Air Pollution Impacts of Permian Development

Methane pollution, flaring, and degradation of air quality

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Methane – a serious and growing climate problem

Methane is currently warming the climate half as much as CO$_2$.

Global methane levels are rising dramatically, imperiling efforts to limit temperature rise.

While the reasons for this global rise are unclear, oil and gas is certainly one of the largest sources of methane, especially from the US.
Permian Basin – an enormous source of US methane

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- Recent work (not yet published) is indicating that the Permian is leakier than the US average
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This is very consistent with observations from the field:

[Images of methane emissions from Reeves Cty (2017 & 2018) and Reeves Cty (March 2018)]

Photos courtesy Earthworks
Beyond Methane: Poor Air Quality from Oil and Gas

Toxic emissions from oil and gas operations create a cancer risk well above EPA’s “Level of Concern” threshold across the Permian.

Emissions from oil and gas also form ground-level ozone smog, which affects people across Texas and beyond. For example, Texas kids suffer at least 145,000 asthma attacks per year due to oil and gas pollution.*

*Including emissions from the whole US O&G industry – not just the Permian

Sources:
Flaring of Associated Gas

Routine flaring of gas from oil wells is wasteful, harmful to communities bearing the impacts of flaring pollution, and represents a failure of regulatory authorities.

Permian flaring is growing rapidly, and is badly under-reported.
Flaring of Associated Gas

Texas flaring is dominated by the Permian

Total = 228 Bcf

Total = 163 Bcf

Courtesy EDF
We have the means to address this pollution
Prognosis

These problems will only get worse unless governments effectively implement reasonable, enforceable emissions standards to limit these harmful sources of pollution.

Permian Emissions reported to EPA

Reported methane rose 1%
Prognosis

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But CO$_2$ emissions rose 17%