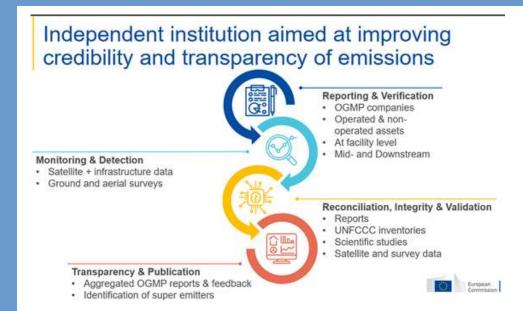


Energy Community

Methane Mondays- Target setting Eva Hennig, Head of Brussels Office

OGMP 2.0 STARTED IN NOVEMBER 2020. IN THE MEANTIME 81 COMPANIES AND INSTITUTIONS HAVE JOINED FROM 25 COUNTRIES.





Energienetze Bayern, schwaben netz and Thüga Energienetze joined for the Thügagroup right from the start. Overall, Germany provides a quarter of the members with 5 DSOs, 9 TSOs, 4 storage operators and 3 gas producers.

We committed ourselves to a strict regime: reporting, reduction targets, measurement, mititgation. However, the real reduction in emissions is always important; most of the money and effort must be invested in this.

With the submission of our first implementation plan, all three companies received the "Gold Standard" as first movers. Still, we have to deliver all our reports and measurements within the timeframe.

We are intensely involved in the work of OGMP, the European and German associations, and the working groups of the Thüga group in order to support as many companies as possible in their work.

The 3 companies are part of the German DVGW-lead measurement program to update and extend the current official emission factors of the UBA. This shall help the 740 DSO in Germany to calculate their emissions in greater detail and to identify measures to reduce them.

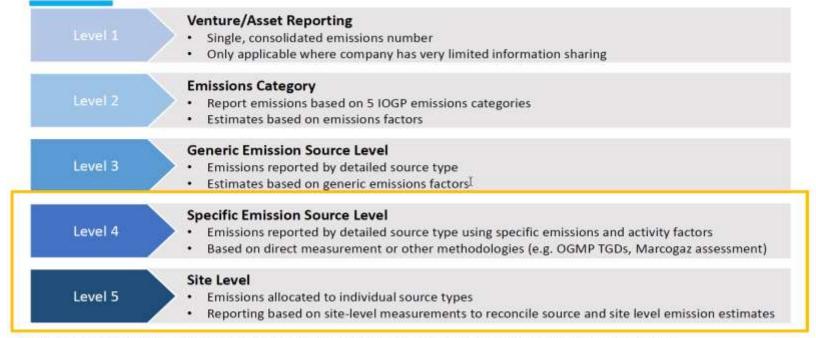


All 3 companies have invested several 100 million euros in the renewal and expansion of the networks in the last 30 years, which means that they are in excellent condition. This has 2 very big advantages for the region

- the methane intensity is already at 0.1% and lower, calculated with the standard values of the UBA. We are convinced that the measurement campaign will show that we are emitting even less.
- Due to the High percentage of plastic pipes and corrosion-protected steel pipes, the nets are already largely hydrogen-ready

Aktiengesellschaft Be

WE STARTED WITH THE CALCULATION OF THE EMISSIONS WITH THE OFFICIAL EMISSIONS FACTORS OF THE GERMAN ENVIRONMENTAL AGENCY



For DSO the differentiation between Level 4 and 5 is still in discussion. The technologies used for the top-down approach in the upstream sector can be very different to the top down approach at the distribution sector.

In the local environment helicopter or drones are often not possible. Wrapping a hole station is one idea, using vehicles another one.

*Gold standard is achieved when all assets with material emissions and where there are no demonstrable impediments report at level 4 and demonstrate efforts to move to level 5.

The right measurement technology has to fit the purpose. Concentration measurements are very efficient e.g. in stations as many devices are needed for the technical personal and the number of flanges to be tested is not so large. For special measurements within the campaign we will test all kinds of cameras. Some technologies don't work for very small leaks, other are good because they visualize.

Tabelle 161: Verwendete Methan-Emissionsfaktoren für die Kategorie 1.B.2.b.v

Einrichtung	Wert	Methode	Quelle
Niederdruck aus Stahl und dukt. Guss	372 kg/km	Tier 3	Expertenschätzung
Niederdruck aus Kunststoff	51 kg/km	Tier 3	Expertenschätzung
Niederdruck aus Grauguss	445 kg/km	Tier 3	Expertenschätzung
Mitteldruck aus Stahl und dukt. Guss	207 kg/km	Tier 3	Expertenschätzung
Mitteldruck aus Kunststoff	28 kg/km	Tier 3	Expertenschätzung
Hochdruck aus Stahl und dukt. Guss	62 kg/km	Tier 3	Expertenschätzung
Hochdruck aus Kunststoff	0,3 kg/km	Tier 3	Expertenschätzung
Obertagespeicher	5 kg/Tsd.m3 (Vn)47	Tier 2	Expertenschätzung
Gasdruckregel(mess)anlagen	256 kg/No	Tier 2	Expertenschätzung
Erdgasfahrzeuge	0,33 kg/Fahrzeug	Tier 2	Expertenschätzung



FIRST EXPERIENCES: A PROPER AND DETAILED DATABASE OF ALL ASSETS IS ESSENTIAL FOR THE CALCUALTION OF THE EMISSIONS AND THE TARGETS

We set our targets after the first calculation of the emissions, and not before.

- The target has to fit the grid. If you already have a very low methane intensity a high reduction target is not achievable.
- Auditing the emissions and target achievements withing the environmental management system EN 14001 is a lot of work but adds to trust.
- High emissions factors result in high theoretical emissions which might not be there in reality. High targets might fall apart after the first measurements.
- It is crucial that the asset data are correct and complete.
- Go the last mile! It's imperative to discuss with the operators in the field about their ideas and experiences. You will be amazed how many good ideas are out there. And what is realistic and what not.
- Calculating the emissions of events e.g. detected leaks from corrosion or excavators attacking pipes require a detailed description with diameter, volume flow, frequency of LDAR, gas-stopps/valves, timing with stopwatch etc. If the operators are sensitized you will have better data to calculate.
- Operational losses need a variety of special calculations: decommissioning
 of renovated network sections, putting new network sections into operations,
 flares, exchange of grid components as fittings or meters, Each theory
 for a calculation method has to be verified in the field.





