



Via email: hockstad.lief@epa.gov

March 24, 2013

Mr. Leif Hockstad
Environmental Protection Agency
Climate Change Division (6207J)
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Comments on the EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011

Dear Mr. Hockstad:

Western Energy Alliance submits the following comments on EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011 (hereafter "the Inventory"). We appreciate the opportunity to participate in the process, and we address EPA's specific request for input on the natural gas sector. Western Energy Alliance supports EPA's revised estimates for emissions from liquids unloading and applauds their willingness to work with industry to get the very best data possible. We do however remain concerned about EPA's estimates of methane emissions from hydraulic fracturing and refracturing, and we hope EPA will take into account more recent data from industry, academia and the EPA itself when calculating methane emissions for the Inventory.

Western Energy Alliance represents over 400 companies involved in all aspects of environmentally responsible extraction and production of oil and natural gas in the West. We represent independent producers, most of which are small businesses with an average of twelve employees. Our members are committed to reducing emissions from their operations and consistently employ best industry practices whether mandated by regulations or voluntary.

Our comments focus primarily on two areas in the Natural Gas Systems section of the Inventory, emissions from hydraulic fracturing and refracturing, and liquids unloading. EPA relies on its technical analysis for the recent NSPS/NESHAP Rule for Oil and Gas¹ to estimate methane emissions from hydraulic fracturing and refracturing. In our comments on that rule, we show that EPA grossly overestimates methane emissions in its analysis² due to poor assumptions, such as the amount of venting versus flaring, use of reduced emissions completions (REC) only where required by regulations, and composition of

¹ US Environmental Protection Agency, *Greenhouse Gas Emissions Reporting from the Petroleum and Natural Gas Industry: Background Technical Support Document*, 2010.

² See [Western Energy Alliance's comments](#) on the NSPS/NESHAP for the Oil and Gas sector.

flowback material. An IHS CERA report, *Mismeasuring Methane: Estimating Greenhouse Gas Emissions from Upstream Natural Gas Development* explains how EPA overestimated methane emissions³ and calculates a very conservative estimate of 43 million tons CO₂e methane emitted from natural gas field production in 2009. EPA's estimate for natural gas field production was 130 million tons CO₂e for 2009, more than three times greater. We are troubled that EPA continues to rely on its NSPS/NESHAP Oil and Gas Rule analysis for the Inventory, especially when new data has become available from both academic and government sources.

More recent analysis by O'Sullivan and Paltsev⁴ of MIT has shown much fewer potential methane emissions from hydraulic fracturing using more realistic industry practices than are assumed in EPA's technical analysis¹. They found the 2010 potential fugitive methane emissions from hydraulic fracturing to be 902 Gg methane from 3948 wells throughout 5 plays (Barnett, Fayetteville, Haynesville Marcellus and Woodford). In comparison, the EPA 2012 GHG inventory for upstream fugitive methane emissions estimates the 2010 value at 6002 Gg methane using far fewer data points. Keep in mind these are potential emissions, not actual emissions, and do not take into account reductions from REC and other controls.

Results from the EPA's own Greenhouse Gas Reporting Program (GHGRP)⁵ also show fewer emissions from hydraulic fracturing and refracturing than the Inventory. The GHGRP data show methane emissions of 6.1 Tg CO₂e while the Inventory estimates emissions of 15.3 Tg CO₂e. We recognize the GHGRP data covers only those sources with emissions greater than 25,000 tons/year and therefore will miss some emissions, but we do not believe it is missing over 60% of the emissions from hydraulic fracturing and refracturing. EPA itself claims the GHGRP data covers approximately 85-90% of GHG emissions in the US⁶. EPA has taken into account GHGRP data in estimating emissions from other parts of the natural gas sector for the Inventory but not hydraulic fracturing and refracturing. We encourage EPA to investigate this discrepancy between the Inventory assumptions and the GHG emissions data reported by industry to improve its methane emissions numbers.

Western Energy Alliance does support EPA's revision of the refracture rate. Previous inventories had used a refracture rate of 10%, but that has been reduced to 1% for the Inventory. This reflects industry practice more accurately and produces more accurate methane emissions estimates from refracturing of wells.

³ IHS CERA, [*Mismeasuring Methane: Estimating Greenhouse Gas Emissions from Upstream Natural Gas Development*](#), August 2011.

⁴ O'Sullivan, F. and S. Paltsev, 2012. Shale gas production: potential versus actual greenhouse gas emissions, *Env. Re. Lett.*, **7**, 044030.

⁵ <http://www.epa.gov/ghgreporting/ghgdata/reported/petroleum.html>

⁶ http://www.epa.gov/ghgreporting/documents/pdf/2012/documents/GHGRP_Inventory_emissions_comparison.pdf

Finally, Western Energy Alliance supports EPA's adjustments to the assumptions for liquids unloading emissions for the Inventory by incorporating data from an API/ANGA study⁷. The study shows greater use of control technology than assumed in previous inventories, and EPA reduced its estimate of 2010 emission from liquids unloading from 85.7 Tg CO₂e in the 2012 Inventory to 5.4 Tg CO₂e in the 2013 Draft Inventory.

It is important that EPA's emissions estimates for the natural gas sector are as accurate as possible in the Inventory, and EPA has a new source of data directly from industry in the GHGRP. The large discrepancy between the Inventory methane emissions and the GHGRP methane emissions reported by industry should be examined carefully to understand where Inventory assumptions might be incorrect. Methane emissions from the natural gas sector continue to be extensively studied by industry and in the academic literature, and we encourage EPA to make use of that information when making the necessary assumptions to calculate US emissions from natural gas.

Sincerely,



Ursula Rick
Regulatory Affairs Analyst
Western Energy Alliance

⁷Shires, T., and M. Lev-On. *Characterizing Pivotal Sources of Methane Emissions from Natural Gas Production: Summary and Analysis of API and ANGA Survey Responses*. Prepared for API and ANGA, Final Report, September 21, 2012. <http://anga.us/media/press/CA5D12D3-CFB5-F2B6-3989B7E2306C8C06/files/task%20%20api%20anga%20survey%20report%20final%2021sept12%20clean%20ae.pdf>