Oil!

Why limiting oil production can make good climate policy

Peter Erickson
California Air Resources Board, Petroleum Transport Fuels Workshop, August 20, 2018
California uses and produces a lot of oil
Much of CA’s oil is high-emissions, high-cost, and in pollution-vulnerable communities.

Source: SEI analysis. Seven largest 2030 oil fields shown, representing 70% of 2030 production (bubble size proportional to production), with costs and quantities as in Figure 2. Colors indicate CalEnviroScreen 3.0 Percentiles of overlying census tracts. Low-carbon two degree oil prices as summarized in Erickson and Lazarus (2018).
Phasing down CA oil supply reduces global CO$_2$, limits lock-in

• Reduces global oil use and CO$_2$ emissions
  – 8 to 24 million tons CO$_2$ annually by 2030 for ~100 million barrel decrease in production
  – Plus methane (CH$_4$) and non-climate benefits

• Demonstrates what an equitable fossil fuel phase-out could look like
  – Going first in wealthy states and countries leaves carbon budget for poorer regions
Hook for ARB could be to address “leakage”

- Leakage = A barrel of oil not burned by California could be burned by someone else!
- Simplistically, for each barrel of oil not used in California, not *producing* a barrel would eliminate any leakage
## Possible approaches to limit CA oil

<table>
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<tr>
<th>Policy</th>
<th>Rationale</th>
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<tbody>
<tr>
<td>Cease issuance of new permits</td>
<td>Expansion of oil supply not consistent with Paris Agreement goals</td>
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<td>Limit oil production in areas with disproportionate pollution vulnerability, e.g. using setbacks</td>
<td>Climate change already places disproportionate burdens on vulnerable communities</td>
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<td>Charge a carbon ‘adder’ on oil extraction</td>
<td>Could be added at the wellhead to cover a portion (e.g. 50%) of damages associated with CO2 from combusting oil</td>
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<td>Remove subsidies for oil production</td>
<td>Subsidies increase oil production and profits, increasing CO2 emissions</td>
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<tr>
<td>Phase out GHG-intensive oil through an emissions performance standard</td>
<td>Maximizes overall GHG savings per barrel not produced; achieves some emissions reductions regardless of level of substitution</td>
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Thank you

- Paper available at www.sei.org
- Goal is to inform debate on extending GHG emissions abatement measures.
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