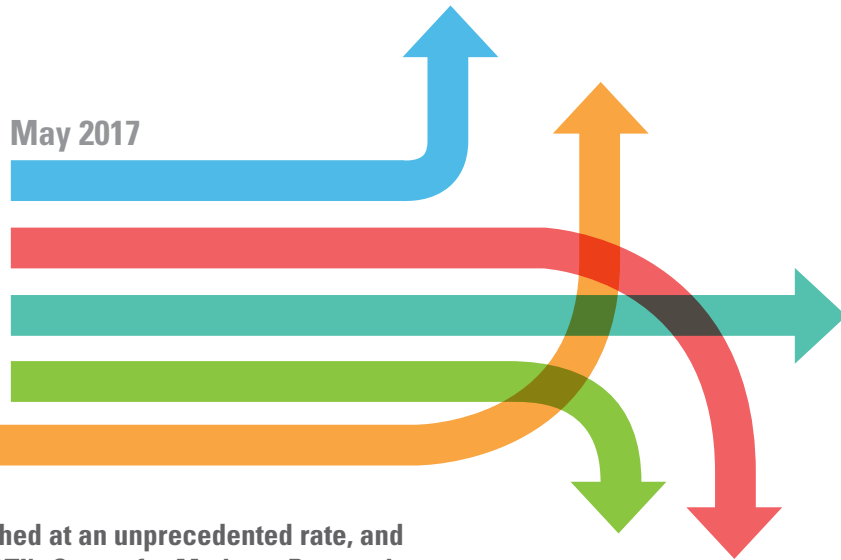


# CH<sub>4</sub> DIRECTIONS

May 2017



New studies on methane are being conducted and published at an unprecedented rate, and keeping up with all of that information is the purpose of GTI's Center for Methane Research (CMR). The CMR is summarizing recent relevant reports and creating new material such as white papers on a continuous basis.

The purpose of creating this CMR newsletter is twofold: first, to briefly introduce the new material produced by the CMR, and second, to keep members informed about CMR operational activities and upcoming events.



## CMR Deploys Public Website

The main information portal for the CMR has been publically released. It can be found online at [cmr.gastechology.org](http://cmr.gastechology.org)

For CMR sponsors, there will be a secure Documents area for members only, which will host new information developed by the CMR, such as white papers and the study summaries that the CMR prepares on paper and meetings. The centralized repository will include historical and current research studies, policy directives, and analytical data regarding methane emission trends and atmospheric concentration levels. The secure site will also be home to the communications tools that will be developed to help the collaborative stakeholders speak with a common voice and convey the same key messages.

The main site will be accessible to the general public, and will house technical information to be shared with the media, policy makers, and other interested parties. The long-term goal is to evolve this site into the go-to methane information resource for the natural gas industry, making fact-based data on methane easily accessible and digestible. In addition, members will have access to a Tools section that hosts methane emissions calculators. The tools allow members to calculate company-specific total methane emissions from their pipeline network and compare the effect on total methane emissions estimated with different calculation methods.

Any suggestions or feedback on the website would be welcomed and greatly appreciated.



SEND US YOUR FEEDBACK

**Chris Moore**  
[chris.moore@gastechology.org](mailto:chris.moore@gastechology.org)  
1.847.768.0500





**Several recently published scientific studies have been summarized by the CMR. They include:**

- A new review covering ground-level methane emission measurements
- A paper on “pump to wheel” emissions from natural gas vehicles
- A methane radiative forcing paper
- Three papers on global methane cycling and the influence of oil/gas
- A methane emissions from abandoned wells paper
- A paper detailing “super-emitters”

The full summaries can be found on the CMR website under the Documents tab, along with a summary of the many methane papers presented at the fall American Geophysical Union meeting in December 2016.

Three important points can be identified when the suite of studies reviewed this quarter are viewed together and at a high level.

- First, technology development is driving methane measurement and leak mitigation. As new sensors are developed, we can gain a clearer understanding of leaks, especially in the downstream area. This increase in knowledge can shape the development of new procedures and hardware that ultimately leak less methane. The push in instrument develop has also provided the insight that a few source of leaks really drive overall methane emissions.
- Second, these learnings have driven innovation in the industry and reduced the overall global impact of methane emissions from the natural gas industry.
- Finally, it is imperative that the industry stay up-to-date, relevant, and engaged in the discussion of new scientific findings on methane.

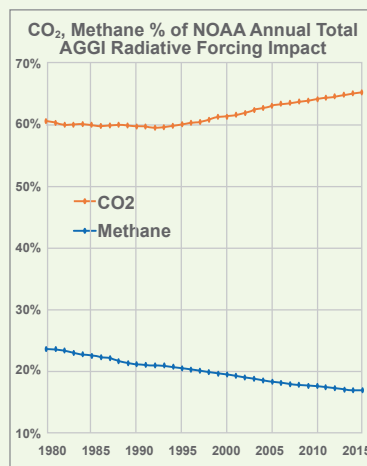
Members are encouraged to suggest specific studies to review or themes to cover for white papers.



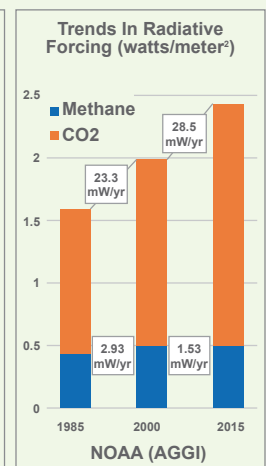
**Trends for Carbon Dioxide (CO<sub>2</sub>) and Methane (CH<sub>4</sub>) in NOAA’s Annual Greenhouse Gas Index (AGGI)**

Since 1979, the National Oceanic & Atmospheric Administration (NOAA) has compiled their Annual Greenhouse Gas Index (AGGI), which provides a ratio of the changes in total radiative forcing from a suite of primary and secondary greenhouse gases compared to a base year of 1990. Using the NOAA AGGI data, it is possible to analyze trends in carbon dioxide and methane radiative forcing and the relative incremental effect each is having on global warming as concentrations slowly increase over time.

While contributing to warming, the relative impact of methane is declining mainly due to carbon dioxide’s high concentration growth rate since 1980; this is in contrast to a deceleration in methane’s atmospheric concentration growth over the same period.



**Figure 1: Trends in CO<sub>2</sub>, CH<sub>4</sub> as % of Total Radiative Forcing From Twenty Greenhouse Gases**



**Figure 2: Trends in CO<sub>2</sub>, CH<sub>4</sub> from NOAA AGGI**