Methane Tracker and Regulatory Roadmap and Toolkit

Tim Gould, IEA

8th UNECE Group of Experts on Gas, Best Practices in Methane Management in the Gas Sector

25 March 2021
Two major new announcements on methane from IEA

1. The **2021 update to the IEA’s Methane Tracker**
   - includes detailed estimates for 2020 that incorporate new data for oil and gas output, as well as the latest evidence from scientific literature & measurement campaigns

2. The **Regulatory Roadmap and Toolkit**
   - detailed ‘how-to’ guide for policy makers and regulators seeking to cut these emissions
The dip in estimated emissions in 2020 is mainly due to lower activity.

Production declines in some emissions-intensive producers (Libya, Venezuela) & reduced shale activity bring down estimated emissions by 10% in 2020, but structural reductions will be essential to make 2020 a turning point.

Estimated oil and gas sector methane emissions 2000-2020

Mt CH₄

Integrating satellite data on large-scale leaks

Large methane emissions from oil and gas operations detected by satellite, 2020

Around 5.5 Mt of satellite-observed leaks are included in the new Tracker; existing approaches do not provide readings around the equator, in northern areas, or offshore operations, but this is a very dynamic area.

Source: Kayrros analysis based on modified Copernicus data.
The size & intensity of estimated emissions ranges widely by country. The amount of methane emitted per unit of production varies by a factor of more than 100 between the worst and the best performing countries, underlining the scope for major improvements in performance.
The IEA Regulatory Roadmap and Toolkit

Methane policies in selected producing countries categorised by regulatory approach

<table>
<thead>
<tr>
<th></th>
<th>Prescriptive approach</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permitting requirements</td>
</tr>
<tr>
<td>Brazil</td>
<td>●</td>
</tr>
<tr>
<td>Canada</td>
<td>○</td>
</tr>
<tr>
<td>China</td>
<td>●</td>
</tr>
<tr>
<td>Iraq</td>
<td>●</td>
</tr>
<tr>
<td>Iran</td>
<td>●</td>
</tr>
<tr>
<td>Mexico</td>
<td>●</td>
</tr>
<tr>
<td>Nigeria</td>
<td>●</td>
</tr>
<tr>
<td>Norway</td>
<td>●</td>
</tr>
<tr>
<td>Russia</td>
<td>●</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>●</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>●</td>
</tr>
<tr>
<td>United States</td>
<td>○</td>
</tr>
</tbody>
</table>

Note: Full circle = national-level policy; open circle = subnational policy.

Policies that affect methane already exist in many jurisdictions. Governments and regulators seeking to take action on methane abatement can look to this existing experience for inspiration and lessons learned.
A ten-step guide for policy makers

Understanding the setting
1. Understand the legal and political context
2. Characterise the nature of your industry
3. Develop an emissions profile

Regulatory design
4. Build regulatory capacity
5. Engage stakeholders
6. Define regulatory objectives
7. Select the appropriate policy design
8. Draft the policy

Implementation
9. Enable and enforce compliance
10. Periodically review and refine your policy