



# Methane Math: Rethinking Emissions from Natural Gas

USDN Innovation Fund Project 2017



**SF Environment**

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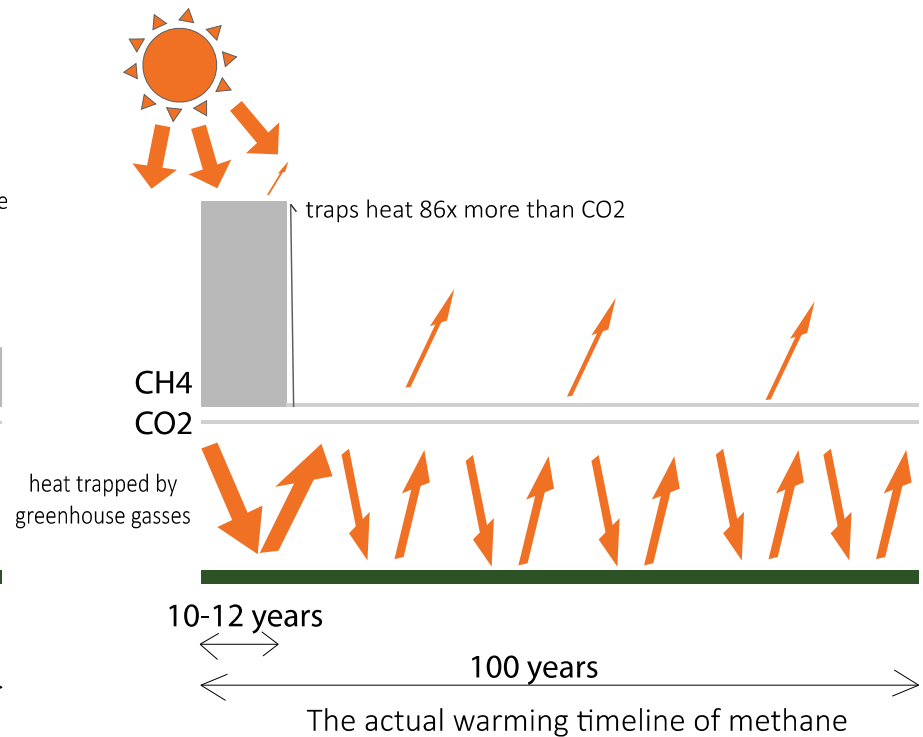
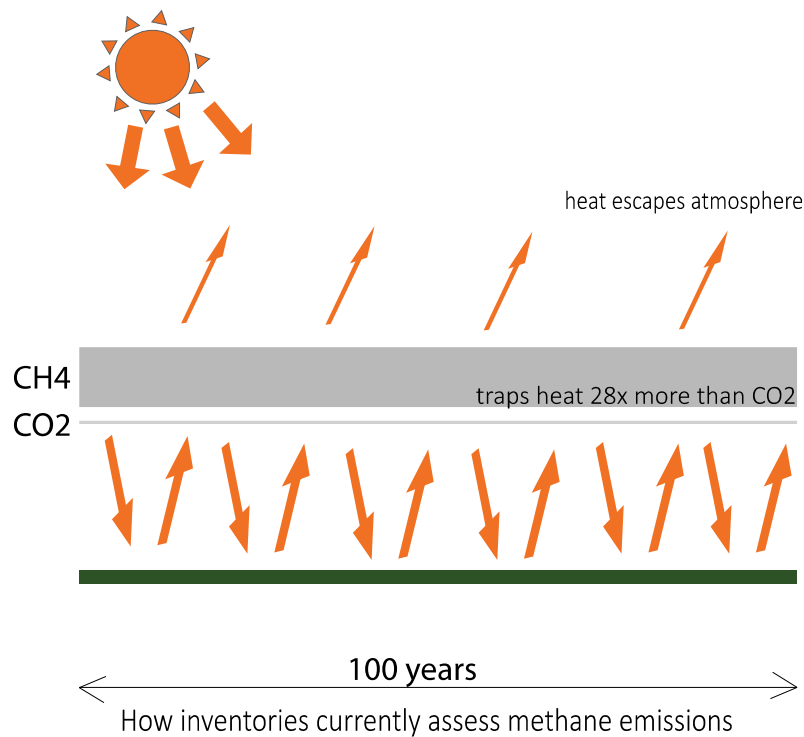
A Department of the City and County of San Francisco



# Problem Statement



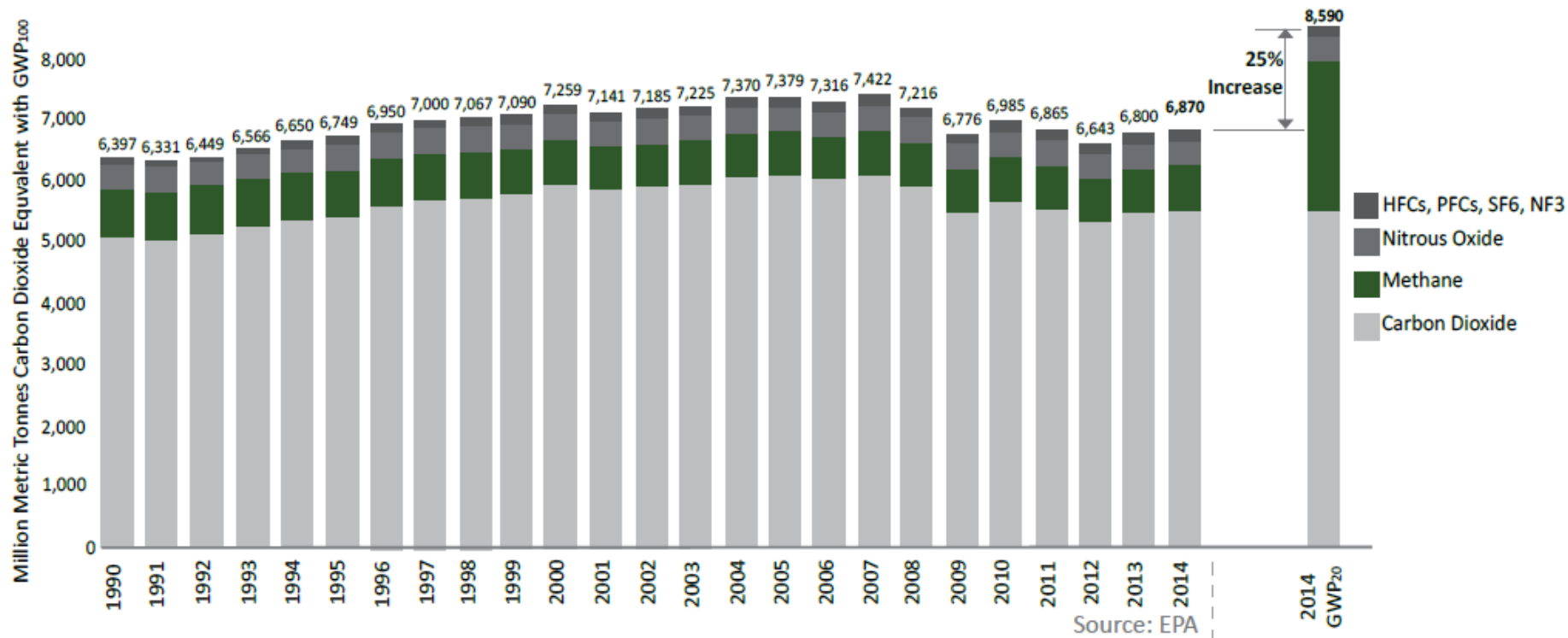
# Undervaluing Methane's Short Lifespan



# Outsized Impact of Methane



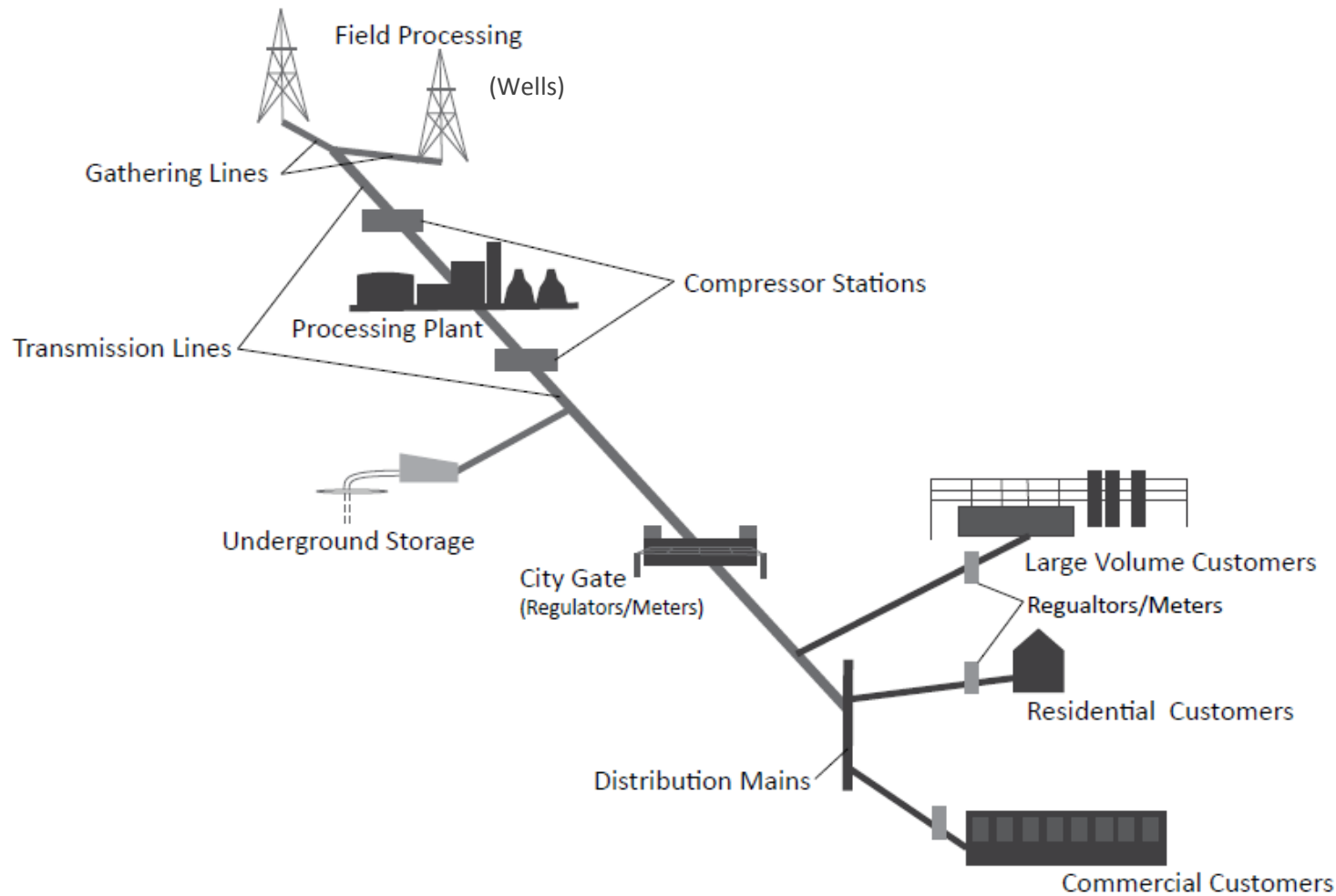
Figure 4: U.S. Greenhouse Gas Inventory - GWP<sub>100</sub> Versus GWP<sub>20</sub>



# And...Leaks Happen



Figure 14: Diagram of Natural Gas Production to Distribution<sup>[73]</sup>

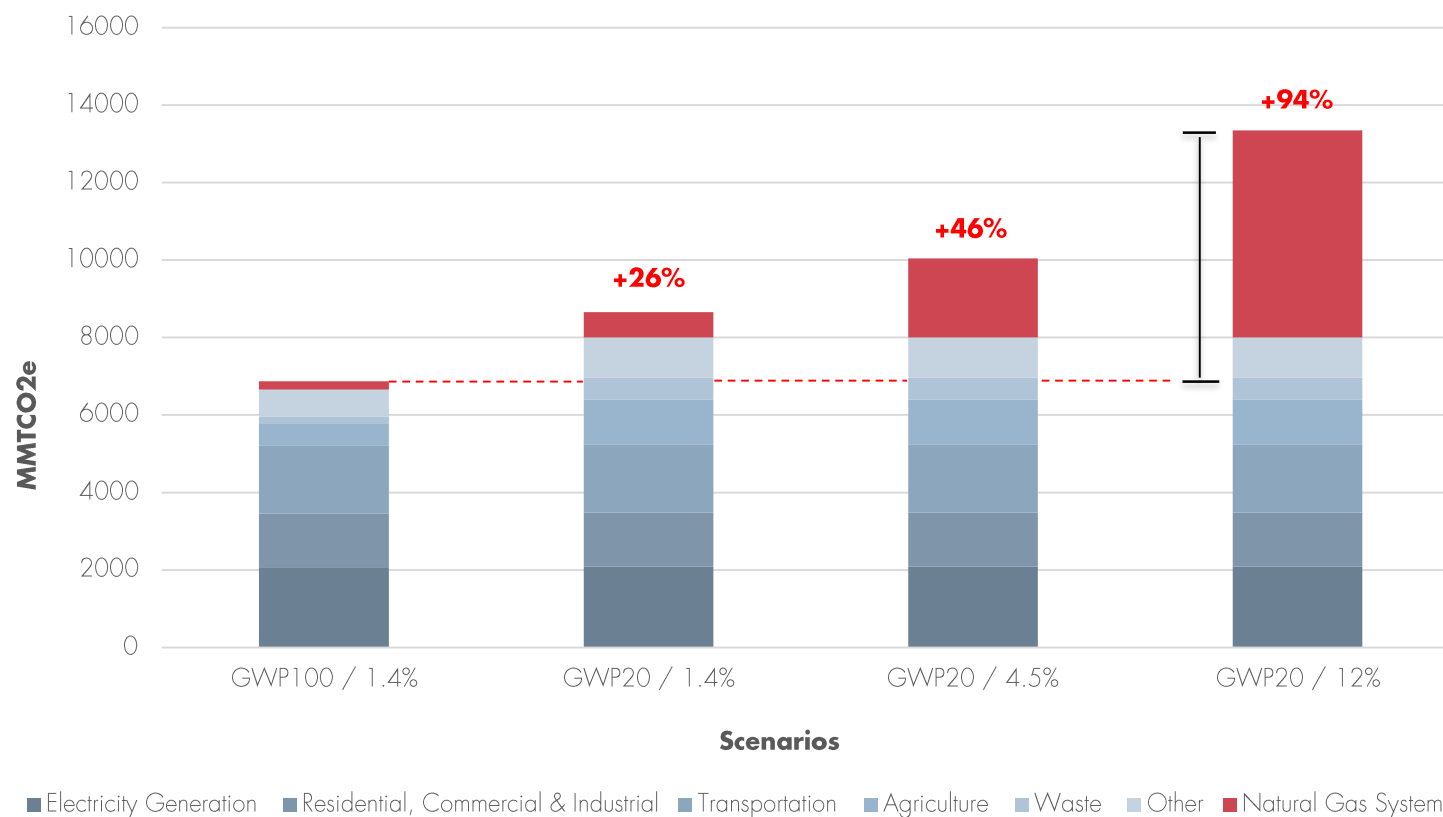


Source: EPA

# True Impact- National 2014 Inventory



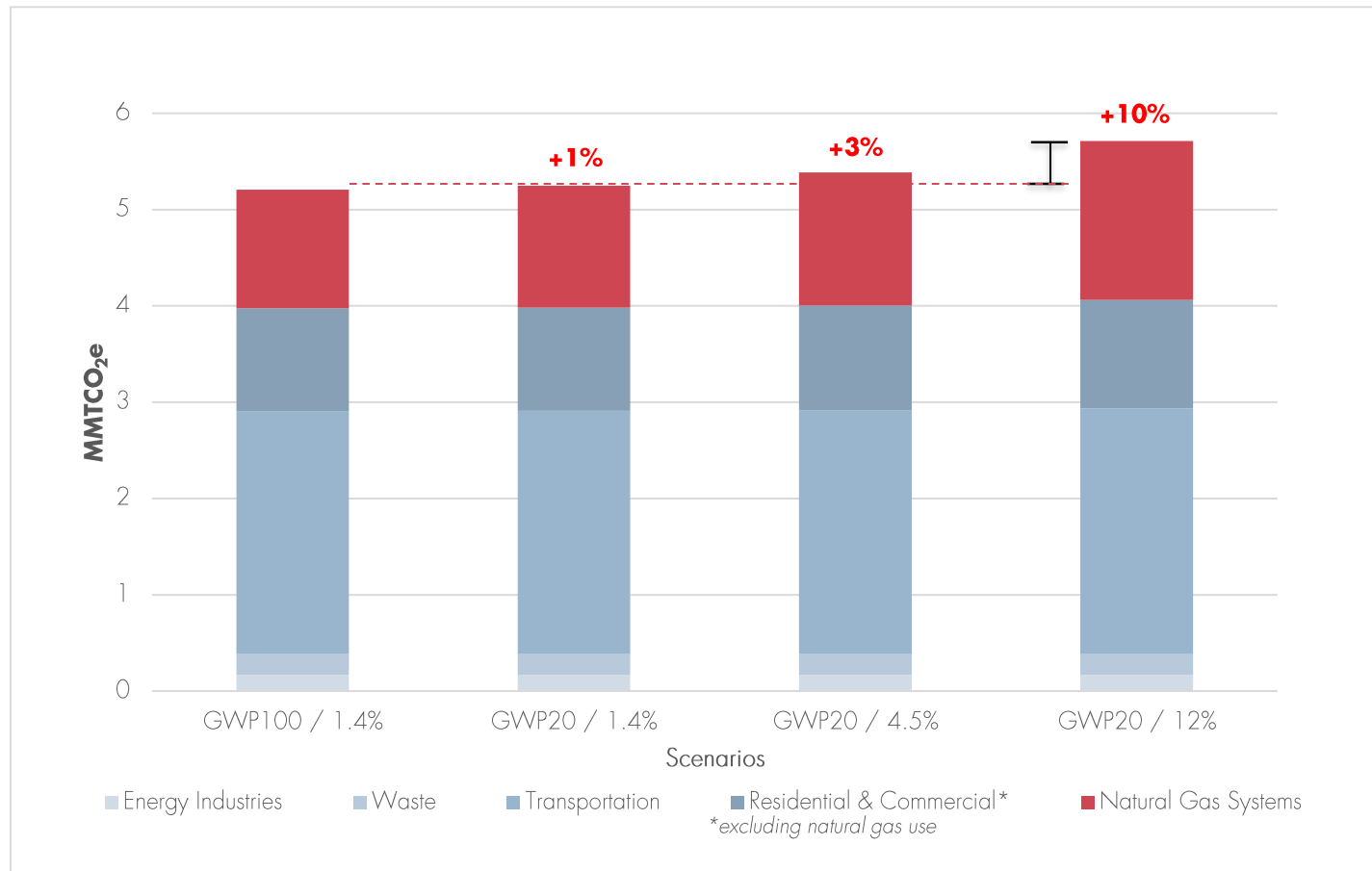
## Changes in **US** Overall GHG Emissions with Different GWP and Leak Rates



# True Impact- SF 2015 Inventory

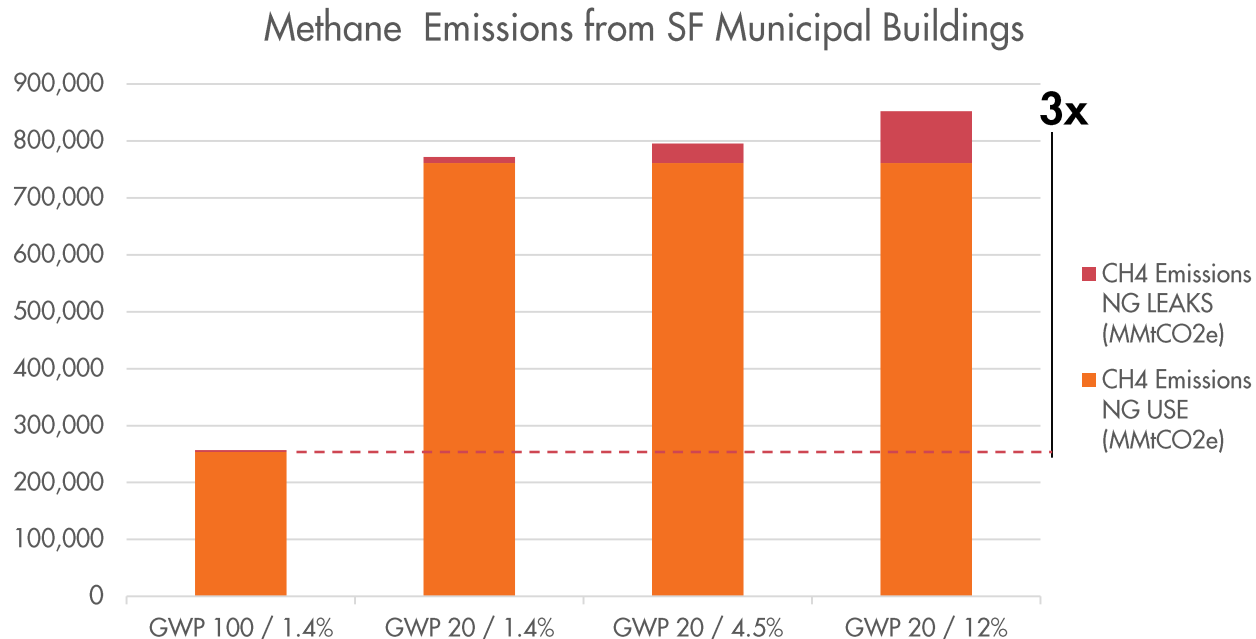


Changes in **San Francisco's** Natural Gas Emissions with Different GWP and Leak Rates





# True Impact - SF Municipal Buildings



**Biggest impact on City building portfolio comes from using GWP20**

Using:  
**GWP 20 / 12%**

- Methane emissions can be up to 3x greater than previously thought
- 26 times more methane being released into the atmosphere
- Overall building emissions can increase up to 61%



# Ten Priority Actions



1. Change carbon accounting practices
2. Communicate importance of leaks
3. Require utilities to disclose leaks
4. Collect more local data on leak rates
5. Reduce leaks in local distribution system
6. Incentivize leak repair
7. Prioritize decarbonization – electrify
8. Support fuel switching
9. Switch to renewable natural gas
10. Create investment plans that consider natural gas infrastructure replacement costs

**A**ction  
**C**hanges  
**T**hings

# Thank You!



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Link to full study:

<https://sfenvironment.org/download/methane-math-how-cities-can-rethink-emissions-from-natural-gas>



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