



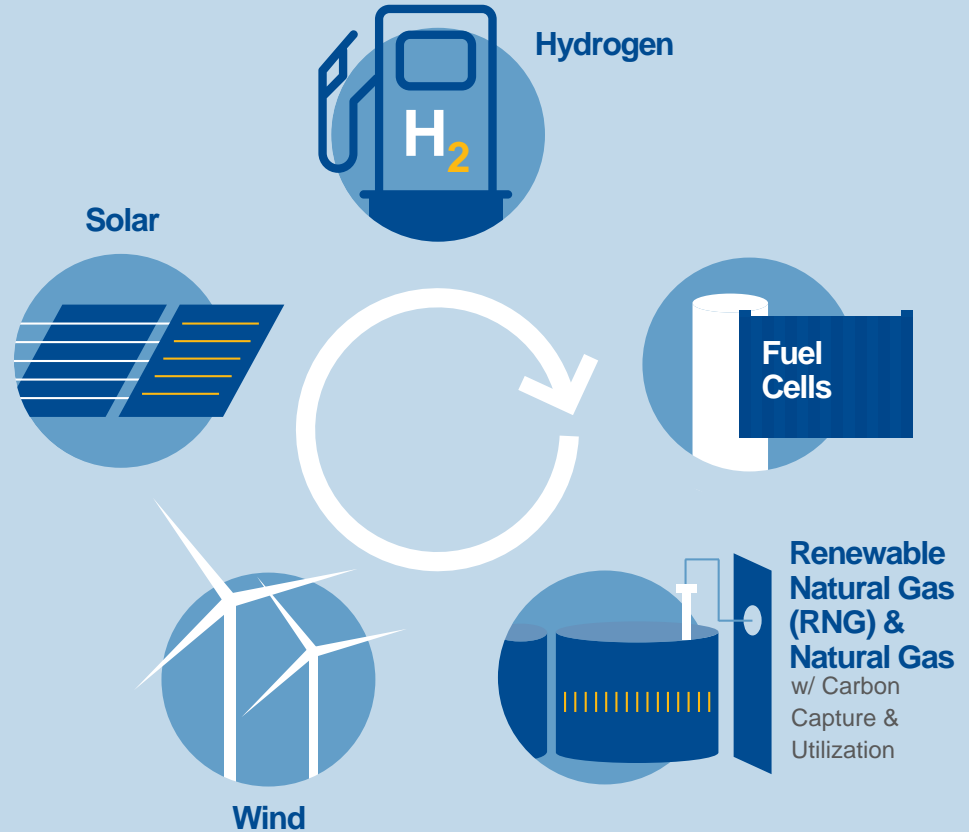
# A Sustainable Energy Future for **all** Californians

**George Minter**

Regional Vice President, External Affairs & Environmental Strategy  
Southern California Gas Company

# How will we get to 2045?

We need to work together, use **all resources** available, and foster policies that will allow for the development of **innovative technologies** and **new ideas**.



# It starts by meeting our our near-term goals

## Governing Law – SB 32

By 2030, reduce  
GHG emissions

# 40%

below 1990 levels

## Governing Law – AB 3232

Assess ability to cut  
building emissions

# 40%

below 1990 levels  
by 2030

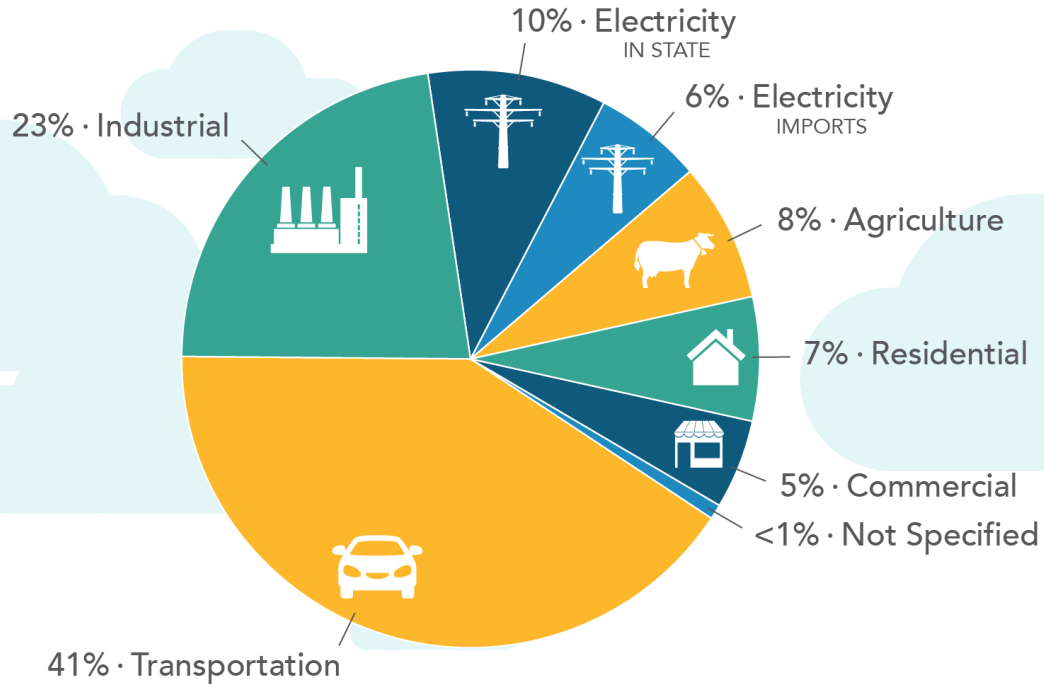
## Governing Law – SB 100

By 2030, obtain

# 60%

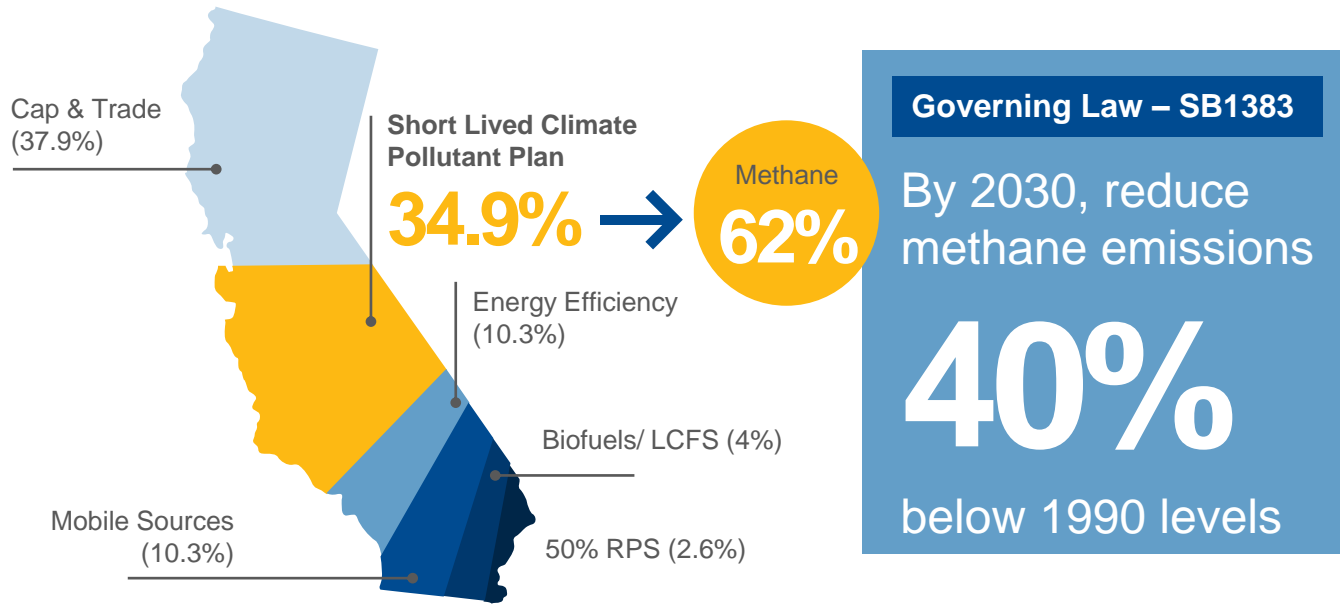
of electricity from  
renewable sources  
(and achieve 100% clean  
energy by 2045)

# California Emissions by sector



**429.4 MMTCO<sub>2</sub>e**  
2016 TOTAL CA EMISSIONS

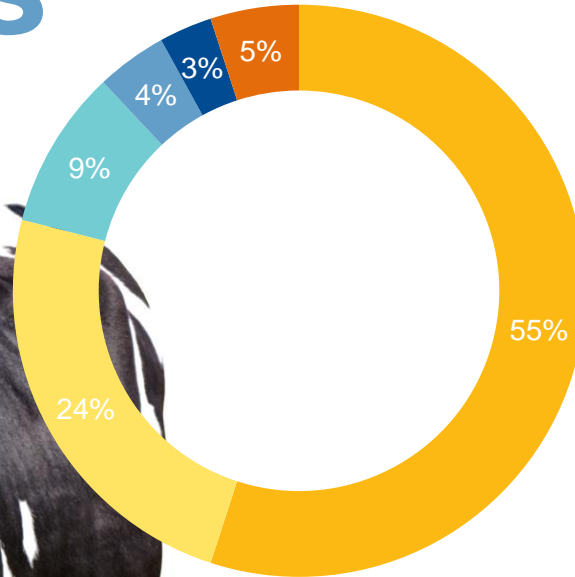
# CARB's Scoping Plan relies on reducing SLCPs



## Stated Objective:

“Reduce the use of heating fuels while concurrently making what is used cleaner by minimizing fugitive methane leaks, prioritizing natural gas efficiency and demand reduction, and enabling cost-effective access to renewable gas.”

# RNG is a key strategy to address CA's biggest methane emitters

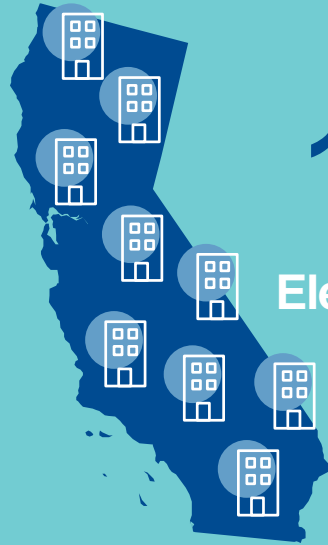


- Dairies & Livestock
- Landfills & Waste Water
- Pipelines
- Oil & Gas Extraction
- Agriculture
- Industrial & Misc.

# Decarbonizing energy is easier than switching appliances and equipment



=



**100%**  
Building  
Electrification



RNG is  
**2-3x**  
More cost  
effective

# The RNG supply is available: in-state estimates (billion cubic feet)



**94** BCF

UC Davis/ARB Study:  
based on current  
federal and LCFS  
incentives

**100-200** BCF

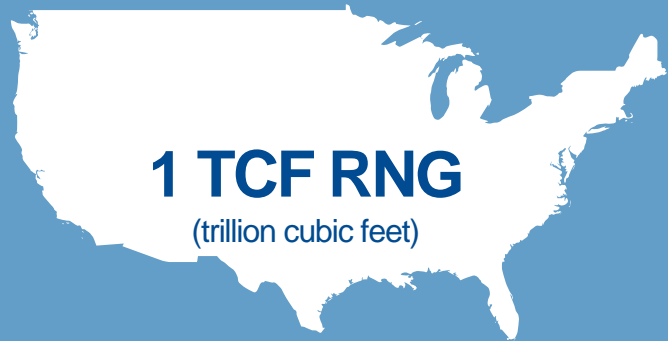
ICF Assessment:  
CA with current  
regulation / incentives;  
100 BCF conservative  
estimate

**300** BCF

UC Davis/CEC Study



# The RNG supply is available: out-of-state resources

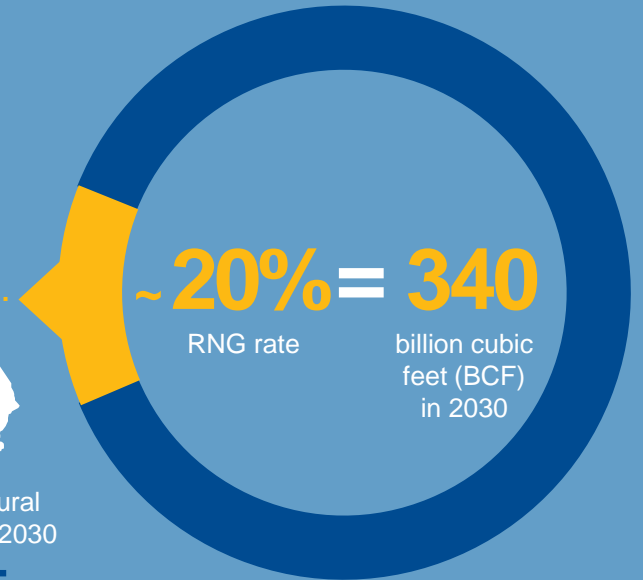


Available in the US today  
(and growing)



Projected CA natural  
gas throughput by 2030

**1.7 TCF**



# Consumer adoption is critical to achieving climate goals

## Electric Heat Pumps

Palo Alto has offered up to \$1,500 rebates since 2016, spending \$900,000 in the first year alone.

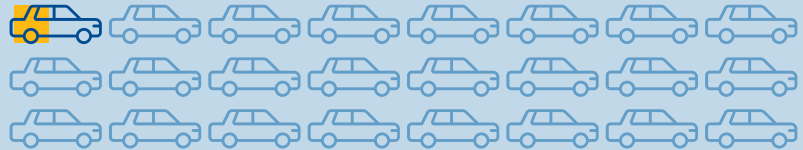
**Rate of adoption:** **0.1%** per year among single family homes



## Electric Vehicles

After distributing more than a half billion dollars in rebates, 329,626 EVs have been purchased in California (January 2011 – February 2018).

**Rate of adoption:** **~1.3%** of cars in California



# The real cost of living

is already too high for too many people



California has the **highest** effective poverty rate in the nation



Nearly **40%** of CA households are rent burdened



Low-income families pay **20%** of their income or more on energy costs



More than **1/3** of SoCalGas' and nearly **1/2** of SCE's customers qualify for bill assistance.

Sources: The United Way, *Real Cost of Living Report* (2018);

Adam Chandler, "Where the Poor Spend More Than 10 Percent of Income on Energy," (2016)

Ron Nichols, Los Angeles Business Council, 12th Annual Sustainability Summit: Regional Solutions For A Clean, Inclusive Economy, April 20, 2018.

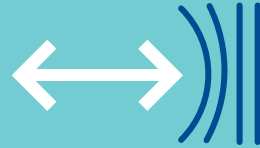
# The case for a balanced approach



Preserves  
Consumer  
Choice



Minimizes  
Disruption  
& Cost



Promotes  
System  
Resiliency



Strengthens  
California's  
Economy

# Stepping up our commitment to **reduce GHG emissions**

## Our **Vision**

To become the  
cleanest natural  
gas utility in  
North America

## Our **Commitments**

**2022**

**5% RNG** being delivered  
on our system

**2030**

**20% RNG** being delivered  
on our system

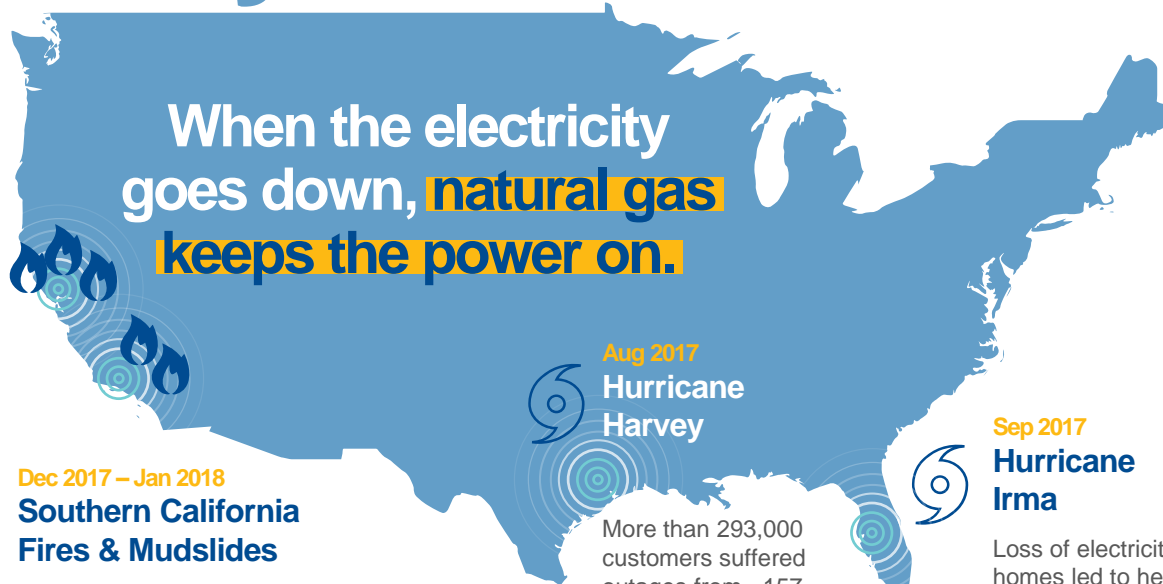


**Thank  
You**

# Appendix

Supplemental Slides

# Resiliency matters



When the electricity goes down, **natural gas** keeps the power on.

## Oct 2017 Northern California Fires

Electric power outages left water valves open leading to major leaks and loss of critical water resources that could have been used to fight the fires.

**Emergency deliveries of compressed and liquified natural gas ensured the power stayed on at local hospitals affected by electricity outages.**

## Dec 2017 – Jan 2018 Southern California Fires & Mudslides

When electric water pumps failed, firefighters ran out of water to put out the fires.

**SoCalGas' Advanced Meter network supported life-saving actions of first responders by pinpointing impacted areas.**

## Aug 2017 Hurricane Harvey

More than 293,000 customers suffered outages from ~157 damaged circuits just one day after Harvey landed.

**Hospitals with natural gas powered Combined Heat and Power (CHP) Systems maintained uninterrupted service despite historic flooding.**

## Sep 2017 Hurricane Irma

Loss of electricity at nursing homes led to heat exposure and caused 12 deaths.

**Local hospitals and businesses with natural gas backup generators kept AC and refrigeration working, saving both lives and livelihoods.**



# Will California electricity become **expensive & inequitable?**



Californians pay **45% more** than the national average for electricity.



The burden of higher cost electricity and benefits of renewable energy subsidies fall unevenly:

- Californians with the highest incomes received **3x more** the solar subsidies than those with the lowest incomes



From 2011 to 2017, California's electricity rates increased **5x more** than the rest of the U.S.

