

California Climate Action Registry Members' Meeting Best Practices – Process and Fugitive Emissions

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Process and Fugitive Emissions Key Topics for Discussion

- * Verifier perspective:
 - > Protocols and methods
 - > Data collection
 - > Degree of precision (emission factors)
 - > Verification standard
- * Three gases CH_4 , HFC, SF_6



Process and Fugitive Emissions Methane

- Still no adopted natural gas protocol (CCAR)
- Several good industry standards
 - > INGAA natural gas transmission
 - > AGA natural gas distribution
 - > API Compendium oil and gas
 - > Most are based on EPA/GRI studies, circa 1990
- Concerns for reporters applicability of guidance to modern day operations, data availability, tiered approaches
- * Verifiers' dilemma!



Process and Fugitive Emissions Methane

- Verifiers observe huge differences between regulated and unregulated sectors (oil and gas production vs. natural gas transmission and distribution)
- Unclear how much of the difference is real and how much is due to the methods used
- Best practices are well-documented (e.g., EPA Gas Star and criteria pollutant regulations) – may provide opportunities for voluntary reduction credits
- Volume of potential reductions probably greater than from Landfill Gas capture and Dairy Biodigesters

Process and Fugitive Emissions Hydrofluorocarbons (HFCs)

- * HVAC, vehicle AC systems, refrigeration, chilling
- - > Developing complete inventory of HFC equipment
 - > Blends –which constituents are covered?
 - Losses are based on "make up" not needed every year
 - > Often contractor run programs need for oversight
- Verifier often has to consider "standard for verification" (5%) to accept HFC emissions estimates
- De minimis sources much easier to verify (GRP upper bound estimates)



Process and Fugitive Emissions Sulfur Hexafluoride (SF₆)

- Electric sector issue
- EPA SF₆ Program is the Best Practice standard, but not used by all reporters
- Complicated because the tracking system needs to account for SF₆ in cylinders and equipment
- Methods are very sensitive to small errors in cylinder/equipment accounting
- Emissions from single breakers very hard to quantify
- ***** Same verification concerns as for HFCs



Process and Fugitive Emissions Summary

- Methane emissions much work to be done on quantification and reporting methods
- Many opportunities for methane reductions (Gas Star, Methane to Markets, LDRP/Vapor Recovery)
- Large potential volumes of offsets from industrial gases – implies need for stringent reporting methods
- CARB now moving ahead with "Refrigeration Management Program" as GHG early action
- Inventory reporting programs in transition, need for reporting systems that can meet evolving standards