



Our role in a renewable future

Sharon Tomkins

Vice President, Customer Solutions and Strategy,
Southern California Gas Company

California leads the nation in setting climate goals and policy

Governing Law – SB100

By 2030, obtain

60%

of electricity from renewable sources

Governing Law – SB1383

By 2030, reduce methane emissions

40%

below 2013 levels

Executive Order B-55-18

By 2045, economy-wide, become

Carbon Neutral

**Electrification as
a one-track solution**

**sounds
simple**



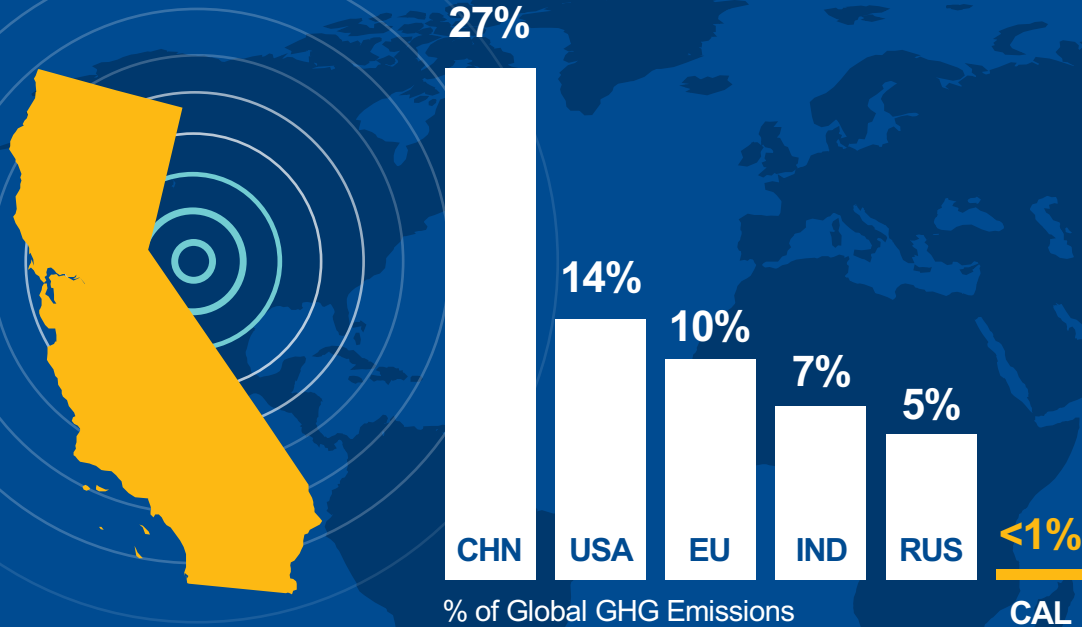
“In the world of
dreams, you can
do a lot of things.

**In the world of
practicality, there’s
a way it works.”**

**Governor
Jerry Brown**

LA Times Interview
September 16, 2018

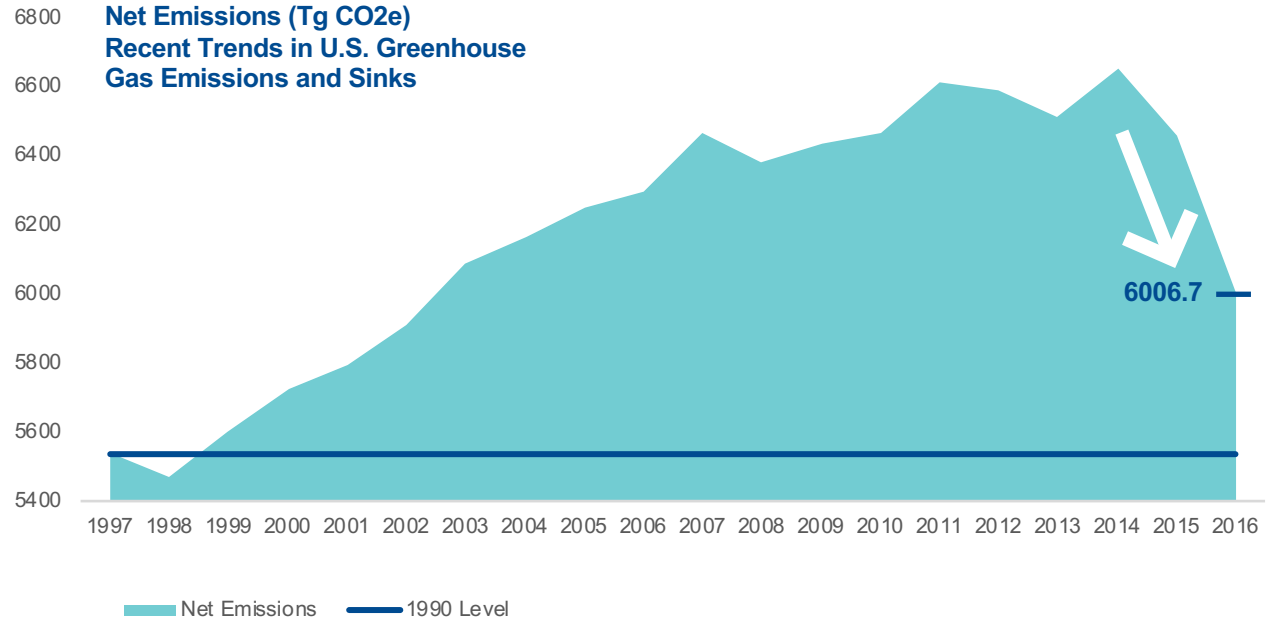
Thinking globally, we can have a greater impact



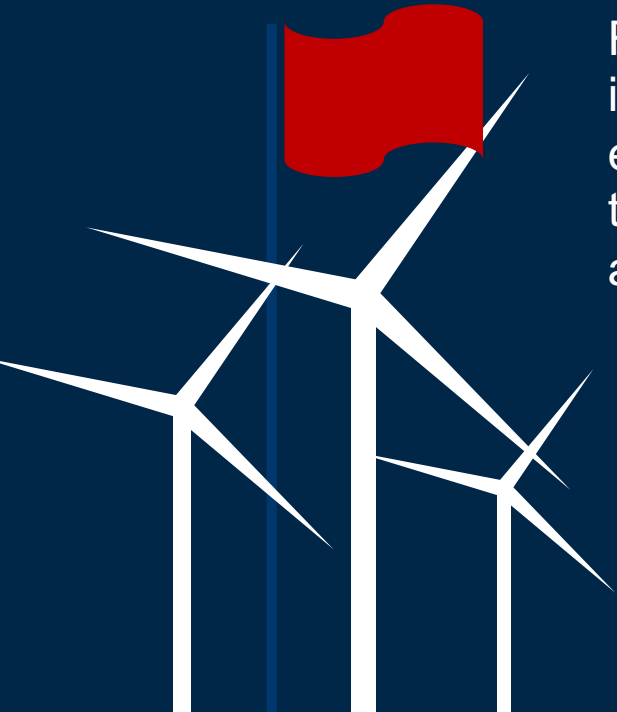
How we
innovate
matters.

U.S. emissions are decreasing

Natural
gas is
displacing
coal.



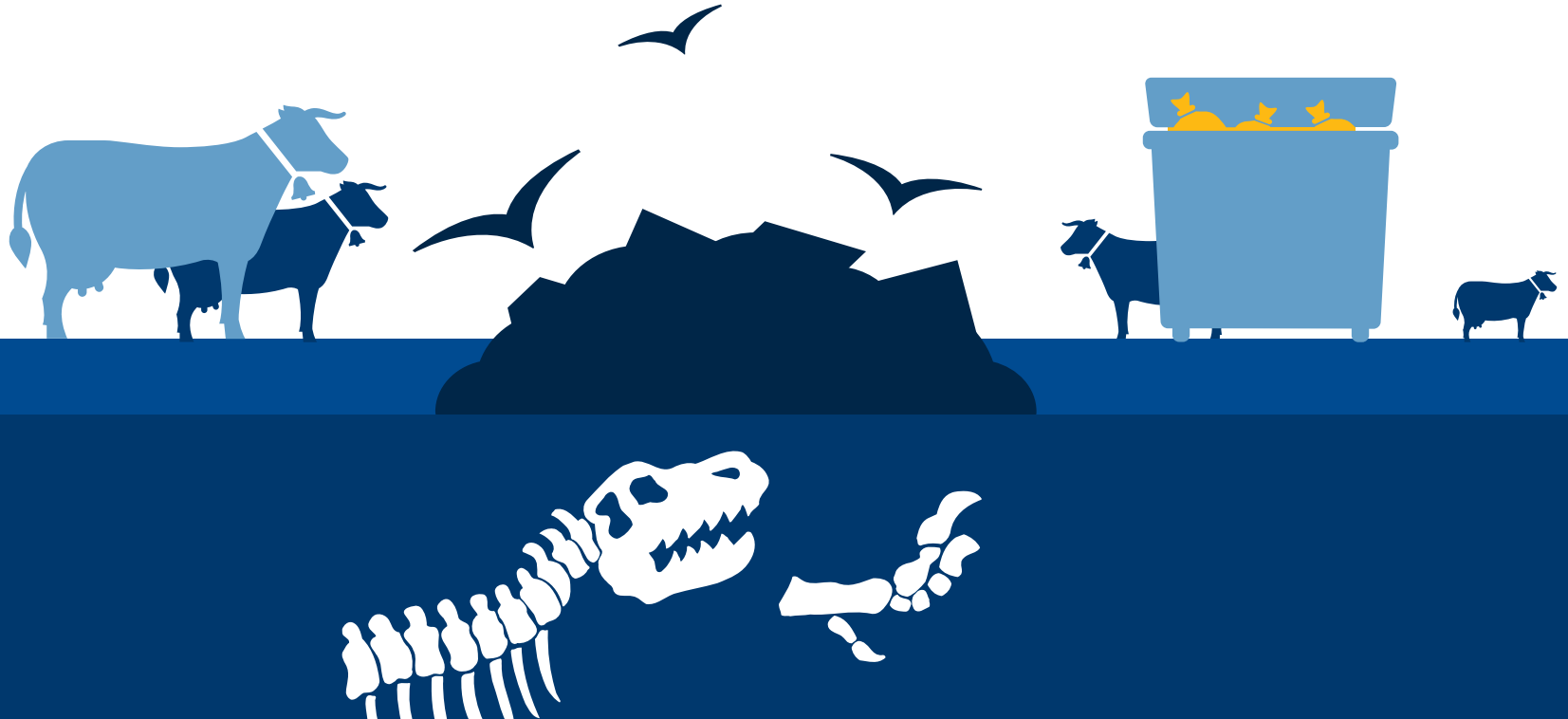
Natural Gas resolves solar and wind power's **intermittency issues**



Reliability isn't only an issue during extreme events; it's about keeping the lights on everyday, and every night.



Like electricity, natural gas can come from renewable sources



Natural gas distribution has a relatively **small GHG footprint**

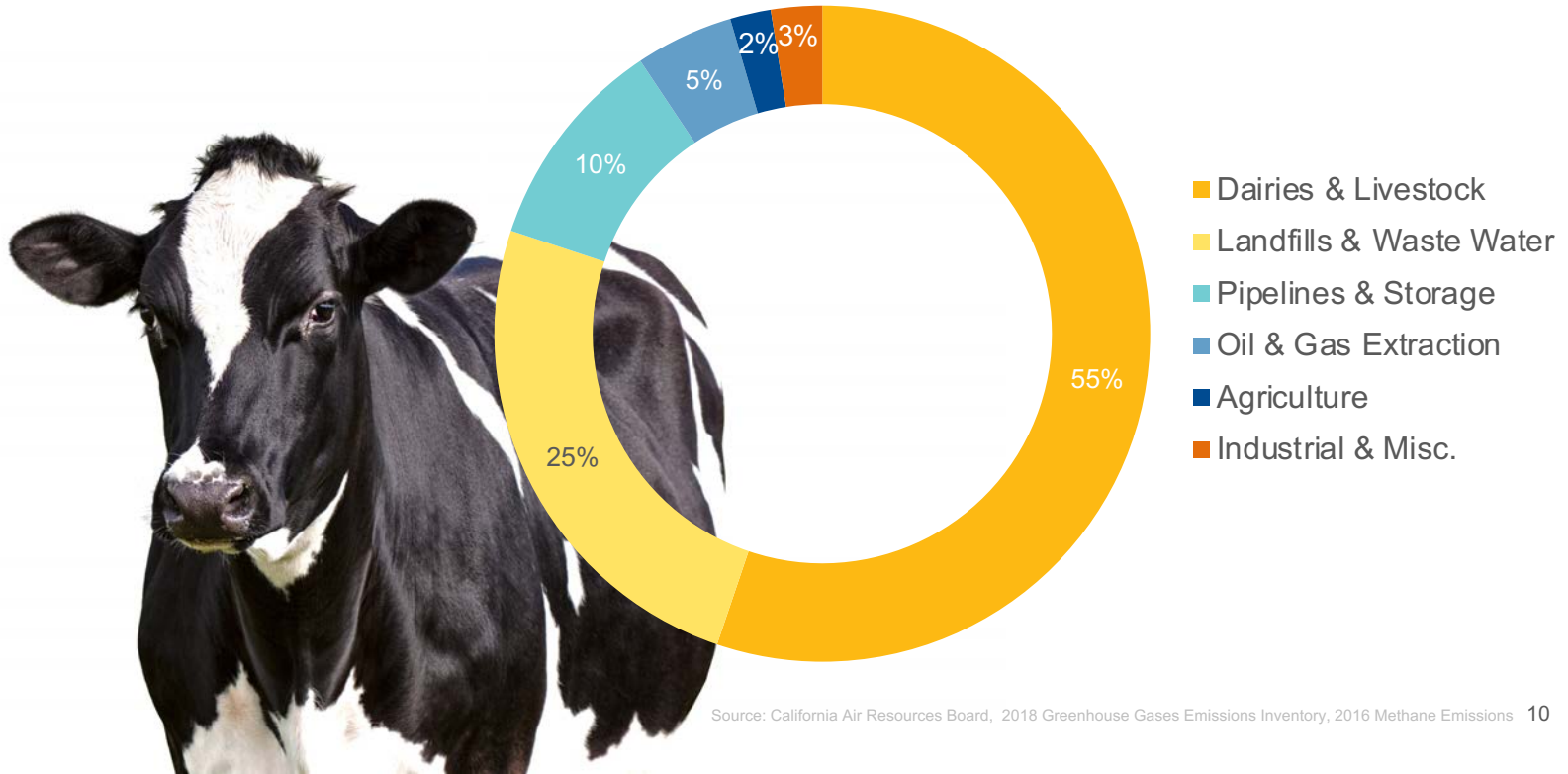


Methane is
9%
of California's
total GHG
emissions



Only
10%
of those methane
emissions comes from all
of California's pipelines

CA's biggest sources of methane come from our waste streams



Putting this in another context

Aliso Canyon
leak emitted

5% of CA's 372
landfills emit

109,000MT
of Methane

199,408MT
of Methane/year

~2X more Methane than
the Aliso Canyon
leak **every year**

Putting this in another perspective

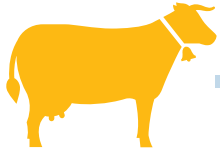


SCG is
0.3%
of California's
total GHG
emissions

Fertilizer contributes
~0.9%
of California's total
GHG emissions



Renewable natural gas



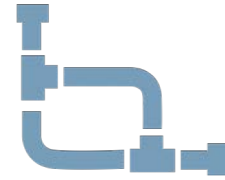
capture waste from dairies,
farms and landfills



convert into biogas using
anaerobic digestion



process the biogas to make it
pipeline-ready (biomethane)



inject the biomethane into the
pipeline for future use

Achieve 30% emissions
reductions in the building
sector by switching to

~5% RNG



Achieve the same GHG reductions
as overhauling 100% of CA's
buildings to all electricity with

~16% RNG

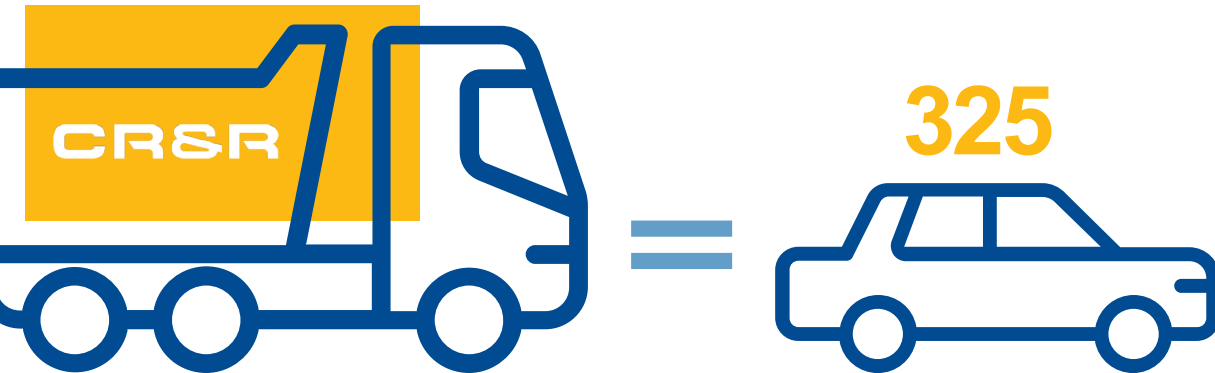


When used as a
transportation fuel, RNG from
food and Green waste has a

negative Carbon
Intensity



CR&R is turning GHG-laden organic waste into Carbon-neutral renewable natural gas

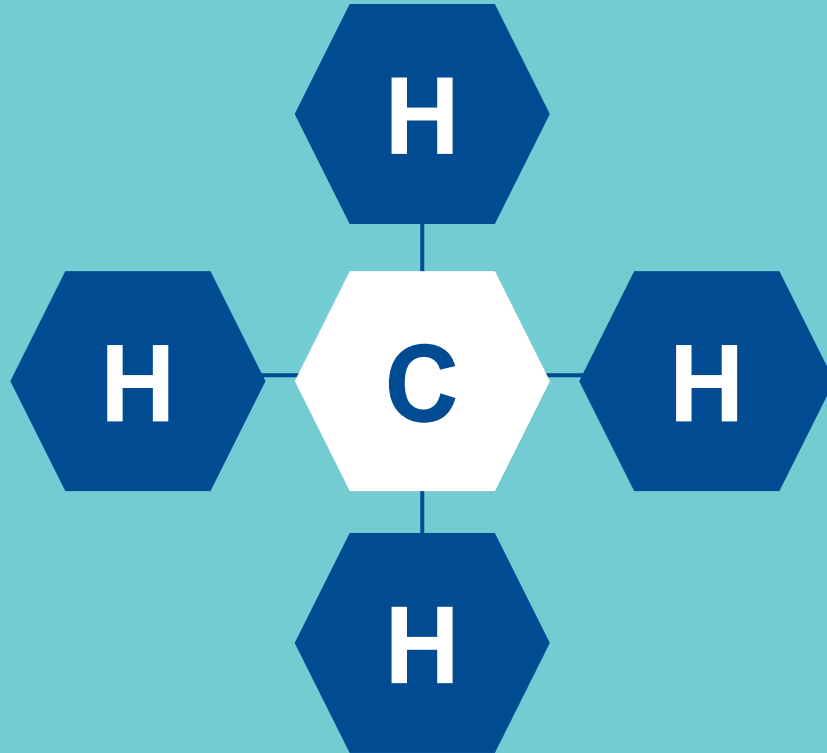


Near-zero natural gas engines reduce NOx emissions up to 90% and GHG emissions up to 80%

CR&R's RNG is fueling 400 waste trucks. That's the equivalent of taking 130,000 cars off the road

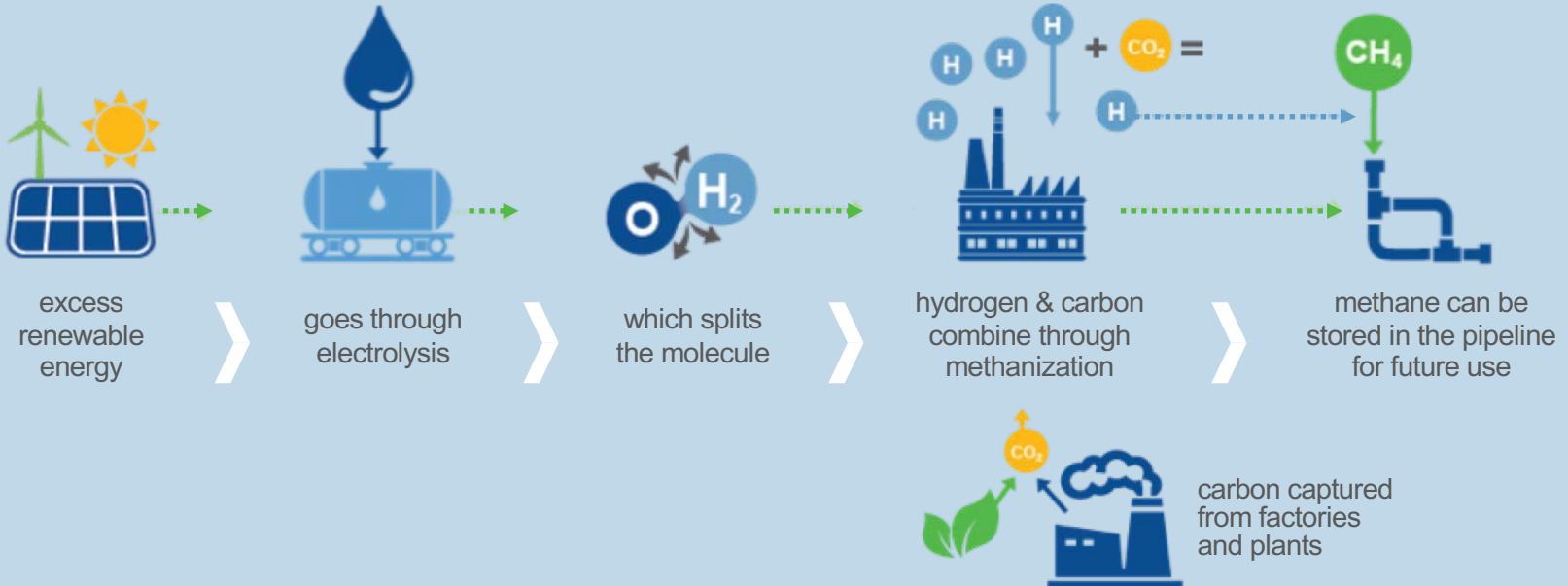
Natural Gas

CH₄ (Methane)



Power-to-gas

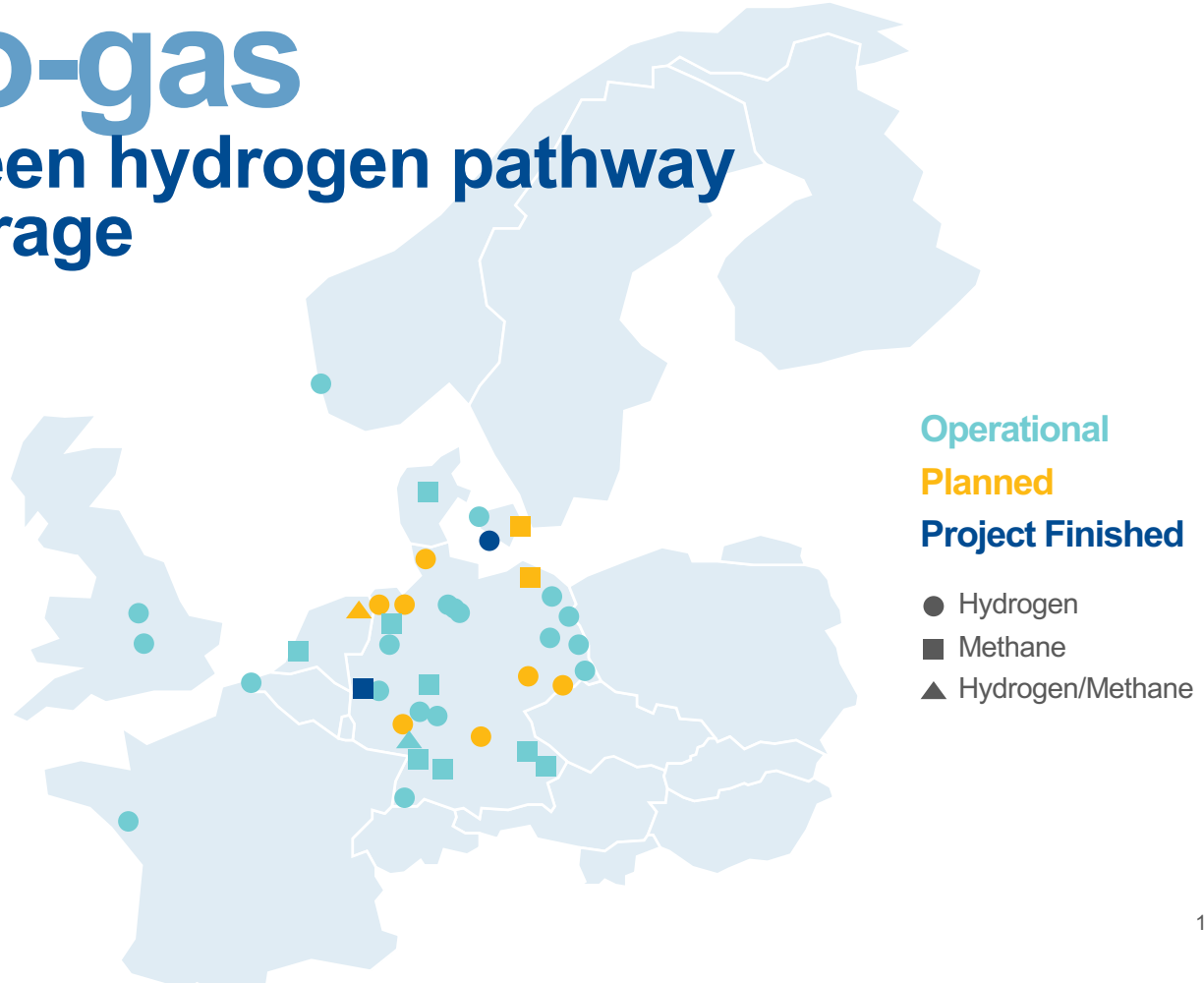
converts excess renewable electricity
into renewable natural gas



Power-to-gas

provides green hydrogen pathway
and grid storage

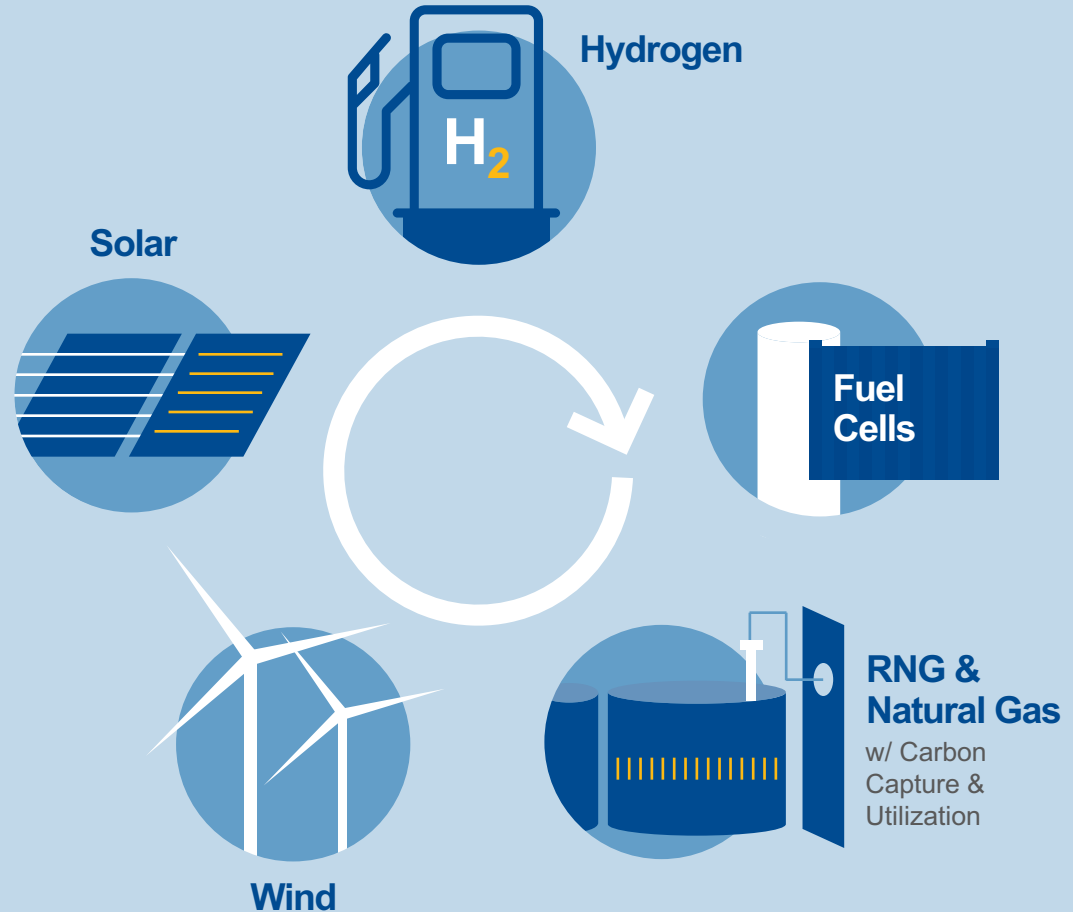
- 70 Projects Now Launched In Europe
- 40 Projects Launched in Germany, with more in development
- 30 MW of installed capacity

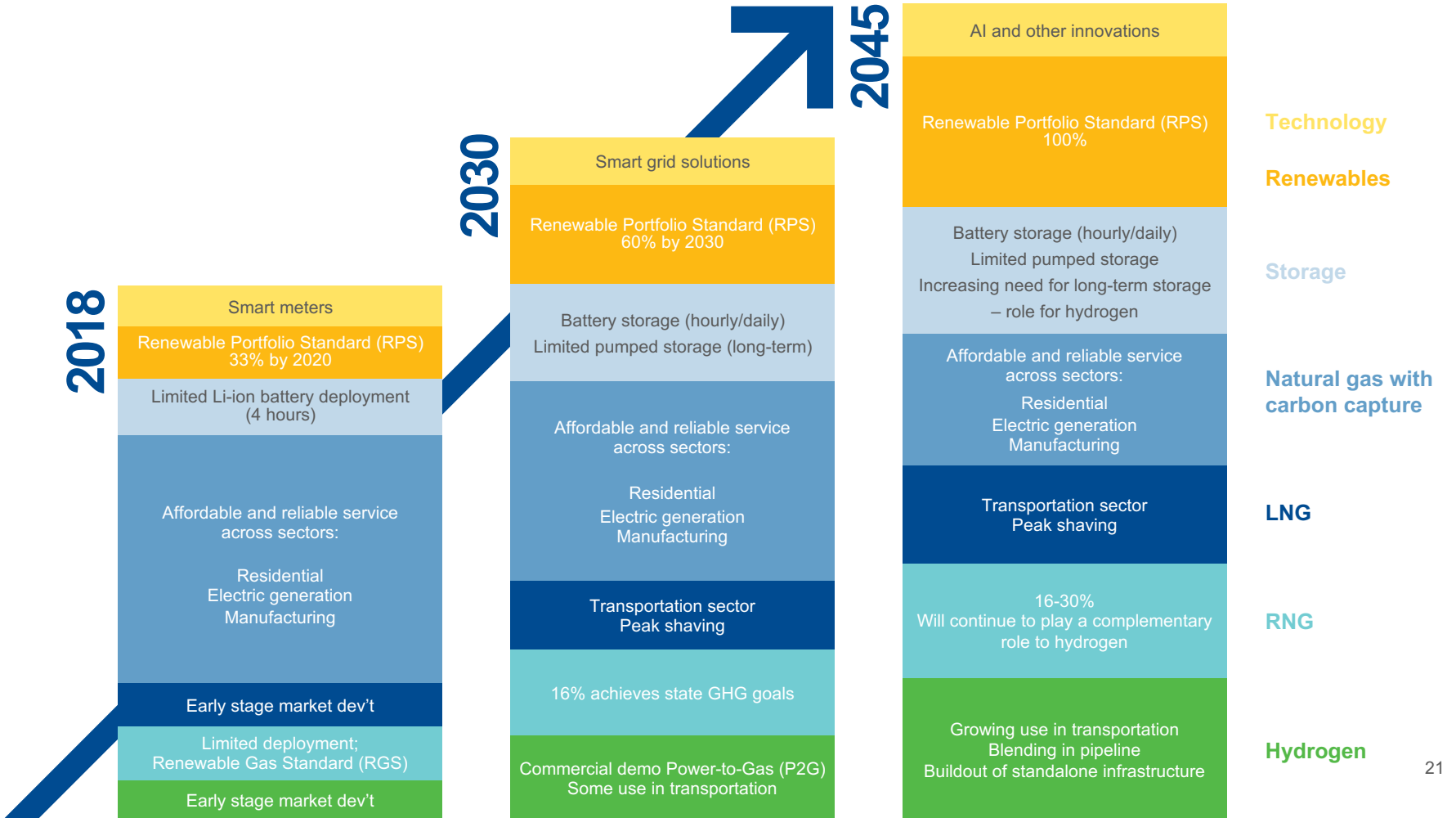


Our vision
for what's
possible

With an integrated approach

we can achieve our goals and preserve choice, while minimizing disruption and cost





The point



You shouldn't have to choose between doing what's right for the environment and what's good for the economy.

And with a balanced energy approach, you don't have to.

**What can
we do?**

RNG and Power-to-Gas: why invest?



Be on the right
side of history



The timing is right
to blend in RNG
without creating
price shock with
consumers



Get ahead of it—
California is a
bellwether state

Our industry needs to take **definitive** steps

Robust monitoring
and timely fixing
of leaks.

No excuses.

Shift our
thinking from risk
mitigation to
**proactive
environmental
stewardship.**

Invest in RNG and
look into ways to
**decarbonize
the energy
system.**



**Thank
You**