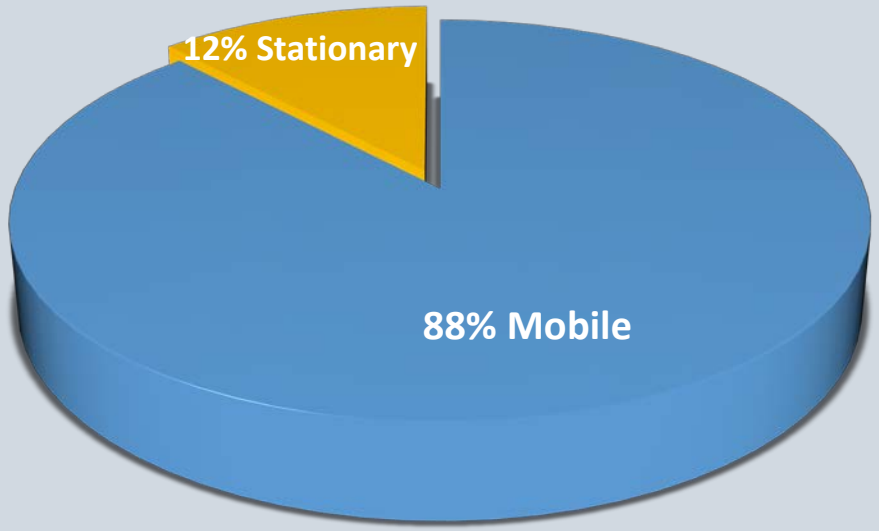
Regional blueprint for achieving federal air quality standards

2016 AQMP Objectives:

- Regulatory measures
- *Incentive-based programs*
- *Co-benefits from existing GHG reduction programs*
- Further deployment of cleaner technologies
- Reduction from State and Federal mobile sources

Basin Total NOx Emissions



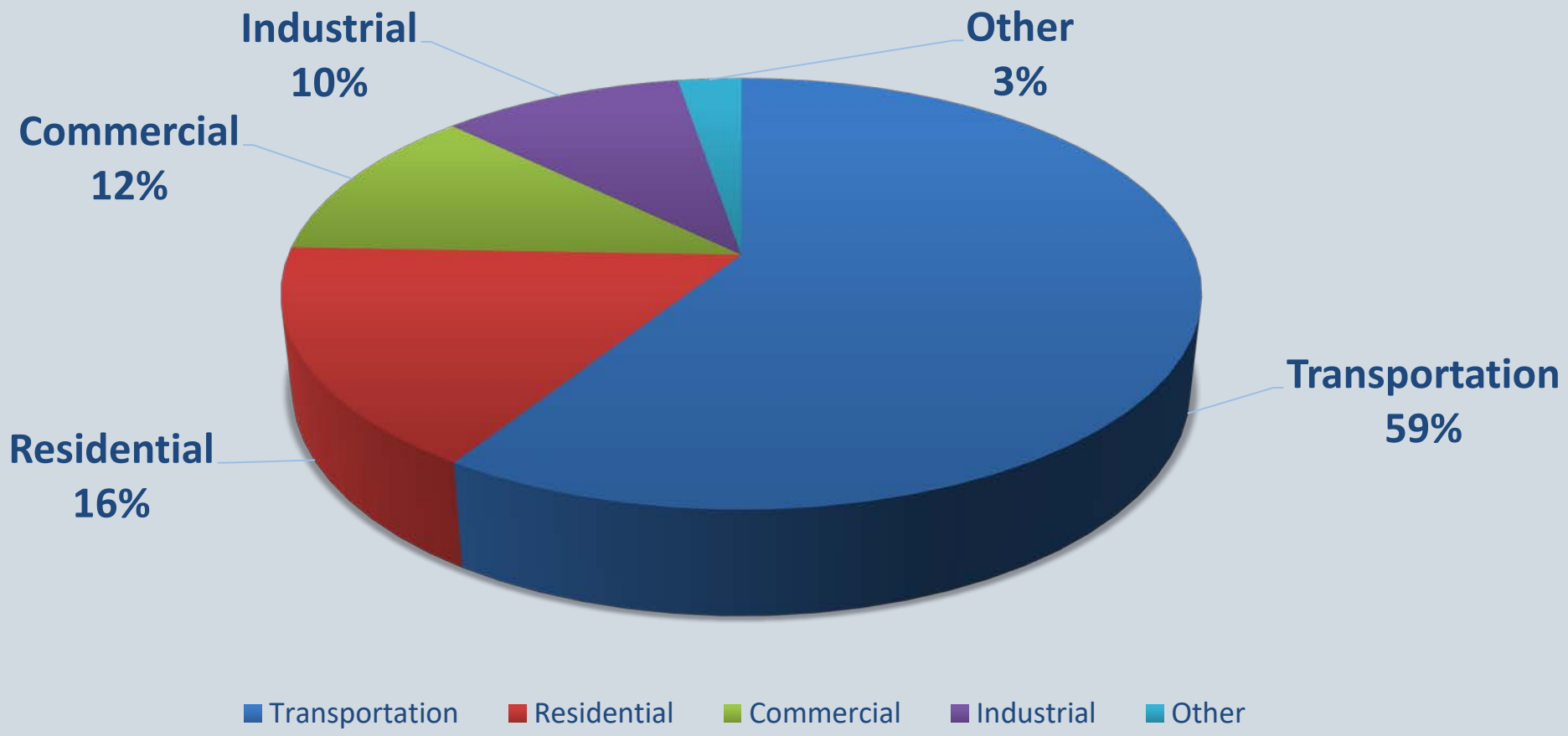


Sources of NOx (2012)
522 Tons per Day

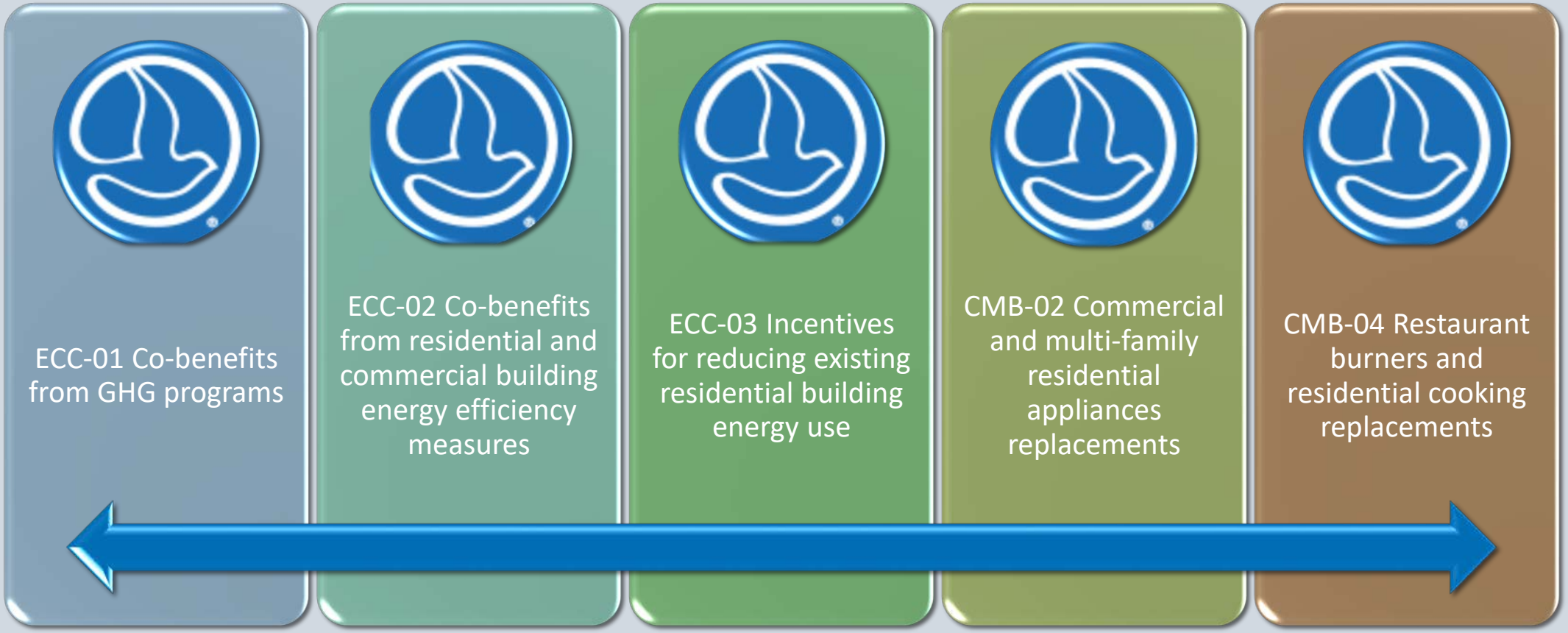
Significant NOx reduction still needed for ozone/PM 2.5 attainment

Key Types of Air Pollution

Share of Energy Use in South Coast Basin



2016 AQMP Energy Efficiency and Climate Measures



AB 1318 Emission Mitigation Projects

AB 1318 established a mitigation fund from fees paid by CPV Sentinelfor the construction and operation of a new power plant in Desert Hot Springs. Funded projects are required to be in close proximity to the power plant and at least 30% of funds spent in EJ areas.

AB 1318 funds were distributed to 26 emission reduction projects in Coachella Valley for a total of approximately $51M, including:

- Over 1,000 homes weatherized with insulation
- A dozen solar projects at various locations

Two Bunch Palms Elementary School

Bubbling Wells Elementary School

Desert Hot Springs High School

Residential Weatherization

Residential Weatherization

South Coast AQMD Recent Energy Efficiency Incentive Projects

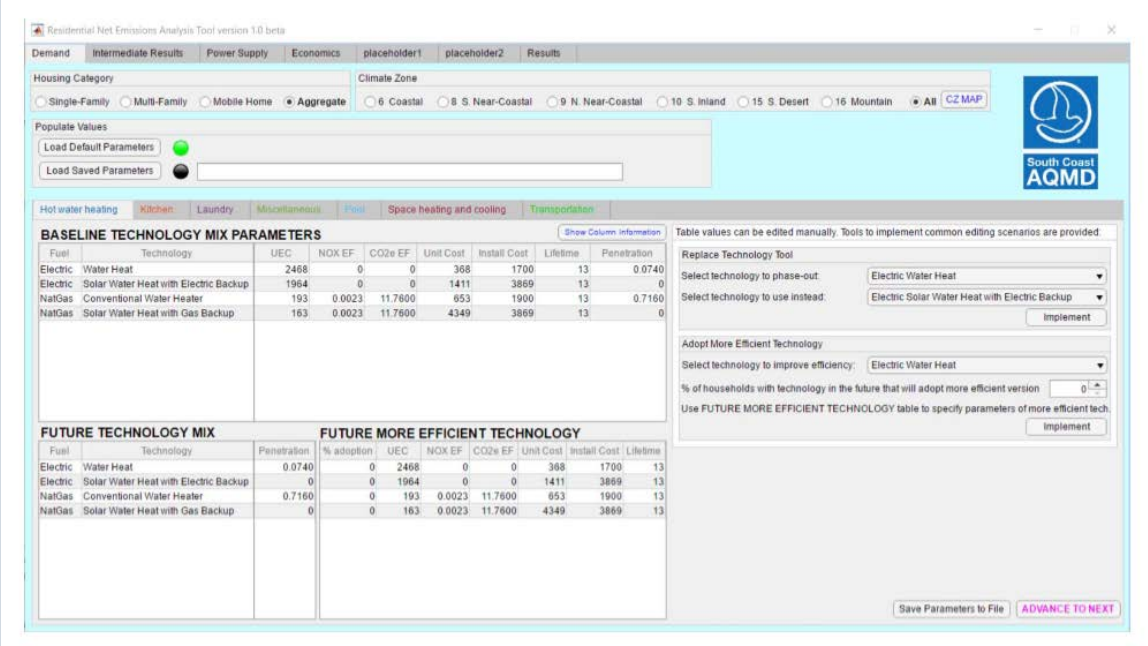
In January 2019, South Coast AQMD awarded approx. $47M from special revenue funds to 26 mobile and stationary source projects. Additional consideration was given for projects with GHG co-benefits.

Energy efficiency type projects

- Commercial water heating incentive program (1)
- Residential fuel cell with solar and storage demonstration project (1)
- Residential energy efficiency retrofit program in EJ areas (2)
- Fuel cell and microgrid projects (3)
- Restaurant cooking equipment and furnace technology demonstrations (5)
- Multi-family affordable housing electrification (1)

South Coast AQMD's Net Emissions Analysis Tool (NEAT)

SCAQMD staff is developing an emissions tool to estimate changes in criteria and GHG emissions and costs associated with replacement of residential appliances with low- or zero-emitting appliances.



- Comprehensive, yet user-friendly tool
- Intuitive workflow with extensive embedded documentation
- Level of complexity determined by the user
- Final stage of development
- Expected to be completed in Summer/Fall 2019

Moving Forward

Energy Efficiency measures identified as a viable strategy in 2016 AQMP

- Continue to implement emission reduction projects
- Develop guidelines for stationary source incentive projects
- Develop new incentive programs
- Maximize co-benefits for both criteria pollutants and greenhouse gases

Thank you!

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