Methane Emissions at German Gas Infrastructure – Results, Challenges and Opportunities

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German Findings of CATF measuring campaign

- Measurements at 15 sites between February and May 2021
- Compressor stations, storage facilities, refineries etc.
- Emissions at all sites – some rather small, some more significant
German Findings of CATF measuring campaign

Example 1: Compressor Station in Rothenstadt, Bavaria,
filmed 04 April 2021
German Findings of CATF measuring campaign

Example 2: Compressor Station in Mallnow, Brandenburg,
filmed on two occasions

12 February 2021

27 April 2021
Methane emissions findings – reactions from regulators

- DUH contacted responsible state authorities in June and July 2021 with footage of sites in Lower-Saxony, Brandenburg, Thuringia, Saxony and Bavaria
- DUH asked for an investigation of found leaks, including consideration on legal steps against operators where necessary
- Reaction of authorities was manifold. Last response was received by DUH end of October. All responsible regulators did answer
- Legal review of reactions by DUH in progress
Methane emissions findings – regulator responsibilities

- As a federal state, there are different regulators for each federated state and subsequent sub-regulators on sub-state level

<table>
<thead>
<tr>
<th>Site</th>
<th>State</th>
<th>State regulator</th>
<th>Sub-regulator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor Station Rückersdorf</td>
<td>Thuringia</td>
<td>Landesamt für Umwelt, Bergbau, und Naturschutz Thüringen (Außenstelle Weimar)</td>
<td>Landratsamt Greiz</td>
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<tr>
<td>Compressor Station Mallnow</td>
<td>Brandenburg</td>
<td>Landesamt für Umwelt (LfU) Brandenburg</td>
<td>-</td>
</tr>
<tr>
<td>Several sites in Lower-Saxony</td>
<td>Lower-Saxony</td>
<td>Niedersächsisches Ministerium für Umwelt, Energie, Bauen und Klimaschutz</td>
<td>-</td>
</tr>
<tr>
<td>Compressor Station Rothenstadt</td>
<td>Bavaria</td>
<td>Bayrisches Landesamt für Umwelt (LfU)</td>
<td>Stadt Weiden</td>
</tr>
</tbody>
</table>
Methane emissions findings – reactions from regulators

Responses from regulators showed:

1. **Jurisdiction unclear at times** – which institution regulates the site had to be researched by contacted regulator first
2. In **some cases**, operators **did not know about** found leakages
3. In **no case** did operators **report emissions** to respective regulator – emissions are **not part of national inventory** reported to UNFCCC
4. Regulators stated a **variety of legal bases** depending on where emissions occurred exactly
5. **Uncertainties** about how **emissions thresholds** are **defined** and when a leak needs to be reported by the operator to regulators – **circumventing thresholds is possible**, e.g. by **subdividing** certain parts of facility
6. **Industry exerts influence on regulating bodies** – reference to interest groups in replies to DUH by regulators
Methane emissions findings – reactions from regulators

**Consequences** of measuring campaign:

- Several operators tightened frequency of their emission monitoring
- Several operators improved scrutiny of monitoring
- Some regulators will put stronger emphasis on methane emissions as part of regular checks of gas infrastructure
- Many of found leaks were closed due to our campaign
Conclusion – what needs to happen in Germany?

• **Monitoring by regulators must be tightened** – more frequent checks of infrastructure to detect leaks as soon as possible

• **Monitoring of gas infrastructure needs to be more thorough**, i.e. through mandatory use of infrared cameras

• **Federal Environment Agency** needs to rely more on measurements instead of calculations

• **Thresholds for reporting of emissions to regulators** by the operator must be reviewed
  
  • New information on climate warming effect of methane to be taken into account
  
  • GWP20 in addition to GWP100 included into national inventory
  
  • Issue of operators evading reporting of emissions must be tackled

• **Political debate on fossil gas exit date** needs to be accelerated
Conclusion – what needs to happen on EU level?

- **EU methane legislation** needs to consider emissions inside and outside of Europe, as well as emissions from the petrochemical industry
- Monitoring, Reporting and Verification (MRV) as well as Leak Detection and Repair (LDAR) programs need to be mandatory
- **Ban on routine venting and flaring**
- **Methane pricing model** needs to be introduced, alongside an emissions performance standard for imported fossil gas

→ EU Parliament with Own Initiative Report calls on Commission to go beyond its original ambition laid out in its Methane Strategy proposal of December 2020
Study „Implementing a methane pricing model for the EU gas market“

- Available at https://www.duh.de/fileadmin/user_upload/download/Pressemitteilungen/Energie/Thema_Gas/2021-09_FOES_DUH_Pricing_Methane.pdf
  - Evaluation of different models for methane pricing including feasibility analysis
  - Combination of methane import fee, EU-internal excise duty on methane and an emissions performance standard judged as best model
  - Methane emissions can be reduced significantly with right mix of measurements & sufficient data base
Thank you!

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