

OIL AND GAS METHANE PARTNERSHIP MODULE

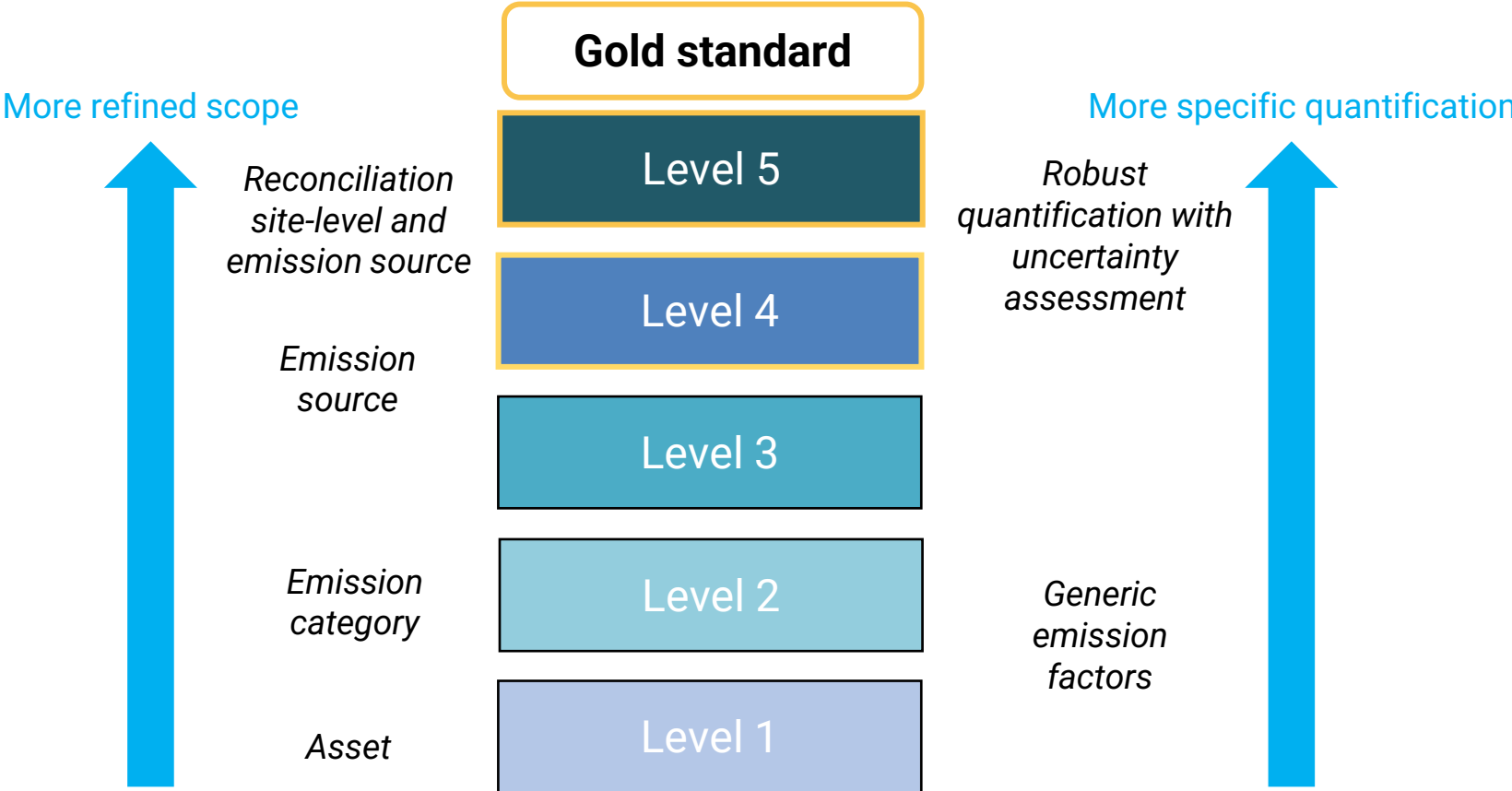
PRESENTATION 2 – The reporting levels





TO UNDERSTAND HOW TO REACH THE DIFFERENT REPORTING LEVELS OF THE
OGMP 2.0 FRAMEWORK

The 5 levels: a “common language” for reporting emissions



Level 1: generic estimate at country/venture/asset/facility scale



Asset/facility scale

Emissions =

Activity factor
At asset/country/
facility level

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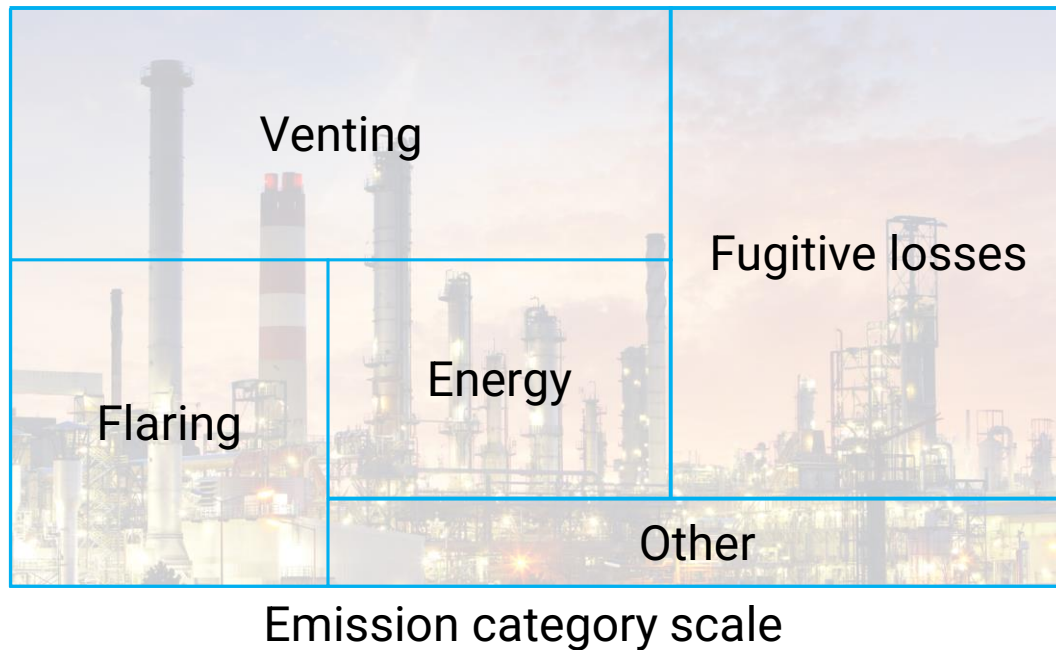
Emission factor
Generic

Example:

$$\text{Emissions} = \text{Volume of gas produced} \times \text{Average emissions per volume of gas in the country}$$

Level 2: generic estimates at emission category level

For upstream*:



Estimates based on generic emission factors or other generic calculation, typically:

$$\text{Emissions} = \text{Activity factor} \times \text{Emission factor}$$

At asset/country or emission category level

Generic but specific to the emission category

Example:

$$\text{Emissions} = \text{Volume of gas produced} \times \text{Average emissions per volume of gas in the country} \times \text{Share of emissions attributed to vents (IPCC factor)}$$

* For mid-downstream: Fugitive losses, Venting and Incomplete combustion

Level 3: generic estimates at emission source level



Emission source scale

$$\text{Emissions} = \text{Activity factor} \times \text{Emission factor}$$

At emission source level Source-level generic emission factors

Example:

$$\text{Emissions} = \text{Hours of operation of the compressor} \times \text{Emissions per hour and per compressor for the specific type of compressor}$$

- 14 core emission sources:**
- Gas well hydraulic fracturing
 - Oil well casinghead
 - Purging and venting
 - Incidents, emergency stops and malfunctions
 - Liquids unloading
 - Reciprocating compressors
 - Leaks
 - Incomplete combustion
 - Unstabilized liquid storage tanks
 - Leaks and permeation from underground pipes
 - Pneumatic controllers, pumps, shutoff valves and control instruments
 - Centrifugal Compressors
 - Glycol Dehydrators
 - Flare Efficiency

Level 4: specific estimate at emission source level



Emission source scale



Measurement-based emission factors

(based on a representative sample)

Emissions =



Results of engineering calculations

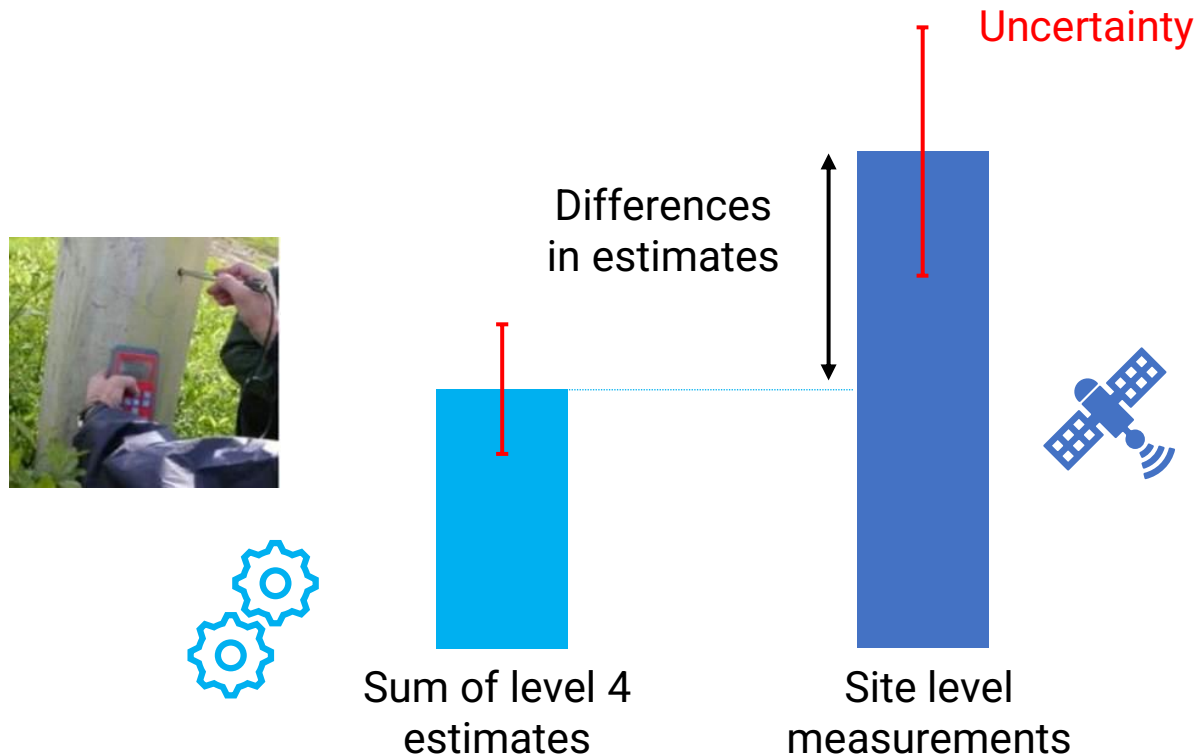


Results of process simulation

other methods...

Guidance on accepted methodologies is given source by source in the TGDs

Level 5: reconciliation between site-level and source level estimates



Statistical analysis to **reconciliate data**:

- Determine the best, **consolidated emission estimate** for the asset.
- Determine the associated **uncertainty**.
- **Understand the discrepancies** between the estimates to improve reporting.
- Include **all potential sources** in the mitigation strategy

- Findings can be extrapolated to similar facilities with similar conditions.
- Level 5 required on most assets to reach the gold standard.
- Guidance can be found in «Reconciliation and Uncertainty» document

Link to «Reconciliation and Uncertainty» <https://www.ogmpartnership.com/uncertainty-and-reconciliation-guidance>

Levels from 1 to 5 with more refined scale and more specific quantification methods.
Reaching level 5 is part of the requirements for the gold standard.



Thanks for your attention.

Training material developed by: **CARBON LIMITS**

In collaboration with the **UNEP OGMP 2.0 Team**

