



Monthly Emissions to air data reporting – minimum viable dataset

Specification, requirements and usage

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1 Background

The following document describes requirements and guidelines with respect to reporting of emission data on a monthly basis for a given field.

The specification for reporting of monthly emissions and associated requirements has been defined as a joint operator and partner scope running under the project defined as “In license data sharing”, which has been running under the umbrella of the Offshore Norge organization. The “In license data sharing” project has as a goal to identify common challenges on the Norwegian continental shelf with emphasis on data sharing within a license or field. Once a high value creating challenge has been identified it will be prioritized through the project itself where the ultimate outcome is that a specific project is defined to realize the identified business wins through a joint project effort under the governance of Offshore Norge. Each project is using agile methodology through a set of workshops where the goal is to not only showcase the potential upside, risks, options and so on but also to define a “minimum viable dataset” to be share similar between all licenses and fields on the NCS. In the case of “Emission data” this was run as a joint industry project in 2022 between operators, partners and Offshore Norge, where the outcome has been a business case (describing aspect of why to share this information) and a defined minimum viable dataset that has been agreed upon by all operating and partner companies on the NCS.

2 Governance of the defined monthly emission data standard

Governance and maintenance of the defined emission data standard is done through Offshore Norge and the “Asset and license management” forum. Any changes or suggested improvements needs to be taken through the above-mentioned forum. Offshore Norge will maintain a change log and back log for the standard and the standard will be revised when needed as defined through the “Asset and license management” forum.

3 Data categorization

All defined data elements within this dataset are classified according to the categories below.

1. **Required:** the information is required and should always be reported.

2. **Recommended**, the information is important but not available for all fields/platforms/licenses. If available, it should be reported. Example is that e.g., for an exploration license you cannot report production related emissions hence production related emissions fall in the category recommended.
3. **Optional**, the information is not important as part of the basis minimum viable dataset, but in some situations, it could be regarded as essential and needs to be shared e.g., due to contractual obligations.

3 Sharing and time scope

Sharing of this dataset is agreed to be on a license or field basis and the dataset should be shared similar across all licenses and fields without any deviations or openings for alternative datasets.

The dataset is to be shared regularly on a monthly basis and the actual time period (data resolution) to be used for reporting of the different emission data categories is defined in the sections below.

Sharing is to be done using the defined data standard from this project (standard defines a standard JSON data format or an excel template that can be used to share this dataset) and the data will after upload to the Collabor8 Subsurface solution be made available to the partnership in a digital form.

4 Naming conventions

When reporting this dataset official names should be used as defined on the NPD fact pages. Official names and associated official NPD id should be used for reporting on entities field, license, installation, rig, vessels.

The data standard defines how to populate official names and NPD ids as part of the reporting requirements.

5. Units of measurements and rounding

Emissions for CO₂, NO_x and CH₄ should be reported in mass in metric tons. CO₂ intensity should be reported in kg/Sm³ or kg/BOE.

The maximum significant number of decimals for all numbers is 2.

All time periods should be reported in Norwegian times and formatted according to ISO 8601 (YYYY-MM-DD).

6 Reporting entities

In cases where emissions should be reported as part of a tie-in situation it is the host operator that has the responsibility to report associated emissions.

The emission data standard defines 2 dimensions of reporting entities (a reporting entity is defined as being the entity to which a given reported data element belongs to, e.g., a field)

1. Source entity – is defined as being the entity from which the data was reported. A source entity is used to be able to support needs to report data from the same field from several different locations (e.g. fuel/flaring can occur not only on the host platform but also due to e.g. third party processing as handled by a different host operator)
2. Data entity – is defined as being the entity to which the data is valid for and relates to

When reporting emissions, the data reported on when tagged as belonging to the field dimension is the actual emissions related to the field itself. If total emissions related to a given host, it should be reported as belonging to the platform where the emissions is captured.

7 Reporting process

The minimum viable dataset should be reported through the Collabor8 Subsurface solution (<https://collabor8.no/services/subsurface>) using the agreed data standard for emissions. The

data can be reported either manually or automatically in a machine-to-machine fashion. The data standard defines 2 standard ways of reporting the data, either using a standard Excel template or using a JSON data file.

8 Data quality and expected usage

All emissions data reported through this standard should be regarded as the “best available number at that given point in time”, meaning that all reported numbers should be regarded as temporary and is expected to change at any given point in time. This reported dataset does not replace the annual emissions reporting as done through the Collabor8 Footprint database where the target receiver is the environmental governmental bodies in Norway.

The expected usage of this dataset is to give the best available estimate indication of emissions related data at that given point in time, hence it should be regarded as an indicational dataset for any given month. As this dataset is regarded as being temporary and representing the best available data at that point in time it means that in case of errors detected this will typically be addressed in the next reporting period.

9 Defined minimum viable dataset and data categories

Data categories					
REQUIRED		the information is required and should always be reported			
RECOMMENDED		the information is important but not available for all fields/platforms/licenses. If available, it should be reported. Example is that e.g., for a exploration license you cannot report production related emissions hence production related emissions fails in the category recommended.			
OPTIONAL		the information is not important as part of the basis minimum viable dataset, but in some situations, it could be regarded as essential and needs to be shared e.g., due to contractual obligations			
CO ₂					
Element	Period	Unit of measurement	Reported on	Category	Description
Total emission	month	tonnes	field, license	OPTIONAL	Total CO2 emissions from mobile units and production
Emission from production fuel gas	month	tonnes	field, license	RECOMMENDED	Fuel gas (includes any commercial components applied, standard today)
Emission from production flare gas	month	tonnes	field, license	RECOMMENDED	Flaring (gas)
Emission from production consume diesel	month	tonnes	field, license	RECOMMENDED	Emissions related to diesel usage
Emission from mobile units fuel gas	month	tonnes	field, license	RECOMMENDED	Fuel gas from drilling and LWI units
Emission from mobile units flare gas	month	tonnes	field, license	RECOMMENDED	Flaring (gas, oil) from drilling and LWI units
Emission from mobile units consume diesel	month	tonnes	field, license	RECOMMENDED	Emissions related to diesel usage from drilling and LWI units
Intensity	month, year to date	kg/Sm ³ or kg/boe	field, license	OPTIONAL	
NO _x					
Element	Period	Unit of measurement	Reported on	Category	Description
Total emission	month	tonnes	field, license	OPTIONAL	Total NO _x emissions from mobile units and production
Emission from production fuel gas	month	tonnes	field, license	RECOMMENDED	Fuel gas
Emission from production flare gas	month	tonnes	field, license	RECOMMENDED	Flaring (gas)
Emission from production consume diesel	month	tonnes	field, license	RECOMMENDED	Emissions related to diesel usage
Emission from mobile units fuel gas	month	tonnes	field, license	RECOMMENDED	Fuel gas from drilling and LWI units
Emission from mobile units flare gas	month	tonnes	field, license	RECOMMENDED	Flaring (gas, oil) from drilling and LWI units
Emission from mobile units consume diesel	month	tonnes	field, license	RECOMMENDED	Emissions related to diesel usage from drilling and LWI units
CH ₄					
Element	Period	Unit of measurement	Reported on	Category	Description
Total emission	year	tonnes	field, license	OPTIONAL	Total CH ₄ emissions from mobile units and production
Emission from production	year	tonnes	field, license	RECOMMENDED	Total CH ₄ emissions from production
Emission from mobile units	year	tonnes	field, license	RECOMMENDED	Total CH ₄ emissions from mobile units (drilling, LWI)