



NORWEGIAN PETROLEUM  
DIRECTORATE



# **RNB2021** General Guidelines



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## 1 The purpose of the reporting, timetable etc.

### 1.1 The purpose of the reporting

Pursuant to Section 50a of the Regulations to the Petroleum Act, operating companies shall submit data for use in the revised national budget (RNB).

*“Reporting shall include corporate financial data, projects, resource volumes and forecasts for production, costs and environmental discharges/emissions as specified by the recipient.”*

Each autumn, 15 October, all operating companies shall submit data and forecasts for their respective operated fields, discoveries, transportation- and utilization facilities (TUF).

The reporting to the RNB comprises part of the basis for the Government's oil and environmental policies, the fiscal and national budget. These forecasts are important, and great emphasis is therefore placed on ensuring that high-quality reporting is provided within the stated deadlines.

The Norwegian Petroleum Directorate (NPD) quality-assures and organizes the data reported by the companies. The NPD also prepares its own estimates and classifies the resources based on its own assumptions. Based on this, the NPD updates the resource accounts for the Norwegian shelf and prepares overall forecasts. The forecasts are submitted to the Ministry of Petroleum and Energy (MPE) and forwarded to the Ministry of Finance (FIN).

The forecasts and the resource accounts are incorporated in several analyses and various publications, such as the “The petroleum resources on the Norwegian continental shelf” and the website “NorskPetroleum.no”.

### 1.2 Reporting deadlines/-format etc.

#### Schedule

The NPD will make the following available to the operators by 1 September:

- Cover letter
- Reporting file
- Guidelines for completing the reporting file for the current RNB

The reporting file can be downloaded from our web site, [npd.no](http://npd.no). The operators' deadline for submitting the reporting file to the NPD is **15 October**. It is important that you deliver at the deadline, in order for the NPD to meet subsequent deadline with the MPE.

The guidelines are provided in English. The reporting file is also in English but contains some Norwegian phrases. There are technical reasons for this and there is no translation to English in the reporting file. If this is a problem, please contact the NPD.

If there are **significant changes** to the reporting as a result of **budgetary processes** in the production licenses' management committees after 15 October, please contact the NPD as soon as possible to clarify whether there is a need to submit an updated reporting file.

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## Reporting format

Data shall be reported electronically in accordance with the format given in the reporting file (macro enabled excel file). No changes shall be made in the layout of the spreadsheets, nor can there be any links to other spreadsheets in the file submitted to the NPD.

The operators are requested to follow the naming of the reporting files as specified in **column I in the project list**. The file name must not contain dates or any other information.

## 1.3 Changes from last year's reporting

There are changes/clarifications in the Guidelines to RNB2021, in the following areas:

- Chapter 5.1 regarding reporting of RC8. Details on exploration drilling and expected outcome for the next years are no longer needed in this report. Relevant information will be collected in the Annual Status Reports for Fields in Production.
- Chapter 6.3.5 Reporting of resources and profiles for commercial agreements and chapter 6.10 Project attributes. An attribute to identify such projects are now available in the drop-down list for Project type. The purpose is to avoid unnecessary error messages in the consistency checks. This shall be filled in for all projects of this kind, regardless of resource class.
- Chapter 9.2 Consistency check #17. The check on gas balance is unchanged, but an additional item regarding follow-up on controls in the Gassco sheet "1. Gas Export" is included. If the cell area V5:V16 contains messages which are not commented in cell area Z5:Z16, there will be a reminder.

## 1.4 Quality Assurance and updates from the operators

It is very important that the operator has carried out an internal check to ensure good quality of the data before submission to the NPD. If the NPD finds errors, lack of information or ambiguities in the received report, the file will be returned with comments entered in the spreadsheet marked "Tilbakemeldingsskjema" (feedback form). The operator must then submit a new, corrected report or response to the comments.

The reporting file also contains several functions for quality assurance. For more information, see chapter 9 – Quality Assurance.

## 1.5 Contact persons

If any questions concerning the reporting, please contact the persons stated below:

Area	Contact	Telephone number	E-mail
General questions and questions regarding the reporting file	Tom Andersen	51 87 62 75	<a href="mailto:RNB2021@npd.no">RNB2021@npd.no</a>
Transmission of data, License to Share (L2S)	Magnar Haugvaldstad	51 87 60 74	<a href="mailto:RNB20201npd.no">RNB20201npd.no</a>

The operator must also state a contact person with e-mail address and telephone number in each reporting file.

## 2 What to report

### 2.1 Main categories: Field, Discovery and TUF

The reporting distinguishes between field, discovery and TUF. The table below gives a definition of the categories.

*Table 2-1 Definition of field, discovery and TUF*

Category	Description
<b>Field</b>	One or more petroleum deposits, which together are comprised by an approved plan for development and operation (PDO) or for which exemption from the PDO requirement has been granted.
<b>Discovery</b>	One petroleum deposit, or several petroleum deposits collectively, which have been discovered in the same wellbore and in which testing, sampling or logging has established the probability of the existence of mobile petroleum (includes both commercial and technical discovery) For discoveries in RC4F, 5F and 7F that are reported as part of a field, the resource estimates will not be published. Several discoveries may be combined in one report, as a development project.
<b>TUF</b>	Transportation and Utilization Facilities includes pipelines, terminals and onshore facilities.

Designation of fields, discoveries and TUF shall be according to the NPD **project list**, see chapter 2.3 - Project list. A drop-down list with names is available in the reporting file, see chapter 5 – Completing the spreadsheet “Generell info og kommentarer” (General info and comments).

### 2.2 Projects in fields, discoveries and TUF

Fields, discoveries and TUF contain one or several **projects**. Project is a basic definition in the NPD resource classification of petroleum (see chapter 3).

**All recoverable petroleum volumes** must be assigned to a **project**. A project represents the connection between a petroleum volume and the decision process, including budget allocation. A project will have a specific level of maturity regarding a decision to whether to proceed (i.e. to spend money). An additional project in a field or a mature discovery can represent development of one or more new deposits, or it can represent a specific **measure** to optimise production on a field

Projects also apply to TUF. An additional project in a pipeline-reporting file can for example be a new pipeline or a new compressor.

Each project should be placed in a resource class based on its maturity, see chapter 3.2 – Resource Classes.

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Several projects can be included in one profile collection, but only if the projects are in the same resource class. It could be relevant to distribute the reporting across multiple profile collections if the projects have different decision progress. For more information, see chapter 6 “Completion of the spreadsheet” – profile 1-15 (= profile collections)

For mutually exclusive projects (targeting the same volume), only the most probable project should be reported.

Delta profiles should be reported in a logical order such that they are addable and give a total realistic production scenario. This applies to all projects with profiles, i.e. RC1-5. The assumptions for the scenario should be described in the text box.

## **2.3 Project list**

This list will form the basis for the reporting and there is a separate process to handle this. Changes to the project list after September 1<sup>st</sup> must be agreed with the NPD. For further information, see [Guidelines for the Project List](#).



## 3 Resource classification

### 3.1 Main terms used

Reporting shall be in accordance with the NPD's resource classification 2016.

Below is a short description of terms used;

#### **Historical production**

**RCO** includes petroleum quantities that have been produced (sold and delivered).

#### **Reserves**

**Reserves** comprise the remaining recoverable, marketable petroleum resources in RC1-3.

Petroleum quantities in projects in production should be reported in RCO+1. The term RCO+1 has been established to show the estimated original recoverable quantities from a project based on the current understanding of the size of the quantities not yet produced. Sold and delivered quantities are also included.

#### **Contingent resources**

**RC4, 5, 6 and 7** represent recoverable petroleum quantities in projects where a development decision has not yet been made.

#### **Undiscovered resources**

**RC8** comprises undiscovered petroleum quantities in mapped prospects. The total risk-weighted recoverable resources in prospects that lie partly or completely within the field's/discovery's licensed area shall be reported.

#### **Effective date**

Expected resource class as of 31.12. of the current year shall be used as a basis. If a decision is expected by the end of the current year (31.12.), the project shall be reported in the resource class that results from this decision. An example of this is if a Plan for Development and Operation (PDO) is expected to be submitted to the authorities before the end of the year, the project shall be reported in RC3.

Note that for recovery projects, both volumes in-place and recoverable volumes shall be reported. Low, base and high estimates shall be reported for the petroleum volumes. For projects with project category A, ref resource classification, no in-place volumes shall be reported.

Projects related to pipelines and terminals are classified according to decision status (planned, decided, approved), similar to classification of recoverable volumes.

## 3.2 Resource Classes

An overview and the main tables from NPD's resource classification 2016 are shown below.

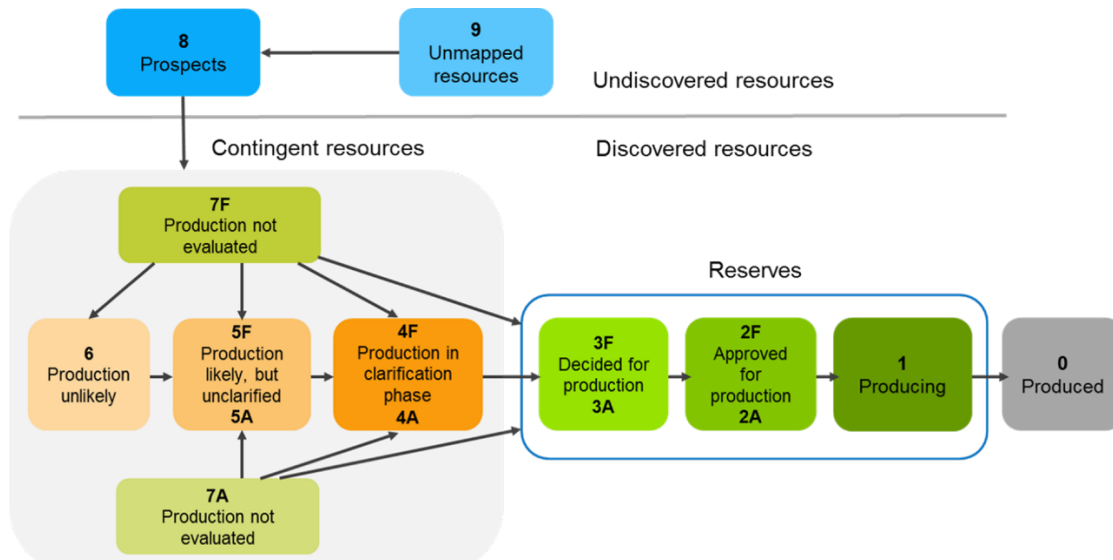


Figure 3-1 Overview of NPD's resource classification 2016

Table 3-1 Overview of classes, resource classes (sub-classes), project categories and uncertainty categories

Class	Resource Class (Sub-class)	Resource Class Code	Project category	Uncertainty - category
	Produced	RC0		
<b>Reserves</b>	In production	RC1		L, B, H
	Approved for production	RC2	F, A	L, B, H
	Decided for production	RC3	F, A	L, B, H
<b>Contingent resources</b>	Production in clarification phase	RC4	F, A	L, B, H
	Production likely, but not clarified	RC5	F, A	L, B, H
	Production unlikely	RC6		L, B, H
	Production not evaluated	RC7	F, A	L, B, H
<b>Undiscovered resources</b>	Prospects	RC8		L, B, H
	Unmapped resources	RC9		L, B, H

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Table 3-2 Classes and sub-classes

Class	Code	Resource Class (Sub-class)	Definition	Explanation
	RC0	Produced	Petroleum that has been produced and sold.	<p>The resource class comprises volumes that have been produced for sale from fields in production and fields that have been shut down.</p> <p>Petroleum that has been delivered free of charge or as compensation to another party is not regarded as having been sold. If this volume is subsequently sold, this will be included in RC0 from the other party.</p> <p>Produced volumes are not considered reserves but are used to estimate original reserves.</p>
Reserves	RC1	In production	Remaining recoverable and marketable petroleum volumes in projects that have started production.	<p>Includes petroleum that is expected to be sold from fields that have started producing.</p> <p>Also includes remaining petroleum volumes in fields that are temporarily shut down.</p> <p>Volumes that have been purchased and are expected to be sold at a later date, shall not be included. Petroleum that was received free of charge, or as compensation from another party and that is expected to be sold at a later date, shall be included in this classification.</p>
	RC2	Approved for production	Recoverable and marketable petroleum volumes in projects that are approved but have not yet started production.	<p>Mainly comprises petroleum in fields that are under development and have an approved PDO or PDO exemption</p> <p>For operational fields, major projects (e.g. further development under a new or changed PDO) <u>shall</u> be included here as a separate project.</p> <p>Optimisation within approved plans, such as measures for improved recovery that were adopted by the licensees but have not been implemented, can be classified as separate projects and be included in this resource class.</p>
	RC3	Decided for production	Recoverable and marketable petroleum volumes in projects that the licensees have decided to implement, but without the necessary authority approvals	<p>Projects that have been given the go-ahead by the licensees, but do not yet have the authorities' PDO approval or a PDO exemption.</p> <p>The project must be reported in this resource class when implementation (BOG) of the project has been decided by the licensees.</p> <p>This resource class also contains additions from deposits that are not covered by an already approved PDO for fields with resources in RC1 and 2, if the implementation decision (BOG) has been made and authority approval is required.</p> <p>This resource class is also used for petroleum volumes in fields that will be sold at a later date without substantial investments, but where the production schedule has not yet been approved by the authorities. This is mainly gas that, when recovered early, will reduce the opportunities for optimal oil production.</p>

Class	Code	Resource Class (Sub-class)	Definition	Explanation
Contingent resources	RC4	Production in clarification phase	Recoverable petroleum volumes from projects in the planning phase, where concrete activity is ongoing to clarify how to execute production.	The project must be reported in this resource class when a decision to concretise (BOK) has been made, and up to the decision to implement (BOG).
	RC5	Production likely, but not resolved	Recoverable petroleum volumes from projects where production is likely, but not resolved.	The project must be reported in this resource class when a decision to initiate project (BOI, Start of feasibility studies) has been made, and up to the decision to concretise (BOK).
	RC6	Production is unlikely	Discovered petroleum volumes in discoveries where, even in the long term, profitable production is not expected.	This category contains petroleum volumes that are considered too small to be relevant for production, or that require considerable changes in technology, change in access to infrastructure, significantly higher price expectations, etc., in order to ensure profitable recovery.
	RC7	Production not evaluated	Recoverable petroleum volumes in immature projects that only have a preliminary resource estimate.	Applies to discoveries where a discovery evaluation report has not yet been prepared, or that are considered too immature to be moved to another RC for other reasons.  Also includes petroleum volumes in potential projects to increase the recovery in fields and discoveries that already have resources in more mature resource classes.  The projects are moved from this RC when a decision to initiate project BOI is made, or when the project is shelved.
Undiscovered resources	RC8	Prospect	Estimated, but unproven recoverable petroleum volumes in mapped prospects.	The prospects have an associated discovery probability that describes the possibility of proving petroleum volumes upon drilling.  Risk-weighted estimates that represent calculated petroleum volumes multiplied by the discovery probability for each prospect are used for aggregation.
	RC9	Unmapped resources	Estimated, but unproven recoverable petroleum volumes associated with geological plays.	Plays contain potential petroleum volumes associated with leads, as well as the number of prospects that can be mapped in the future (postulated prospects).  Resource estimates reflect estimated amounts multiplied by the discovery probability.

Table 3-3 Project categories<sup>1</sup>

Project-category	Definition	Explanation
<b>F</b>	First development project for a deposit	<p>A project is classified as <b>project category F (First)</b> when it is the first development project for one or more deposits. Used for projects in RC2,3,4,5 and 7.</p> <p>Projects with additional resources in new deposits in fields/discoveries must also be classified as F (First) when inclusion of the resources will increase the petroleum volumes in place in the field/discovery.</p> <p>Projects must have a PDO or PDO exemption.</p>
<b>A</b>	Project to optimise the recovery from a deposit	<p>A project is classified as <b>project category A (Additional)</b> when recoverable petroleum volumes associated with the project lead to improved recovery of petroleum in place (increased recovery rate) in deposits that are in production or with projects classified as F (First). Used in RC2, 3, 4, 5 and 7.</p> <p>The resource volumes in A-projects may be negative in some instances, for example when improved oil recovery requires gas injection, or where improved recovery entails an accelerated production. Also includes projects that can extend production by reducing costs.</p>

<sup>1</sup> Project categories are not used for projects in RC0, 1, 6, 8 and 9

Table 3-4 Uncertainty categories

Uncertainty category	Definition	Explanation
<b>Low estimate (L)</b>	Low estimate of petroleum volumes that are expected to be recovered from a project.	<p>The low estimate must be lower than the base estimate. The probability of being able to recover the indicated estimate or more must be shown (e.g. P90).</p> <p>Compared with the base estimate, the low estimate should express potential negative changes with regards to mapping of the reservoir, reservoir/fluid parameters and/or recovery rate.</p>
<b>Base estimate (B)</b>	Best estimate of petroleum volumes that are expected to be recovered from a project.	<p>The base estimate must reflect the current understanding of the scope, properties and recovery rate of the reservoir. The base estimate will be calculated using a deterministic or stochastic method. If the base estimate was calculated using a stochastic method, the base estimate shall be stated as the expected value.</p>
<b>High estimate (H)</b>	High estimate of petroleum volumes that are expected to be recovered from a project.	<p>The high estimate must be higher than the base estimate. The probability of being able to recover the indicated estimate or more must be shown (e.g. P10).</p> <p>Compared with the base estimate, the high estimate should express potential positive changes with regards to mapping of the reservoir, reservoir/fluid parameters and/or recovery rate</p>

## 3.3 Problem areas

### 3.3.1 Clarification of the distinction between contingent resources and reserves

Projects with additional volumes in fields must be classified either as reserves or as contingent resources.

The following criteria shall be applied to classify projects as **reserves**:

1. The project is regarded as normal optimization within approved plans, e.g.:
  - Better reservoir management
  - Improved sweep
  - Well maintenance/recompletions
  - 4D seismic
  - Improvements to existing production facilities (improving robustness/removal of bottlenecks)
2. Well projects that have a **high probability** of implementation, where the following conditions are met:
  - Wells can be drilled from an available drilling facility
  - Wells can be drilled with available technology
  - Wells that are a part of a long-range plan for future activity within approved drainage areas

The probability of implementation should take into account:

- Economy of drilling targets based on expected production and all costs related to drilling and maintenance of drilling facilities.
- Technical feasibility of drilling with respect to depleted reservoir, faults, rock mechanical problems, complex reservoir and well integrity.
- Availability of drilling facility without additional major investment. For investment in new drilling facility, the date when the new facility will be completed, should be taken into consideration.
- Availability of infrastructure such as sub-sea installations and risers.

Quantities from all projects with wells mentioned above shall be reported as reserves in resource class 0+1, 2 or 3. If the operator wishes, quantities from well projects classified as reserves can be reported in separate consistent profiles, as follows;

- ◆ RC0+1: Quantities from projects with wells in production
- ◆ RC2: Quantities from projects with wells with approved budget
- ◆ RC3: Remaining quantities from projects with wells that can be reported as reserves

Well projects planned to be drilled but which do not meet the criteria above, will be linked to the quantities of petroleum which are classified as **contingent resources** in resource class 4, 5, 6 or 7.

Examples of other projects with contingent resources on fields are:

- ◆ **Recovery methods under evaluation or significant expansion** of existing recovery methods that will yield extra volumes and a higher recovery factor if implemented (project category A), or
- ◆ **Segments/ parts of the reservoir** not currently PDO-approved, and which will yield increased STOOIP/GIIP (project category F), or
- ◆ Changes to new form of operation, new or modified facility that will yield higher/accelerated production and possibly also lower costs.
- ◆ Projects that will result in significantly longer lifetime for the field.

In all cases, it is a requirement that the project must undergo a defined decision process with milestones/"decision gates" and costs must be associated to the project.

The **reserves** reported should be considered profitable assuming long-term assumptions regarding product prices and operating costs. Projects where most of the investments are sunk costs should be reported as reserves when total cash flow, including contingent resources, are expected to be profitable.

At some time, continued operation for a field will become unprofitable. Dependent on other possibilities for continued operation of the field, the so-called uneconomic tail production should be reported as a contingent resource. If there is a reasonable probability for continued operation based on contingent or undiscovered resources, not restricted to current license acreage, this should preferably be reported in RC5A. If more speculative, the resources could be reported in RC7A.

### 3.3.2 RC6 – fields and discoveries

RC6 is used for deposits which, even in the long-term, probably cannot be recovered profitably and resources in minor, non-tested discoveries where recovery is not very likely. If the deposit is a supplementary resource to a field, it is reported under the field. Stand-alone discoveries are to be reported separately.

Improved recovery measures on fields (project category A) which have been evaluated and found to be unprofitable, shall not be reported in RC6. If resources can be realized with other measures later, they could be included in RC7A.

### 3.3.3 Undiscovered resources in/nearby fields and discoveries

Undiscovered recoverable resources in or nearby fields and discoveries will either comprise prospects or undrilled segments in the field/discovery, which for different reasons are not defined as a separate prospect.

The main rule is that undiscovered, recoverable risked volumes should be reported in RC8. Risked volumes are calculated by multiplying expected recoverable petroleum quantities, given a discovery, by the probability of making a discovery. The total of risked volumes that lie completely or partly within own licensed area and which, given discovery, can be recovered in connection with the field/discovery, shall be reported. Prospects that extend over the borders of the production licence, or into adjoining production licences are to be reported as total risked volumes. In some cases where the discovery probability is high, and the volumes are included in the base of a development solution, undiscovered resources may, in agreement with the NPD, be categorised differently.

## 4 The reporting file

The reporting file has been prepared in a macro enabled excel file. The file contains several built-in macros and it contains multiple calculations and linking of data between sheets in the file.

Furthermore, information is uploaded to in-house databases. It is therefore important that the structure of the file remain unchanged.

**No changes shall be made in the layout of the spreadsheets, except for entering data in the white cells.**

Emphasis has been placed on validation of data in the reporting file. This takes place in two ways, by:

- controlling the entries in cells using list boxes/drop-down menus and other validation of data
- consistency checks of the data after entry

The consistency checks can result in various messages. Possible errors must be checked and corrected, or comments regarding the cause of the message must be provided.

### 4.1 Spreadsheets in the reporting file

The table below shows the spreadsheets in the reporting file.

*Table 4-1 The spreadsheets in the reporting file*

Names of the sheets	Purpose	Comments
<b>Innledning</b>	Information to the report issuer	No data to be filled in
<b>Generell info og kommentarer</b>	Basis information on fields, discoveries, TUF. For fields and discoveries, resource information and information on exploration activity should also be included.	Resource estimates for RC6-8.  New Profile collections (Profilsamlinger) can be opened from this file.
<b>Tariffinntekter</b>	Give an overview of income from use of facilities by others.	Should not be used for discoveries.
<b>Cost Control</b>	Quality assurance.	Provide some data/comments.
<b>Profilsamlinger (Profil_1, _2, _15)</b>	Yearly data, resource information and information on projects that has not been decided and production start. ("Project attributes") Consistency checks.	Projects in RC0, 0+1, 2, 3, 4 and 5 should be reported in the profiles. Sheets can be opened from "Generell info og kommentarer" and must NOT be removed. Please use Profil_15 for commercial data
<b>Profil_Total</b>	Sum of all profile collections Total overview – field reporting.	No data to be entered. Can be opened by the report issuer.
<b>Månedssdata</b>	Monthly values for the next calendar year.	
<b>Ressursoversikt</b>	Summary of data from the sheets - Generell info og kommentarer og Profil samlinger.	No data to be entered.
<b>Gassco</b>	Provide information to Gassco	This is the front page to the Gassco main data collection (GMDC). Other reporting sheets can be opened from this page. Separate guidelines from Gassco are available at <a href="http://myplace.gassco.no">myplace.gassco.no</a> .



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The operators are requested to fill in the comment boxes in the reporting file. It is important for us to have updated information on the projects as well as changes in the forecasts for each project. This is also very useful in the quality control of the data sets.

Regarding discoveries in RC4 and 5 the operator is requested to use the general comment box to briefly describe the concept.

## The spreadsheet colour codes:

Do not complete
Do not complete
Optional to complete
Must/can be completed

- Grey and yellow cells shall not be completed by the operator. Grey and yellow cells contain either information obtained elsewhere in the reporting file, or data calculated from submitted data. Some cells are shaded grey depending on resource class or project type. Other colours might be in use to highlight new items in the file.
- Light grey cells are optional to complete. In some cases, data are available even though the maturation level suggests otherwise. These cells are shaded light grey depending on resource class.
- White cells shall/may be completed by the operator. Some cells will generate an error message if invalid values are entered.

## 4.2 General information – how to complete the reporting file

Recommended sequence for entering data.

Start completing the file at the top of the spreadsheet "Generell info og kommentarer" by completing the area "1) General information". For fields and discoveries, then proceed to the tables under "2) Resource overview" to enter (2a) resources in place for all resource categories and (2b) recoverable resources in RC6-8. Recoverable resources and reserves in classes lower than 6 must be stated directly in the relevant profile collection. Profile collections are opened as needed.

During completion, enter the data cell by cell or paste in the data from other sources. Note that the paste function is limited. There are locked cells with formulas in the spreadsheets which make it impossible to paste in larger areas, try pasting lesser amounts of data at a time.

The function "**Edit – Paste Special - Values**" **must be used** when pasting data into the spreadsheets. Do not use the command "Ctrl-V" or other methods, this will cause problems.

## 5 Completing the spreadsheet “Generell info og kommentarer”

### 5.1 Completing “General information”:

First, enter **the name of the field/discovery/TUF**. Pick a name from the drop-down list in cell D7. It contains official names for fields and discoveries as well as designations for pipelines and facilities. When a name is selected, many of the cells in this area will be filled in automatically, e.g. information about the contact in the NPD. If the correct name is not in the drop-down list, contact the NPD.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1																
2		Reporting for Revised National Budget 2021														
3																
4																
5																
6																
7		1) General information:														
8		Name of field/discovery/pipeline, etc.:					Area:		Type:							
9		Discovery well (for field):							OD-ID:							
10																
11																
12		Norwegian percentage:			100.00	%										
13		Operator:							Report issuer:							
14		Date:														
15		Contact, NPD:														
16		Telephone:							Contact, operator:							
17		E-mail address:							Telephone:							
18									E-mail address:							
19									Alternative contact:							

Then complete:

- **Norwegian part (%):** The Norwegian percentage (normally 100 per cent) of the resources shall be stated. For those cases where the resources extend into another country's continental shelf, use the latest official allocation of resources between Norway and the other country.
- **Date:** The date of completion of the reporting file should be entered in the format dd.mm.yyyy.
- **Report issuer:** When the spreadsheet is completed by the operator, the report issuer will normally be identical to the stated operator. However, there may be cases where the report issuer is not the same as the operator. Select a name from the dropdown list.
- **Contact information:** Name, phone number and e-mail address and an alternative contact must be given.

### 5.2 Completing the “Resource Overview”

The resource overview shall be completed for all fields and discoveries, unless otherwise agreed with the NPD. Fields and discoveries often have projects also in higher resource classes with associated resources. Projects with resources/reserves in RC0-5 shall be reported directly in the applicable profile collection.

- Expected **resource class as of 31 December**, of the current year shall be used as a basis for the reporting.
- Only the **Norwegian percentage** of the resources is stated according to the distribution provided under "General information".
- In files where several discoveries are reported, resources for each individual discovery should be given separately.

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**Hydrocarbons originally in place** shall be reported for each deposit. Deposit names are to be selected from a drop-down list. Enter the discovery well for the deposit in Column C. Give a brief characterization/description of the deposit in Column D. Note that the name of the deposit used in Column B forms the basis for specifying the deposit in the various profile collections. The hydrocarbons are divided between oil, associated liquid (condensate), associated gas and/or free gas all independently of the sales products. Gas volumes shall be reported at the actual calorific value. All estimates shall be given with uncertainty, i.e. high (preferable P10), low (preferable P90) and base estimate (expected value). Information about risk spread, i.e. the probability that the outcome will be greater than, or equal to the low/high value shall be given at the top right of the table. These values should always apply when uncertainty is reported.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
19																	
20	<b>2) Resource overview</b>											Risk distribution. State probability that the outcome will be greater than or equal to the low/high value:		Low (%)	Base	High (%)	
21																	
22	Recoverable resources and reserves in classes lower than 6 shall be reported directly in the applicable profile collection. A total overview of the reported resources can be found in the Resource Overview - "Ressursoversikt" spreadsheet <a href="#">Resource Overview</a>																
23																	
24																	
25	<b>2a) Originally in place:</b>																
26	Name of deposit (Select from list or enter new)	Discovery well for deposit (Select from list)	Description of deposit	Oil (million Sm <sup>3</sup> )			Associated liquid (condensate) (million Sm <sup>3</sup> )			Associated gas (billion Sm <sup>3</sup> )			Free gas (billion Sm <sup>3</sup> )				
27				Low	Base	High	Low	Base	High	Low	Base	High	Low	Base	High		
28																	
29																	
30																	
31																	
32																	
33																	
34																	
35																	
36																	
37																	
38																	
39																	
40																	
41																	
42																	
43																	
44																	
45	Total:				0.0		0.0		0.0		0.0		0.0				
46																	

**Recoverable resources** shall be stated for all discoveries and fields. Recoverable gas comprises quantities which are sold, physically delivered or planned to be delivered from the asset.

The resources should be reported as sales products; oil, NGL, condensate and gas. The sales products shall, to the greatest extent possible, be reported in the same way as they will be reported to the NPD (DISKOS) in the regular monthly reporting. This means that condensate sold as oil should be reported as oil and associated liquid from gas fields shall be reported as oil if the liquid is sold as oil. If any changes in definition of sales products during the operating period of a field, the date of the change should be reflected in the RNB reporting, meaning that the change should be reflected in the same way as reported to DISKOS.

In the table showing hydrocarbons originally in place, condensate should be reported as associated liquid, regardless of the sales product.

Gas flared or used for fuel shall not be included in the resource base.

For all fields and discoveries high, base (expected value) and low estimates shall be reported for recoverable resources, see chapter 6.3 Annual Profiles for petroleum - production, sale, transport and injection.

For projects in RC1-5, the recoverable resources are normally equivalent with sum of the reported sales profiles. However, some fields and discoveries with commercial agreements for swaps/borrowing/deferral of volumes need special handling (see chapter 6.3.5 for more information).

## Reporting of RC0-5

Recoverable resources in RC0 – 5 shall be stated in the relevant profile collection. The profile collection is displayed by clicking on one of the buttons marked "View Profil\_x". The profile collections can be displayed and then hidden as needed, without changing the set-up.

There should be consistency between profiles and the stated base estimates for recoverable resources, unless special reasons indicate otherwise.

### 2b) Recoverable resources:

#### Resources in Categories 0,1,2,3,4 and 5:

Profiles shall also be entered for projects with resources in Categories 0,1,2,3, 4 and 5. Project resources are reported directly in the profile compilations.

Profile compilations can be accessed by clicking on these buttons:

View Profil_1	View Profil_2	View Profil_3	View Profil_4	View Profil_5	View Profil_6	View Profil_7	View Profil_8
View Profil_9	View Profil_10	View Profil_11	View Profil_12	View Profil_13	View Profil_14	View Profil_15	<b>View Profil_Total</b>

Information about development concepts in RC3, 4 and 5 is provided in the project overview in the Profil\_X spreadsheets

One profile collection (minimum) shall be prepared for each resource class in which a project is reported.

### Recoverable resources RC6 and 7:

For projects in RC6 and 7, the necessary information is provided in the "General info and comments" spreadsheet. Column B gives the name of the project as it appears in the project list. The resource class is obtained from the drop-down list in Column C. Project category "A" or "F" is selected for RC7 from the drop-down list in Column D. The deposit from which the project obtains its resources is selected from the drop-down list in Column F. Information about evaluations that have been performed and further plans for the project are provided in the comments space below the table.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
60	Recoverable resources in Classes 6 and 7																			
61	Name of project	Resource Class	Project Category	Serial Number	Deposit	Year for the decision to initialize (feasibility studies) DGO (yyyy)	Oil (million Sm <sup>3</sup> )			NGL (million tonnes)			Gas (net deliverable) (billion Sm <sup>3</sup> )			Condensate (million Sm <sup>3</sup> )				
62							Low	Base	High	Low	Base	High	Low	Base	High	Low	Base	High		
63																				
64																				
65																				
66																				
67																				
68																				
69																				
70																				
71																				
72																				
73																				
74																				
75																				
76																				
77																				
78	TOTAL RC6							0.0			0.0			0.0			0.0			0.0
79	TOTAL RC7							0.0			0.0			0.0			0.0			0.0
80																				

### Reporting of RC7A:

For projects in RC7A, the resource estimate should reflect a long-term expectation of the final recovery factor for the field/discovery due to anticipated technological development. The low estimate should reflect a long-term expectation of the final recovery factor for the field/discovery assuming a moderate technological development. The high estimate should reflect a more optimistic, long-term objective for the final recovery factor for the field/discovery assuming an expansive technological development.

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## Reporting of RC8:

Estimates shall be given for recoverable resources in prospects in separate production licences/unitized fields that, given discovery, will very likely be tied into the field/discovery they are reported in. Prospects that extend into adjacent production licences are to be reported with the total volumes. It must be ensured that the prospect is not reported simultaneously by other fields/discoveries. The resource estimate must be risk-weighted and should reflect the estimated volumes multiplied by the probability of making a discovery.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
87	Recoverable resources in Resource Class 8														
88	Resource estimates (risked) all prospects:						Oil (million Sm <sup>3</sup> )			NGL (million tonnes) Condensate (million Sm <sup>3</sup> )			Gas (billion Sm <sup>3</sup> )		
89							Low	Base	High	Low	Base	High	Low	Base	High
90															
91	Name of prospects included in the resource estimate:														
101	Comments:														

## Explanation of changes and comments:

Space has been reserved for **explanation of changes and comments** at the bottom of the spreadsheet, paragraph 2c. Explanations of changes in the resource estimates compared with the previous RNB reporting shall be entered here.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
104	<b>2c) Explanation of changes and comments</b>														
105	Detailed explanation of any changes in the resource estimates in relation to the previous RNB reporting, as well as explanations concerning changes in the project that will have consequences as regards changes in production profiles, costs and environmental discharges/emissions.														
106	Please state any transfer of gas to other fields/discoveries for injection or other use. Please state if the gas is given away as payment for a service or if it is sold.														
107															
108															

Changes in total recoverable resource estimates of more than 5% are considered significant and must be explained.

## 6 Completion of the spreadsheet – “Profil\_1-15 (=profile collections)”

### 6.1 Definitions, reporting requirements and the need for comments

#### 6.1.1 Definitions and reporting requirements

**Profile:** All yearly or monthly data under one heading (i.e. column) in the spreadsheet is a Profile.

**Profile collection:** All data in the spreadsheets, Profil\_1, Profil\_2 etc. are a Profile collection.

**Time horizon:** The operator should report complete profiles for the projects, assumed profitable operations beyond the expiry of the license. Relevant columns for costs and emissions, as a result of the production, shall be filled in. If profitability is dependent on other projects, e.g. when reporting an uneconomic tail production, this should be stated in a comment for this project.

**Norwegian part:** If the ownership of a field or discovery is shared with another country, only the Norwegian part shall be reported in the profiles, except for environmental data which shall be reported 100 % if the emissions take place in Norway.

**NOK-values:** Costs and income for the previous calendar year shall be reported in actual NOK values for that year. No price increase/decrease calculation shall be made on cost numbers for previous years. All future costs and income shall be reported in real NOK. Year of reference for real NOK shall be current calendar year.

**Costs:** To the extent possible, reported operating costs should be distributed among the various cost components and correspond with the operating period. For next year, the RNB reporting should be in **accordance with the proposed license budget per 1.10**. Any discrepancies between reported estimate and the operator’s proposed investment budget shall be commented in cell AE28 in the relevant profile sheets.

#### 6.1.2 Type of profiles – overview

For fields, discoveries and TUF in RC0, 0+1, 1, 2, 3, 4 and 5, data on a yearly basis should be reported.

Monthly sales quantities for 2021 for actual profiles shall be reported in a separate spreadsheet, see chapter 8 – Completion of the spreadsheet “Måneddata”.

Types of data included in the profile collections:

- Project overview incl. recoverable resources and project attributes
- Uncertainty on production start should be reported
- Production and injection data
- Sale of petroleum and other revenues
- Physical rich gas/dry gas deliveries
- Costs, (investments, operating costs, tariffs and other costs)
- Environmental data

The scope of the reporting depends on the type of project (field versus pipeline/land facility) and resource class.

There is an area under each profile collection for consistency check of data entered in the profile collection, see chapter 9.2 Consistency checks.

## 6.1.3 Comment boxes – explanation of changes from last year’s reporting

Each profile collection includes comment boxes placed above the production and sales data, investment data, operating costs and environmental data. These boxes shall be used to provide brief information about the profiles. If gas is bought for injection, please state the source field in the information cell “Please name sources of gas purchase”.

Furthermore, the comment boxes are to be filled in if there are significant changes compared with the previous RNB reporting, such as:

- Changes of more than 5 % in the total recoverable resource estimates.
- Changes in one (or more) years in the next ten-year period that is greater than 10 % or more than 1 million Sm<sup>3</sup> oe.
- Changes in total investment of more than 5 %. Changes of more than NOK 500 million in a single year.
- Changes in operating costs amounting to more than NOK 300 million per year.
- As regards Disposal costs and Other income, changes in the total estimate greater than NOK 300 million must be explained.

The comment boxes can be used to explain large variations in the series of number reported this year. For projects that are reported with operating costs in basis profile, the comment box in this profile sheet is used to explain nonconformities. For other projects, the nonconformity explanation is provided in the comment box in the profile sheet, ref. chapter 6.7.

## 6.2 Project overview

The table at the top of each profile sheet must be completed with information about the projects included in the profile collection; project name, resource class and serial number as specified in the project lists. Recoverable volumes shall be stated with uncertainty. Fields and discoveries shall specify which deposit the recovery comes from. The drop-down lists retrieve information from Table 2a in the spreadsheet “Generell info og kommentarer”.

	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA			
1																							
2	Profil_01		0		Hide Profil_1		RNB2021																
3																							
4	Project overview incl. recoverable resources										Gas resources/reserves shall be stated with actual gross calorific value excluding fuel and flare gas.												
5																							
6	Name of project	Resource class	Project category	Serial Number	Oil (million Sm <sup>3</sup> )			NGL (million tonnes)			Gas (net deliverable) (billion Sm <sup>3</sup> )			Condensate (million Sm <sup>3</sup> )			Deposits (choose from drop-down menu)						
7					Low	Base	High	Low	Base	High	Low	Base	High	Low	Base	High							
8																							
9																							
10																							
11																							

The main project should always be reported in Profil\_1. Further profile sheets should be used according to maturation and dependencies. For example, a project depending on implementation of another project should be reported in a profile sheet with a higher number. Note that the resource class is independent on the numbering of profile sheets.

In each profile sheets, multiple projects with the same resource class can be included. The projects reported in the same sheet should have a common project type and decision timeline. Larger projects, where PDO or an application for PDO exemption will be delivered, must be reported in a separate profile sheet. Furthermore, the projects in the resource classes 3, 4 and 5 require information ("prosjektattributter") about the projects, this is described in chapter 6.10 Project Attributes.

## 6.3 Annual profiles for petroleum – production, sale, transport and injection

This chapter includes a description of the reporting of liquid and gas profiles. Please note the following:

- 1) Reporting is requested for the sales product and condensate sold as oil should be reported as oil
- 2) For individual profiles negative rates can occur in some years, for example, a profile for a project that entails acceleration of the oil production or increased gas injection, however the sum of all profiles for a field or discovery should be positive
- 3) Reporting of commercial agreements involving swaps/borrowing/deferral of volumes are described in chapter 6.3.5.

### 6.3.1 Production and injection data

The profiles under the heading "Production and injection data" relate to volumes that are produced and injected in the deposits in the same field, not injection in other fields.

	H	I	J	K	L	M	N
33	Rows for annual values after 2044 can be displayed/hidden by clicking the icon to the left of Row 115 header.  <b>Joint operating agreement (JOA) item</b>	<b>Production and injection data</b>					
		Water injection	Water production	Gross gas production	Natural gas injection in own field, exclusive gas lift	Gas for gas lift	CO2 Gas injection
34							
35	Unit :	million m3	million m3	billion Sm3	billion Sm3	billion Sm3	billion Sm3
37	Sum:	0,000	0,000	0,000	0,000	0,000	0,000
38	Accum. up to and including 2018						
39	2019						
40	2020						
41	2021						

The following profiles are to be reported:

- Water injection (million m<sup>3</sup>) in own field
- Water production (million m<sup>3</sup>) from own field
- Gross gas production (billion Sm<sup>3</sup>)  
Gross gas production shall be equivalent to the lifting of gas from the reservoir in the relevant field/discovery. Gross gas production shall not include gas from other fields/discoveries that is merely processed and/or transported on the field/discovery that is the subject of the report. Nor should this profile include gas lift rates. For fields that are in production, gross gas production shall be reported in volumes equivalent to those reported to the NPD (DISKOS), in connection with the monthly production reporting. The measuring point is otherwise left to the discretion of the individual operator (state applicable assumptions).
- Natural gas injection in own field excluding gas lift and CO<sub>2</sub> (billion Sm<sup>3</sup>) reported in separate columns. Injection gas purchased (bought or borrowed) from another field shall be included in this column by the recipient (not the provider)
- Gas for gas lift (billion Sm<sup>3</sup>)
- CO<sub>2</sub> injection (billion Sm<sup>3</sup>) for enhanced recovery in own field.



## 6.3.2 Profiles for sale of oil, NGL and condensate

For **oil**, annual base (expected) estimates must be reported with uncertainty estimates if the project is in RC(0+1) - 4. For **NGL and condensate**, only annual base (expected) estimates are to be reported.

	H	O	P	Q	R	S
	Rows for annual values after 2044 can be displayed/hidden by clicking the icon to the left of Row 115 header.	Annual sale oil Low estimate	Annual sale oil Base estimate	Annual sale oil High estimate	Annual sale NGL Base estimate	Annual sale condensate Base estimate
34	<b>Joint operating agreement (JOA) item</b>					
35	Unit :	million Sm <sup>3</sup>	million Sm <sup>3</sup>	million Sm <sup>3</sup>	million tonnes	million Sm <sup>3</sup>
37	Sum:		0,000		0,000	0,000
38	Accum. up to and including 2018	0,000		0,000		
39	2019	0,000		0,000		
40	2020	0,000		0,000		
41	2021					

The high and low estimates must describe the sample space for the relevant calendar year including both general reservoir uncertainty and operational uncertainty. Operational uncertainty shall reflect the progress in well drilling, the productivity of the wells, production capacity in processing facilities, etc.

The total of low estimates for annual production will normally be lower than the low estimate for the resource estimate (chapter 6.2), as uncertainty in annual volume shall include uncertainties that are not correlated from year to year (for example regularity). It is also improbable that the low estimate will occur all years. Correspondingly, the total of annual high estimates will normally be higher than the high estimate in the resource overview.

Annual low and high estimates shall have the same start-up year as the basis profile. The uncertainty in the start-up date is reported in a separate space on the spreadsheet directly above the profiles, by stating an early, expected and late date.

## 6.3.3 Transport, sale and purchase of gas

Transport and sale of gas shall be reported independently of the given production permit. If the expectation is higher than the production permit, this must be stated.

Note that some of the gas data is to be reported according to calendar year (1 January – 31 December) while other data is to be reported according to gas year. The gas year n runs from 1 October in year n to 1 October in year n+1. If it is difficult to convert between gas year and calendar year, please contact the NPD.

We are cooperating with Gassco on the reporting. The sheets used to report to the GMDC are included in the reporting file. The RNB data is transferred into the "Gassco sheets" using formulas. The operators will receive a separate request from Gassco.

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	H	T	U	V	W	X	Y	Z	AA
	<div style="border: 1px solid black; padding: 2px; font-size: 8px;">           Rows for annual values after 2044 can be displayed/hidden by clicking the icon to the left of Row 115 header.         </div>	Annual dry gas Low estimate per calendar year. Gross calorific value (GCV)	Annual dry gas Base estimate per calendar year. Gross calorific value (GCV)	Annual dry gas High estimate per calendar year. Gross calorific value (GCV)	Physical dry gas deliveries from fields/ discoveries per gas year. Gross calorific value (GCV)	Physical rich gas deliveries from fields/ discoveries per gas year. Gross calorific value (GCV)	Saleable gas per calendar year 40 MJ/Sm <sup>3</sup>	Saleable gas per gas year 40 MJ/Sm <sup>3</sup>	Gas purchase per calendar year 40 MJ/Sm <sup>3</sup>
34	Joint operating agreement (JOA) item								
35	Unit:	billion Sm <sup>3</sup>	billion Sm <sup>3</sup>	billion Sm <sup>3</sup>	billion Sm <sup>3</sup>	billion Sm <sup>3</sup>	billion Sm <sup>3</sup>	billion Sm <sup>3</sup>	billion Sm <sup>3</sup>
37	Sum:		0,000		0,000	0,000	0,000	0,000	0,000
38	Accum. up to and including 2018	0,000		0,000					
39	2019	0,000		0,000					
40	2020	0,000		0,000					
41	2021								

## Transport of gas:

The profile in column W (Physical dry gas delivery) shall be completed for all fields and discoveries that physically deliver gas. Fields that deliver rich gas shall report the expected volumes of dry gas at sales point after processing. For fields transporting unstable liquids ashore, the profile W shall not contain dry gas that is separated from the liquids at the terminal.

The data (column W) shall be reported with gross calorific value per gas year. This profile (W) is also used in the enclosed Gassco forms in the RNB file. For fields/discoveries that are expected to deliver dry gas to Gassled, the gas is reported to Gassled Area D (dry gas) ("Entry point" = Gassco Area D). All gas that the licensees may seek transport rights for in Gassled, shall be included in the Gassco part of the reporting.

The profile in column X (Physical rich gas delivery) shall be completed for fields/discoveries that are expected to deliver rich gas. The profile is stated per gas year with actual gross calorific value at the sales point. The profile is also used in the enclosed Gassco forms in the RNB file. Fields that export rich gas to another field for processing before further transport as dry gas, is not required to report rich gas in column X.

For fields/discoveries that are expected to deliver rich gas to Gassled, the rich gas (column X) is reported to Gassled Area A (Statpipe), Area B (Åsgard), Area E (Kollsnes), Area K (Haltenpipe), Area L (Utsira High Gas Pipeline) and/or other areas such as the Barents (Gassco: "Entry points"). All gas that the licensees may seek transport rights for in these transport systems or areas, shall be included in the Gassco part of the reporting.

## Sale of gas:

The profile in column Z (saleable gas per gas year) is derived from the profile in column W. For fields transporting unstable liquids ashore this profile (column Z) should also contain dry gas that is separated from the liquids at the terminal and sold.

The profile in column Y (saleable gas per calendar year) is derived from the profile in column Z, only converted into calendar years.

The profile in column AA includes both historical and future expected purchases. Gas received as compensation for services (such as storage, treatment and transport), is not defined as purchase. All physical received gas to the field / discovery (bought, compensation, in kind, etc.) shall be reported in column BY (Receipt of gas), see chapter 6.9.1.

## Sale of gas – low and high estimates:

The profile in column U should be identical with the profile "Saleable gas per calendar year 40 MJ/Sm<sup>3</sup>" in column Y, but stated in gross calorific value. The same principles as for oil are used as a basis (see chapter 6.3.2).

The table below summarize the reporting of different gas types.

Table 6-1 The reporting of different gas types

Product exported from field	Column				
	T,U,V	W	X	Y	Z
Dry gas	δ	δ		δ	δ
Rich gas	ρ	ρ	δ	ρ	ρ
Condensate	χ			χ	χ

- δ Gas delivered directly from the installation
- ρ Expected volumes of dry gas at sales point after processing
- χ Dry gas separated from the liquids at the terminal and sold

### 6.3.4 Reporting of gas blow-down

Blow-down of gas caps on the fields should be reported in a separate profile collection. This will apply to projects that describe a change in production strategy for gas (compression, blow-down, etc.).

The reason for this is that it is uncertain when these projects will start. It is therefore desirable to receive separate profiles so that this can be considered when NPDs aggregated prognoses are prepared.

The consequence is that the blow-down projects included in RCO +1, and previously included in the main profile should be reported separately.

For these projects, it is desirable to get gas and associated liquid profiles and investment profiles in a separate profile collection. Operating costs and environmental profiles can still be reported in the main project, unless the project involves new power-generating equipment.

### 6.3.5 Reporting of resources and profiles for commercial agreements

Gas bought from other fields (for injection purposes), which later will be exported, shall not be included in the resource base of the buyer, therefore these volumes should be shown in a separate row in the resource overview with negative numbers. The gas import profile is given in column AA (gas purchase) by the buyer, and the payment is given in column BJ (Cost purchase of gas)

If gas is delivered to another field/discovery for injection or other use, please name the actual field/discovery. If the gas is given away as payment for a service or if the gas is sold, this should be explained in the comment box 2C in the worksheet "Generell info og kommentarer".

When products are delivered in kind to other fields, the recipient should show the volume in a separate row in the resource overview, if these volumes will be sold.

When commercial agreements involve swaps/borrowing/deferral of volumes between fields, a new “commercial” profile, Profil\_15 can be added.

The complexity in reporting of commercial agreements varies, and in some situations sufficient reporting might be possible without the introduction of Profil\_15.

Reporting of commercial agreements should apply the following practise:

- Only commercial agreements between *fields* should be reported in the RNB file, not bilateral agreements between individual companies (e.g. shipper agreements)
- Fields and discoveries should make the effect of the agreement visible in the reporting from the DG3 year. If the agreements are not ready for RNB reporting, NPD can ask for the commercial effects in a separate Excel file
- Sales profiles without the effects of the commercial agreements, should be reported in other profile collections than Profil\_15
- The effects of commercial agreements should be reported in Profil\_15. If there are several field agreements, please use the adjacent profiles in descending order (Profil\_14, Profil\_13 etc)
- The gas columns in Profil\_15 should be based on the same definitions as in chapter 6.3.3
- The sum of all profiles (including Profil\_15) should give the correct total income profiles corresponding to the total reserves in the project resource overviews
- The project resource overview should correspond to the sum of the sales profiles for all products in each profile collection
- The comment area should be used to describe commercial set-ups and assumptions (cell H28)
- To avoid unnecessary feedback in the consistency checks, you should choose “Kommersiell avtale” as project type in the attribute area AB7:AB25 regardless of resource class.

## 6.4 Costs and income –the Joint Operating Agreement and exceptions therefrom

The [Joint Operating Agreement](#) (JOA), which is an appendix to the License Agreement, specify which cost items the licensees are obliged to report in their budgets, work programs etc. The JOA consists of 9 main items with sub-items (and sub-sub-items).

The reporting to the NPD shall mainly be in accordance with the item structure in the JOA. In some cases, the operators are asked to submit more detailed reporting than what is specified in the JOA. In other cases, the operator is requested to report more aggregated data. This applies to both investment costs and operating costs.

### 6.4.1 Operating income, Concept studies (JOA, items 7 and 4), Price increases

#### Concept studies (JOA, item 4)

For further definition of what is included in “Concept studies”, please refer to the JOA.

#### Operating income (JOA, item 7)

Tariff income shall be reported in the spreadsheet “Tariffinntekter” (see chapter 7 for details). Tariffs from this spreadsheet are copied automatically to Profile 1 only.

“Other income” beyond tariff income should be reported directly in column AC under “Other income” in the profile sheets.

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## General price increase

«General price increase» is the operator’s general assumption for converting nominal NOK to real NOK. For RNB2021 the reference year is 2020. The “General price increase” should therefore be used to convert nominal figures for 2021 and onwards from nominal value to 2020-value.

Please note that if the general price increase is assumed to be constant with time from 2020 and onwards, this shall be reported as a percentage in the cell AC28 in profile sheet 1 (**Profil\_1**). We expect the same general price increase (for instance the consumer price index) to be used for all projects reported by the same operator, and we recommend that the price increase percentage value is entered into cell AC28 by a coordinator before internal distribution to the projects. If the general price increase varies, please input the percentages in the “Cost control” spreadsheet range C19:C41, see chapter 9.3.

## 6.4.2 Investments (JOA, item 5)

Investments begin when a decision on implementation of a development project has been made.

Reporting to the RNB regarding investment costs differ on certain items from the structure in the JOA. [Joint Operating Agreement](#).

The table below shows where this is applicable.

Table 6-2 Investment costs

Structure in The Joint Operating Agreement	Structure in the RNB reporting
<b>5.1 Development investments</b>	Development investments shall be reported separately for: <ul style="list-style-type: none"> <li>- Subsea facilities</li> <li>- Floating facilities</li> <li>- Fixed facilities</li> <li>- Pipelines and land facilities</li> <li>- Other development investments</li> </ul>
<b>5.2 Operating investments</b>	Operating investments
<b>5.3 Production drilling</b>	Investments in development wells shall be reported separately for: <ul style="list-style-type: none"> <li>- New wells from mobile facilities</li> <li>- New wells from permanently placed facilities</li> <li>- Investment related to production drilling not distributed by well</li> </ul>

The following table shows the reporting requirements for development and operating investments, ref. Items 5.1, 5.2 and 5.3 of the JOA.

	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
33	<b>Investments</b>															
34	Concept studies -JOA 4	Investments in new subsea facilities -JOA 5.1 part	Investments in new floating facilities -JOA 5.1 part	Investments in new fixed facilities -JOA 5.1 part	Other Development investments -JOA 5.1 part	Operating investments (modifications) -JOA 5.2	Total investments in facilities -JOA 5.1-2	Dev. wells from permanently placed drilling facilities	Dev. wells from mobile drilling facilities	Investments in dev. wells from permanently placed drilling facilities -JOA 5.3 part	Investments in prod. wells from mobile drilling facilities -JOA 5.3 part	Investments related to production drilling not distributed by well -JOA 5.3 part	Investments in pipelines -JOA 5.1 part	Investments in land facilities -JOA 5.1 part	Total investments in pipelines and land facilities -JOA 5.1 part	Total investments -JOA 5
35	million NOK	million NOK	million NOK	million NOK	million NOK	million NOK	million NOK	Quantity	Quantity	million NOK	million NOK	million NOK	million NOK	million NOK	million NOK	million NOK
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38							0									0
39							0									0
40							0									0
41							0									0

## 6.4.3 Development investments (JOA, item 5.1)

The JOA: "Development investments concern the development of new resources. There will always be concept studies before such an investment is made. The budget for the project is sanctioned by an approved PDO/PIO. Some projects are exempted from the PDO requirement."

"Other development investments" is a miscellaneous column that includes all other development investments.

Please control the accordance between type of development investment and development solution reported in the project attribute area for RC3-5 projects.

### The following definitions apply:

**Subsea facilities** are facilities on the seabed. They are to be reported excluding pipelines.

**Floating facilities** comprise all facilities that do not rest on the seabed, such as semi-submersible platforms, tension leg platforms (TLP), production ships and other floating facilities. If in doubt, contact the NPD.

**Fixed facilities** comprise all facilities that are located on the seabed (excluding subsea facilities and pipelines) and that are above sea level. Fixed facilities also include mobile facilities which during the field's lifetime are regarded as permanent for the field (e.g. jack-up rigs, owned or rented as production facility.)

**Pipelines** shall comprise investments in the pipeline system. However, investments related to non-pipeline facilities offshore, such as Draupner, should be reported as investments in columns AF to AJ. Internal pipeline costs for fields and discoveries shall be included here, in addition to export pipelines. Costs related to umbilicals are included with pipelines.

The pipeline system includes the actual pipeline downstream of the connection point on the production facility and upstream of the connection point for;

- receiving production or process facility
- receiving pipeline with different ownership than the joint venture/equivalent or
- receiver on land

**Land facilities** include land facilities owned by the joint venture or equivalent that are located on land downstream of the pipeline. Investments on land that are transferred free of charge to another joint venture shall be included in the investment estimate.

**Other development investments** comprise development investments that would not naturally be included in the other categories, including special modifications or additional equipment on existing facilities. Capex for a discovery under evaluation, related to modification on a future host installation, should also be included. This category also covers investments in specific equipment on leased production facilities.

## 6.4.4 Operating investments (JOA, item 5.2)

We refer to the JOA which states what to be included in point 5.2.

## 6.4.5 Development wells (JOA, item 5.3) – investments and number of wells

### Development wells (JOA, item 5.3)

The reporting regarding development wells must differentiate between wells drilled from fixed and mobile facilities.

**Please note that** NPD uses the term Development wells instead of Production wells (and Development Drilling, not Production drilling).

The table below shows reporting requirements for investments in development wells, ref. Item 5.3 in the JOA.

	AL	AM	AN	AO	AP
34	Dev. wells from permanently placed drilling facilities	Dev. wells from mobile drilling facilities	Investments in dev. wells from permanently placed drilling facilities -JOA 5.3 part	Investments in prod. wells from mobile drilling facilities -JOA 5.3 part	Investments related to production drilling not distributed by well -JOA 5.3 part
35	Quantity	Quantity	million NOK	million NOK	million NOK
37	0	0	0	0	0
38					
39					
40					

For more details, we refer to the JOA.

Please note that investments in development drilling that cannot be attributed to wells, such as seismic and associated activities mentioned above, shall be kept separate and reported separately.

### Number of development wells

New wells include all wellbores that receive their own designation in accordance with the NPD's rules for naming wells and wellbores: Wells - [Designation of wells and wellbores](#). For the purpose of this, a side-track and each branch in a multilateral well shall count as a separate wellbore.

The number of development wells is to be reported:

- Both production and injection wells shall be included in number of development wells and costs.
- Pilots and observation wells drilled in order to establish an efficient wellbore, should not be reported under the number of development wells. However, costs related to these wells must be reported. Calculations of an average well cost will then reflect the total cost of getting one functional well.
- Changes to the purpose of a well may occur. This however will not count as a new well, hence the number of wells is not changed. The costs related to conversion must be reported.
- Exploration wells (wildcat and appraisal wells) shall NOT be included in number of development wells nor in well costs.
- Disposal wells shall be included in number of development wells and costs.

The number of development wells from mobile and permanently placed facilities shall be reported.

The following definition applies:

- ✓ A **mobile drilling facility** means a drilling facility that is intended to be used on multiple fields.
- ✓ A **permanently placed drilling facility** means a drilling facility that is permanently placed on a field, including drilling facilities that physically can be moved, but intended to be permanently placed during the production period. This means that wells drilled from floating facilities such as Njord and Visund, and jack-up rigs with drilling and processing equipment are considered to be drilled from a permanently placed facility.

The division is thus not determined by whether the facility can physically be moved or not.

### Well costs

Costs associated with development wells, disposal wells and costs related to pilot and observation wells shall be reported.

The number of wells from fixed and mobile drilling facilities shall correspond per year with costs associated with development wells. The number of wells may be reported as a decimal figure (e.g. 3.2) if the wells are not completed within the calendar year.

As part of the quality assurance, a graph in the spreadsheet “Cost Control” shows yearly investments per well, distributed on different drilling facilities, calculated from the spreadsheet “Profil\_Total”.

### 6.5 Operating costs, (JOA, item 6)

The reporting to the RNB regarding operating costs differs on certain items from the structure in the JOA. The table below shows where this is applicable.

Table 6-3 Operational costs

Structure in The Joint Operating agreement	Structure in the RNB reporting
<b>6.1 Operational preparations</b>	Operational preparations
<b>6.2 Operating costs and support activities</b>	
<b>6.2.1 Operation (ordinary operating costs)</b>	Ordinary operating costs
<b>6.2.2 Maintenance</b>	Maintenance excl. wells
<b>6.2.3 Well maintenance</b>	Well maintenance
<b>6.2.4 Modifications</b>	Modifications
<b>6.2.5 Subsea operations and maintenance</b>	Subsea operations and maintenance
<b>6.2.6 Platform services</b>	Platform services
<b>6.2.7 Administration</b>	Administration
<b>6.2.8 HSE</b>	HSE
<b>6.2.9 Reservoir management and development</b>	Reservoir management and development
<b>6.2.10 Business development</b>	Business development
<b>6.3 Logistics</b>	
<b>6.3.1 Maritime operations</b>	Logistics
<b>6.3.2 Air transport</b>	
<b>6.3.3 Supply bases</b>	
<b>6.3.4 Preparedness</b>	
<b>6.4 Tariff costs</b>	Operating costs (part of item 6.5)
<b>6.5 Other operating costs</b>	Gas purchase (part of item 6.5)



The table below shows our requirements concerning operating costs. For more details, we refer to the JOA.

	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK
33	<b>Operating costs</b>																
	Operational preparations	Ordinary operating costs	Maintenance excl. Wells	Well maintenance	Modifications	Subsea operations and maintenance	Platform services	Administration	HSE	Reservoir management and development	Business development	Other operational support	Total operations and support	Logistics costs	Other operating costs	Cost purchase of gas	Total operating costs, incl. operations preparation excl. Tariffs
	-JOA 6.1	-JOA 6.2.1	-JOA 6.2.2	-JOA 6.2.3	-JOA 6.2.4	-JOA 6.2.5	-JOA 6.2.6	-JOA 6.2.7	-JOA 6.2.8	-JOA 6.2.9	-JOA 6.2.10	-JOA 6.2.5-10	-JOA 6.2	-JOA 6.3	-JOA 6.5 part	-JOA 6.5 part	-JOA 6 (-6.4)
34																	
35	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK	miljon NOK
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38													0	0			0
39													0	0			0
40													0	0			0
41													0	0			0

As part of the quality assurance, a graph in the spreadsheet “Cost Control” shows yearly unit costs calculated from the spreadsheet “Profil\_Total”.

## 6.6 Shared facilities (Costs)

Some fields or development projects share common facilities to achieve a cost-efficient resource management. Examples might be

- development of deposits in different production licences sharing common facilities
- power from shore projects involving different fields

For this kind of projects, all investments and operating costs should be reported by the operator of the shared facilities except for fields and discoveries in RC3 and RC4. Fields or discoveries paying for the shared facilities should only report its investment share or operating cost share as Cost sharing CAPEX or Cost sharing OPEX in the spreadsheet (columns BR and BQ, RC3 and RC4 mandatory and RC5 optional). For RC1 and RC2 the shared costs are to be reported by the operator of the shared facilities in sheet “Tariffinntekter”.

When different projects at a specific field share new common facilities, all investments and operating costs regarding new common facilities should only be reported in one profile collection. No cost sharing should be reported.

## 6.7 Distribution of a field’s total operating costs on an individual project

Projects that result in significant changes in operating costs cannot be reported in the basis profile.

- Examples of this include: New facilities, new expensive equipment/drainage strategy and cost reduction project

It is not necessary to report separate operating costs for a project on a field if no significant changes are expected in the operating costs on the facility.

- Examples of this include: Wells/well work, optimizations within reservoir management, upgrades, etc.

If some of these projects result in extended lifetime for the field, the total operating costs must also be extended.

## 6.8 Shut-down and removal (JOA, item 8) and General costs (JOA, item 9)

### Shut-down and final disposal costs

Costs associated with shutdown and final disposal shall be reported. The time schedule for the activity must be practically possible to carry out. In a supplementary project that can extend the lifetime of the same field, costs related to shut-down and removal/disposal may be postponed. Shutdown- and final disposal costs are then subtracted from the profile sheet for the supplementary project and added to the year(s) the removal/disposal of facility is taking place. An example is given below.

Example: A project in RC1 is shown in the left table. The right table illustrates a supplementary project in RC5 that can extend the lifetime of the field, thereby delaying shutdown and final disposal costs.

Other costs			Other costs		
Year	Shut-down costs -JOA 8.1	Final disposal (removal) -JOA 8.2	Year	Shut-down costs -JOA 8.1	Final disposal (removal) -JOA 8.2
	million NOK	million NOK		million NOK	million NOK
	Kst_Nedstegning	Kst_Disposition		Kst_Nedstegning	Kst_Disposition
	1400	1000		0	0
2023	700	500	2023	-700	-500
2024	700	500	2024	-700	-500
2025			2025		
2026			2026		
....			....		
2032			2032	700	500
2033			2033	700	500
2034			2034		

## 6.9 Environmental data and assumptions for discharges/emissions

The environmental forecasts comprise the physical volumes that are flowing in the production facilities on the respective fields, both from and to own fields and connected fields, and entailing emissions to air and/or discharges to sea.

### Main principles:

- For reserves, RC1-3, environmental data are reported for fields, transport systems and land facilities where the emissions/discharges physically occur. This means that some fields (such as fields that only have seabed installations) do not need to report other environmental data than drilling related emissions. The forecasts shall reflect emissions/discharges based on use of current technology and the effect of emission/discharge reduction measures adopted by the license.
- A different principle is employed for RC4 and 5. Environmental emissions/discharges, as well as the assumptions used, are to be reported for the respective field/discovery. Actual emissions/discharges as a result of the development shall be reported. In the comment space, it should be stated which existing field that are planned to be used. The forecasts should be based on the current plans. Measures under consideration that could lead to emission/discharge reductions, beyond what can be achieved using current technology, shall be described in the comments space for environmental data.

- Electrification projects related to existing infrastructure shall be reported with costs and emissions when passed or expected to pass DG0 current year.
- The border fields/discoveries whose facilities are placed entirely on the Norwegian shelf, shall report emissions/discharges.

	BX	BY	BZ	CA	CB	CC	CD	CE	CF
31	<b>Please name the fields that enter into the assumptions below (Alt + Enter for line shift)</b>								
	<b>Delivered from:</b>								
32	<b>Delivered to:</b>								
33	<b>Assumptions for environmental emissions/discharges and other data</b>								
	Receipt of gas	Deliveries of gas from main field and associated fields with ship-loading point on the facility	Deliveries of oil/NGL/condensate from main field and associated fields with ship-loading point on the facility	Injected natural gas in main field and associated fields as well as any deposit excl. gas lift	Total gas lift in main field and associated fields	Injected CO2 in main field and associated fields as well as deposit	Discharge of produced water from main field and associated fields	Injected water in main field and associated fields	
34									
35	billion Sm3	billion Sm3	million Sm3 oe	billion Sm3	billion Sm3	billion Sm3	million m3	million m3	
37	0	0	0	0	0	0	0	0	
38									
39									
40									

## 6.9.1 Assumptions for environmental data

### Fields included in the environmental reporting

Associated fields that are included in the assumptions for environmental emissions should be listed in the cell above. Please distinguish between fields that you are receiving products from and fields that are recipients from your field (for instance by using two lines in cell BY32; Alt+Return to make a new line).

**Gas received** (column BY) shall include all gas received or purchased for fuel, injection, resale or storage. It is insignificant whether the gas is actually used for this purpose, or whether it substitutes for gas produced from the reporting field/discovery.

**Deliveries of gas** (column BZ) shall be reported at actual calorific value. The column shall contain all gas, including gas from associated fields treated for further transport, as well as any NGL volumes that follow the gas stream. The volumes shall refer to the metering point (fiscal) for shipping/export of gas on the facility. Gas directly injected in associated fields shall not be included in this profile.

**Deliveries of oil/NGL/condensate** (column CA) are sales of oil/NGL/condensate (including oil/NGL/condensate that is treated from associated fields) converted into Sm<sup>3</sup> oil equivalents (1 tonne NGL = 1.9 Sm<sup>3</sup> oil). NGL that follows the oil stream shall be reported here. The volumes shall be referred to the metering point (fiscal) for shipping/export of gas on the facility.

**Injected natural gas** (column CB) is the total volume of compressed natural gas for injection as pressure support and/or disposal in own or third-party fields. Gas that is delivered for further compression and injection and/or disposal in a neighbouring field, should be included in "Deliveries of gas" (BZ). The gas is reported at actual calorific value. Gas volumes used as gas lift shall not be included in this column, nor CO<sub>2</sub> gas for disposal or pressure support.

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**Gas lift** (column CC) is the volume of gas compressed on the field for use as gas lift in own or associated fields.

**Injected CO<sub>2</sub>** (column CD) is the volume of CO<sub>2</sub>-gas that is injected from the field for improved recovery or for disposal in own or associated fields.

**Discharge of produced water** (column CE) is the total volume of produced water discharged from the field, i.e. the water that comes from own field and other associated fields.

**Injected water** (column CF) is the total volume of water (seawater and/or produced water) injected for pressure support or disposal. If a field delivers water to an installation on another field, the injection is to be reported where the pumping work takes place.

	CG	CH	CI	CJ
33	<b>Consumption of natural gas and diesel</b>			
34	Natural gas used for fuel	Natural gas used for flaring	Diesel consumption subject to CO <sub>2</sub> tax (in accordance with CO <sub>2</sub> tax legislation)	Diesel consumption not subject to CO <sub>2</sub> tax (mobile facility)
35	million Sm <sup>3</sup>	million Sm <sup>3</sup>	million litres	million litres
37	0	0	0	0
38				
39				
40				

**Natural gas for fuel** (column CG) is gas consumption to generate power.

**Natural gas for flaring** (column CH) is the gas volume that is flared.

**Diesel** (column CI) is diesel consumption from permanently placed facilities and mobile facilities that are tied in to a permanently placed facility in production (activity that is subject to the CO<sub>2</sub> tax).

**Diesel consumption** (column CJ) that is not subject to the CO<sub>2</sub> tax under the CO<sub>2</sub> Tax Act shall be reported in a separate column and shall include mainly diesel consumption on mobile facilities that are involved in petroleum activity.

**Emissions of CO<sub>2</sub> and NO<sub>x</sub>** from fuel gas, flaring and diesel include emissions from permanent facilities, mobile facilities linked to a permanent facility in production (activities subject to the CO<sub>2</sub> tax) and facilities that are not covered under the CO<sub>2</sub> Tax Act.

Emissions of CO<sub>2</sub> as a consequence of e.g. venting from CO<sub>2</sub> separation plants shall be reported under the column "CO<sub>2</sub> contribution flare", and shall also be addressed under comments. In some cases, this will lead to a lack of consistency between the columns "natural gas to flare" and "CO<sub>2</sub> contribution flare". This must be explained in the comments box.

For reserves (RC1-3), the total CO<sub>2</sub> and NO<sub>x</sub> emissions shall be divided between the contributions from fuel gas, flaring, diesel and activity from mobile facilities.

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For RC4 and 5 it is required to report the total prognosis for emissions of CO<sub>2</sub> and NO<sub>x</sub>, respectively. When possible please specify these emissions according to contributions from fuel, flare, diesel and activity from mobile facilities.

Activity related to exploration wells shall not be reported.

	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT
33	<b>CO<sub>2</sub> - discharge</b>					<b>NO<sub>x</sub> - discharge</b>				
	CO <sub>2</sub> total	CO <sub>2</sub> contribution fuel gas	CO <sub>2</sub> contribution flaring	CO <sub>2</sub> contribution diesel (in accordance with CO <sub>2</sub> tax legislation)	CO <sub>2</sub> contribution from mobile facilities	NO <sub>x</sub> total	NO <sub>x</sub> contribution from fuel gas	NO <sub>x</sub> contribution from flaring	NO <sub>x</sub> contribution from diesel (in accordance with CO <sub>2</sub> tax legislation)	NO <sub>x</sub> contribution from mobile facilities
34										
35	million tonnes	million tonnes	million tonnes	million tonnes	million tonnes	1000 tonnes	1000 tonnes	1000 tonnes	1000 tonnes	1000 tonnes
37	0	0	0	0	0	0	0	0	0	0
38										
39										
40										

## Emissions of nmVOC and CH<sub>4</sub>

Total emissions of nmVOC and CH<sub>4</sub> from diffuse emission sources and cold venting in connection with loading shall be reported. Emissions of natural gas from all systems that handle hydrocarbons shall be included.

The sources of these emissions will be facility-specific.

Emissions associated with storing and loading of oil/NGL/condensate shall be reported in accordance with adopted measures or as the operator has planned (in those cases where a final decision has not yet been made) to fulfil the Norwegian Environment Agency orders regarding recovery of nmVOC.

For facilities that carry out storage and loading for other fields, these volumes and their associated emissions shall also be included (applies to reserves).

	CU	CV	CW	CX	CY	CZ	DA	DB	DC
33	<b>nmVOC &amp; CH<sub>4</sub> - discharge</b>							<b>Power from shore</b>	
	Emissions nmVOC from cold venting and fugitive emissions	Emissions CH <sub>4</sub> from cold venting and fugitive emissions	Oil, NGL, etc. total loaded/stored	Emissions nmVOC storage	Emissions nmVOC loading	Emissions CH <sub>4</sub> storage	Emissions CH <sub>4</sub> loading	Annual power consumption	Maximum power usage (Peak)
34									
35	1000 tonnes	1000 tonnes	million Sm <sup>3</sup>	1000 tonnes	1000 tonnes	1000 tonnes	1000 tonnes	GWh	MW
37	0	0	0	0	0	0	0	0	0
38									
39									
40									

## Energy demand for power from shore

Use of power from shore in the petroleum industry will have consequences for the whole power system onshore. Information regarding both energy requirements and power demand (GWh and MW) from the sector of the petroleum industry that gets power from shore is necessary both to secure an effective operation of the power system onshore, and to help plan for prudent development over time.

It is important when planning to have the best possible overview and knowledge of both energy consumption and power demand. Power demand from the onshore grid, measured as maximum load during a year, from the installations that get power from shore will vary over time. This applies to both facilities that receive power from shore via subsea cables and land facilities that are directly connected to the domestic power grid. It's the power demand that regulates the dimensioning requirement of the transmission capacity in the power grid.

### Report;

- Forecasts for power (electricity) consumption in GWh/year in column DB
- Maximum peak load/effect in MW that is expected during each year in column DC

## 6.10 Project attributes

For all projects/discoveries in RC3-5, project-specific information shall be provided under the collective heading "project attributes" in the table at the top of each profile collection in the reporting file. (Please note that the project attributes are in Norwegian). It is possible to use the light grey cells to fill in project attributes for projects/discoveries in RC2, but this is optional.

This information will be used in various analyses the authorities perform regarding the offshore activity. In order to ensure a uniform basis for the analysis, the project attributes are based on lists with pre-defined selections (drop-down lists). Therefore, only one value can be selected in each cell. The selections shall be reflected in the profile collection below.

	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM
	<b>Project type:</b> Chose from drop down menu.  <b>Use for Project-category "A" and commercial agreements</b>	<b>Develop-ment solution:</b> Chose from drop-down menu.  Use for project-category "F" and "A"= Videreutvikling	<b>Need for new power generation:</b> Indicate how the project will get supply of power	<b>Project stopper:</b> Most important cause for the project not being realized or suffering significant delay.	<b>Technology usage:</b> Is the project based on conventional methods or will new technology be used or developed?	<b>Technology areas:</b> Within which areas will new technology be used or developed?	<b>Technology status:</b> What is the status as regards technological development for projects which are conditional upon new technology?	<b>Time criticality:</b> Is the realisation of the project time critical, and, if so, what kind of time-criticality?	<b>Year for the decision to initialize</b> (feasibility studies)  DG0  (yyyy)	<b>Year for the decision to concretize</b> (concept studies)  DG1  (yyyy)	<b>Year for the decision to continuation</b> (concept choice, preliminary engineering phase) DG2  (yyyy)	<b>Year for the decision to implement</b> (detailed engineering PDO if relevant) DG3  (yyyy)
5												
6												
7												
8												
9												

For pipelines and land facilities the name of the various projects must be entered in H7 in the profile collection.

### When none of the options fit

In many cases, none of the options in the respective lists will be appropriate for the specific project. The parameter that comes closest shall nevertheless be selected. An explanation can be entered in the comments space to the right in the project attributes, or a more suitable parameter can be given. The same applies if several of the choices are equally relevant; select one parameter and, if applicable, note the others in the comments space.

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The comments space can also be used to provide information e.g. that realization of the project is contingent on specific assumptions, more detailed information about the use of new technology or technology development needs and explanations for the decision plan.

### Project type

Use this attribute to describe the main method applied to recover the additional volumes reported with project attribute A. A drop-down list has been assigned to this column.

The table below shows available options for project category A.

Table 6-4 Options for project category A

Project type in Excel file	Description
<b>Water injection</b> <b>(Vanninjeksjon)</b>	New or increased water injection in order to increase oil or gas recovery
<b>Gas/WAG injection</b> <b>(Gass- og WAG-injeksjon)</b>	New or increased gas- or WAG injection in order to increase oil or gas recovery (most likely oil)
<b>Wells</b> <b>(Brønner)</b>	New production wells to optimize recovery
<b>Advanced methods</b> <b>(Avanserte metoder)</b>	Improved recovery through advanced methods including CO <sub>2</sub> – injection and chemicals injected together with water or gas. Also including other types of water treatment (e.g. low salinity and bacteria/microbial)
<b>Further field development</b> <b>(Videreutvikling)</b>	New facilities to be installed on a field, to optimize recovery or operations as well as prolong field life. May be subject to PDO. The actual facility type must be reported under attribute development solution.
<b>Low-pressure production</b> <b>(Lavtrykksproduksjon)</b>	Improved recovery of gas or oil (most often gas) by reducing inlet pressures in the process system through installation of compressors (subsea or topside) or booster pumps etc. and / or reservoir depressurization, also called blow-down.
<b>Late-life production</b> <b>(Senfaseproduksjon)</b>	Prolonged production (and improved recovery) through extension of facility life-time, e.g. involving modifications, upgrades and/or reclassifications
<b>Other</b> <b>(Annet)</b>	When none of the alternatives suits the project. When multiple methods are used, please select the main contributor to the volumes stated
<b>Commercial agreement</b> <b>(Kommersiell avtale)</b>	Commercial agreements that involves swap/borrowing/deferral of volumes between fields. Please choose this project type regardless of resource class.

**Development solution** –use this attribute to describe the planned solution for development of resources with project category F. If multiple facilities are possible, pick the top most solution in the table below. This attribute also applies for project category A when the attribute, “further development” are selected.

More detailed information about assumed development concept can also be described using free text in the comments space in cell H28.

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The table below shows the available options corresponding to project category F:

Table 6-5 Options for project category F

Project type in Excel file	Description
<b>New stand-alone floating facility</b> <i>(Ny selvstendig flytende innretning)</i>	Production ship with process facility (FPSO), semi sub, TLP
<b>New stand-alone fixed facility</b> <i>(Ny selvstendig, bunnfast innretning)</i>	Integrated platform with process facility, e.g. jacket, jack-up, GBS
<b>Rental of production facility</b> <i>(Leie av produksjonsinnretning)</i>	Used when the main production facility, normally FPSO or Jack-up, will be leased
<b>Wellhead platform to existing facility</b> <i>(Brønnhodeplattform mot eksisterende innretning)</i>	Platform without process facility
<b>Sub-sea development to existing facility</b> <i>(Havbunnsutbygg. mot eksisterende innretning)</i>	New facilities located subsea and connected to existing facilities
<b>Well(s) from existing facility</b> <i>(Brønn(er) fra eksisterende innretning)</i>	New production or injection wells drilled from existing facility either to infill targets or to undrained segments or prospects
<b>Other</b> <i>(Annet)</i>	Used for other specified or unspecified that does not fall under other categories. To be specified in the comments space to the right of the attribute lists

## Power solution

Many projects will be of such a character that there will be no need to install new power intensive equipment, installed capacity to be used. This applies to both projects at the fields and development projects. In the environmental part, independent data should be reported. We ask you to state what will be the most likely requirement at project implementation.

These choices are possible;

- New power generating equipment (Nytt kraftgenererende utstyr).
- Use of existing equipment (Bruk av eksisterende);
- There will be no need to install new power generating equipment on the field/ host field/ power plant
- Power from shore (Kraft fra land)



## Project stoppers

We ask for an identification of the most obvious condition that may hinder project implementation as reported. For projects with resources in RC4-5 the most important cause for the project not being realized or suffering significant delay is to be chosen. The table below shows the available options:

Table 6-6 Project stoppers

Project stoppers	Description
<b>None</b> <i>(Ingen)</i>	It is not identified any obvious condition that can cause a halt or significant delay in the project
<b>Uncertainty in resource volume</b> <i>(Usikkerhet i ressursvolumer)</i>	The resource estimate is associated with substantial uncertainty and more information is required about the size of the deposit before making a decision about realization
<b>Reservoir properties</b> <i>(Reservoarforhold)</i>	Low reservoir productivity expected acidification/H <sub>2</sub> S, sand production, etc. which are challenging, which with the current solutions, are technical or economical unfeasible
<b>Technology is lacking</b> <i>(Mangler teknologi)</i>	Realization requires development of new technology
<b>Lack of infrastructure in the area</b> <i>(Manglende infrastruktur i området)</i>	Realization requires tie-in to facilities that are not yet in place, physical or contractual e.g. pipelines
<b>No gas solution</b> <i>(Manglende gassløsning)</i>	Realization requires a solution for handling produced gas, but no profitable gas disposal is available
<b>Lack of capacity in existing systems</b> <i>(Manglende kapasitet i eksisterende systemer)</i>	Realization assumes tie-in to facilities (process facilities, pipelines, land facilities) which do not have available capacity in the relevant period
<b>No commercial agreement</b> <i>(Mangler kommersiell avtale)</i>	Realization assumes agreements with third parties, and this is expected difficult to achieve
<b>Rig availability</b> <i>(Riggtilgjengelighet)</i>	No mobile drilling rigs available in the market
<b>Environmental requirements</b> <i>(Miljøkrav)</i>	Realization can entail unacceptable environmental emissions/discharges that with current solutions cannot be removed in a profitable manner
<b>HSE requirements</b> <i>(HMS-krav)</i>	Realization can entail unacceptable HSE conditions that with current solutions cannot be resolved in a profitable manner
<b>Other</b> <i>(Annet - se kommentar)</i>	Specify in the comments space

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## Technology

Is the project based on conventional methods or will new technology be used or developed?

The table below shows the available options:

Table 6-7 Technology options

Technology	Description
<b>Conventional methods</b> <i>(Konvensjonelle metoder)</i>	Used and commercially available for several years.
<b>New available technology</b> <i>(Ny tilgjengelig teknologi)</i>	The project entails use of, or is a result of, new technology/methods that are currently available commercially/ are fully qualified / recently developed, but not previously used.
<b>Requires development of technology</b> <i>(Betinget teknologiutvikling)</i>	Realization of the resources in the project is contingent on the development of technology/methods that are not available commercially today.
<b>Other</b> <i>(Annet - se kommentar)</i>	Specify in the comments space.

## Technology areas

Within which areas will new technology be used or developed? Provide detailed comments in the comments space, e.g. if the project includes technology development within several areas. The table below shows the available options:

Table 6-8 Technology areas

Technology areas	Description
<b>Seismic/resource mapping</b> <i>(Seismikk/res. kartlegging)</i>	Advanced seismic methods, 4D, geo-modelling, geo-management, reservoir simulation, etc
<b>Drilling/well technology</b> <i>(Bore/brønnteknologi)</i>	The drilling process, reduced drilling costs, well interventions, completion, etc.
<b>Reservoir technology</b> <i>(Reservoarteknologi)</i>	Injection media, residual oil saturation, reservoir chemistry, etc.
<b>Production control</b> <i>(Produksjonsstyring)</i>	Zone control, sand control, water production, etc.
<b>Facility/process</b> <i>(Innretning/prosess)</i>	Process facility, power supply, environment, integrated operations, subsea facilities/equipment, etc.
<b>Other</b> <i>(Annet - se kommentar)</i>	Specify in the comments space

## Technology status

What is the status regarding technology development for projects that are contingent on new technology? The table below shows the available options:

Table 6-9 Technology status

Technology status	Description
<b>Commercially available</b> <i>(Kommersielt tilgjengelig)</i>	No need for development of technology, available technology will be used.
<b>Not started</b> <i>(Ikke startet)</i>	A need for technology has been defined, but no steps have been taken to start research / development.
<b>Undergoing engineering</b> <i>(Under prosjektering)</i>	The owners are aware of/are financing research/development.
<b>Undergoing qualification</b> <i>(Under kvalifisering)</i>	Technology has been developed but has not been qualified / is not ready for use.
<b>Undergoing field testing</b> <i>(Under felttest)</i>	The technology is available, but further use depends on the results of pilot tests.
<b>Other</b> <i>(Annet)</i>	Specify in the comments space

## Time-critical aspect

Is realization of the project time-critical, and if so, what is the time-criticality. The table below shows the available options:

Table 6-10 Time-critical aspect

Time-critical aspect	
<b>Not time-critical</b> <i>(Ikke tidskritisk)</i>	
<b>Contingent on infrastructure</b> <i>(Infrastrukturbetinget)</i>	Time-critical due to limited technical or economic lifetime of facility or time-limited window for process/transport capacity.
<b>Contingent on reservoir</b> <i>(Reservoarbetinget)</i>	Time-critical due to planned gas export and/or accelerated pressure reduction (blowdown) or expected natural depressurization, e.g. in connection with production from adjacent fields (regional pressure drop) which can lead to the loss of resources.

## Decision plan

To ensure that the maturation of projects and discoveries can be followed, the authorities want an overview of the past and expected project decisions in the production licences. What kinds of decisions will be made next in the project indicates how far the project has progressed in terms of studies/evaluations? The figure below illustrates the decision model used by the authorities for larger projects and developments, and which represents some of the possible selections in the list.

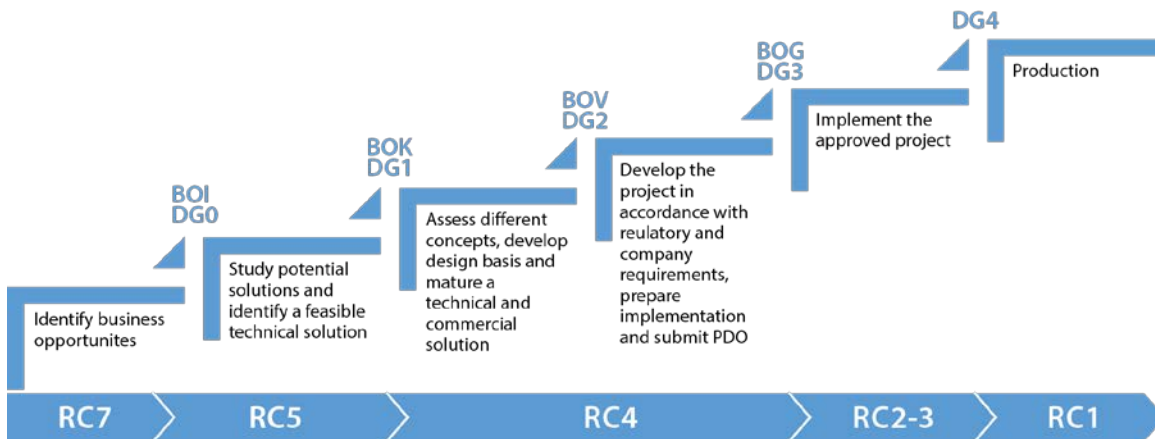


Figure 6-1 The connection between project maturation and resource classes

## Decision year

- The expected/planned years for future decisions must be indicated. Even if, for example, initiation of the project lies quite far into the future, the operator must nevertheless indicate a year that represents the best estimate. The year selected should be realistic, and not just an ambition. Decision milestones that have already been passed shall also be stated, including the year.
- Decision on project initiation, BOI (DG 0)
  - Equivalent to start-up of feasibility studies. The project is a potential, but evaluation has not yet been started.
- Decision on concretization, BOK (DG 1)
  - Equivalent to start-up of concept studies. The project is initiated, and feasibility studies are underway. Work is proceeding towards a reduced list of concept options. The following activities are normally carried out in the feasibility study phase up to a decision on concretization:
    - The concept or resource base for the project is reviewed, evaluated and described.
    - The market for the proposed products is evaluated.
    - Based on technical studies, potential feasible technical solutions are outlined for the field development, transport system, treatment facility, etc.
    - HSE consequences are evaluated.
    - A cost estimate is prepared for the project; this will normally satisfy +/- 40 %.
    - The probable profitability of the business concept will be documented.
    - An evaluation is made of the uncertainty associated with the project, including resource base, market, technical solution, HSE, feasibility, supplier market, cost estimate and profitability.
- Decision to continue, BOV (DG 2)
  - Equivalent to start-up of pre-engineering and concept selection. A cost estimate with reduced uncertainty will be prepared.

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- Decision to implement, BOG (DG 3)
  - The project is in the engineering phase and final approval by the licensees and submission of PDO (if applicable) is planned. The year will mark when the resources are expected to become reserves. This applies regardless of whether the final decision is submission of a PDO, or whether the decision is made in some other manner. The selected year should be realistic, and not merely reflect ambition. Even if the project is in an early study phase, a year must be entered as the best estimate, given certain assumptions. For discoveries/projects that will be phased into a (parent) facility when capacity becomes available, this field can remain blank if necessary, but a notation should be made in the comments space.

The DG years should be consistent with the resource class for the profile. Example: volumes from wells classified as reserves according to 3.3.1 in the Guidelines, shall have DG1-DG3 when these criteria are met even though DG3 (drilling plan) for individual wells are not yet approved.

## 7 Completing the spreadsheet "Tariffinntekter" and Tariff Costs

Tariff income and tariff costs shall be stated, assuming that they entail a payment obligation.

### Tariffs per field

Tariffs shall be equivalent to 100 % of the field (or 100 % of the Norwegian share). If all licensees do not receive the same tariffs/have the same tariff costs, an estimate must be calculated, e.g. calculated as the operator's tariffs / the operator's share in the joint venture.

### Reporting period

Tariff income/tariff costs shall, as for the profile collection, be reported for the entire license period for the project, or for as long as income/costs are expected to occur for the project (longest period).

### 7.1 Tariff income (only from fields with projects in RC1-2)

Tariff income shall be reported in the sheet named "Tariffinntekter" for fields that receive tariff from other fields/projects, and shall include tariff income only from projects in RC1-2. Tariff income from projects in RC3-4 shall not be included by the receiver but is to be reported as tariff cost by these projects, in the profile sheet, columns BM to BR, ref chapter 7.2.

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	<b>Reporting for Revised National Budget 2021</b>													
2	<b>Tariff income / rebates</b>			Yearly income (mill NOK) should be stated for each field etc, paying cash for services.										
3	(million NOK)			Field names should be selected from the drop list in row 7. Type of tariff should be selected from the drop list in row 8. Free text should be added in the cells in row 9. The cells are small, but will handle text limited to 256 characters.										
4	Project ID :		0											
5	Operator :													
6	<b>Norwegian fields, etc. that pay for services in the form of money - state name of field at the top of the column.</b>													
7	Field name :													
8	Tariff type :													
9	Free text :													
10	Year	C=D+AC	D=TOT(E:AB)	E	F	G	H	I	J	K	L	M	N	O
11	2019	0	0											
12	2020	0	0											
13	2021	0	0											

The fields that pay for services in the form of money shall be indicated in Rows 7 and 9. The income flows are to be stated in separate columns. At the top of the column (Row 7), select the name of the field that purchases services from the drop-down list. In row 8 it is possible to select a type of tariff from the drop-down list. Tariff revenues also comprise a possible reimbursement of operating costs as a result of cost sharing agreements with associated fields. Free text can be added in Row 9, if needed. Space has also been allocated for more free text below the table.

### Delimitation

Tariff income shall include all payments for services that are performed for another field or outside the Norwegian shelf in connection with treatment, transport, storage, modulation, etc. of petroleum. Tariff income shall also include any reimbursement of operating costs/investments that the relevant project may have covered by other parties as a consequence of agreements for treatment and/or transport of petroleum.

Total tariff income is automatically retrieved in Profil 1, from the data entered in the "Tariff income" spreadsheet.

## 7.2 Tariff costs

Tariff costs are found on the profile spreadsheets and shall be reported for projects in RC3-4 that have such costs. However, if you have any information or data for RC5 concerning opex sharing and/or capex sharing, we would appreciate that you also report this data.

With exception of tariffs on foreign installations, tariff costs in RC0-2 shall not be reported. The tariff costs, to Norwegian installations, associated with the projects in RC0-2 will be accounted for when the fields report income from third-party processing, and pipelines and terminals provide estimates of their income. The NPD incorporates and allocates this income as costs for the relevant fields as part of the comparison of the figures associated with National Budget Reporting.

	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	
27	<b>Free text to explain the tariff-chain if multiple service providers per category are involved:</b>										
28											
29	<b>Column BL: To be completed for all projects (except RC 5) with import of tariff services (foreign installations).</b>										
30	<b>Column BM-BR: To be completed for all projects in RC3 and RC4, optional input for RC5.</b>										
31	<b>Please state where services are assumed to be provided. Only one provider per cell, additional comments in cell BL28 above.</b>										
32											
33	<b>Tariffs</b>										
34	Import of tariff services (Cost for use of foreign installations)	Tariff costs oil transport	Tariff costs gas transport	Tariff costs processing/treatment	Tariff costs land based	Tariff costs Cost sharing OPEX	Tariff costs Cost sharing CAPEX	Total tariff costs			
	-JOA 6.4 part	-JOA 6.4 part	-JOA 6.4 part	-JOA 6.4 part	-JOA 6.4 part	-JOA 6.4 part	-JOA 6.4 part	-JOA 6.4			
35	million NOK	million NOK	million NOK	million NOK	million NOK	million NOK	million NOK	million NOK			
37	0	0	0	0	0	0	0	0			
38											0
39											0
40											0

The types of data are divided between import of tariff services (foreign installations), oil transport, gas transport, processing/treatment, and land facilities, direct payment of operating costs, direct payment of investment costs. These are summarized for each project. The total column will be completed and calculated automatically.

Indicate the intended location where the service is to be performed in the comments space above each data type (row 32). Only one provider per datatype, further explanation and other providers should be described in the larger text box above.

## Definition and delimitation

Tariff costs shall include all payments for services that are performed by another field on the Norwegian shelf in connection with treatment, transport, storage, modulation, etc. of petroleum.

- Only tariff costs that are or will be included in the licence budget should be reported. Costs that only occur in the operator's internal accounts should not be reported.
- For the purposes of this reporting, **import of tariff services (foreign installations)** comprises payments for use of the Brae pipeline, the Brent oil and gas pipeline (Flags) and any other foreign installations. The NPD receives a calculation basis for Norpipe UK and Norseia Pipeline. Tariffs to Norpipe UK and Norseia Pipeline are therefore not included.
- **Oil transport** – Costs associated with oil transport before the norm price point, i.e. transport costs that are deductible in relation to petroleum tax.
- **Gas transport** – Costs associated with gas transport up to the sales location, i.e. transport costs that are deductible in relation to petroleum tax.
- **Processing/treatment** – Costs associated with processing and treatment on third party facilities, including storage, modulation, etc. of petroleum, i.e. processing and treatment costs that are deductible in relation to petroleum tax.
- **Land** – Costs associated with processing and treatment including storage, modulation, etc. of petroleum that takes place in terminals on land, i.e. processing and treatment costs in land facilities that are deductible in relation to petroleum tax.
- **Cost sharing Opex related to cost sharing agreement:** Operating costs connected to a host field. The name of the host field intended to be used, shall be expressed in the comment box above the data type.
- **Cost sharing Capex related to cost sharing agreement:** Investments that should be made on a host field based on a tie-into this field. The name of the host field intended to be used, shall be expressed in the comment box above the data type.

**Note that import of tariff services (foreign installations)**, i.e. costs associated with the use of transport or processing facilities that are either geographically or in terms of the Petroleum Act outside the Norwegian shelf area, but that nevertheless are deductible in relation to petroleum tax, shall still be reported in a separate column (BL) in the profile collection for the project in question. This applies both to fields in RC0-2 as well as projects in RC3-4.

Any tariff costs after expiration of the license period for the project can be reported as an estimated annual amount, e.g. the level before the license period expired.

Only the Norwegian part of the tariffs shall be reported.

If there are other significant operating costs other than tariffs/rebates that are not covered by the joint venture or equivalent budgets, information must be provided separately, if applicable. Amounts are significant if they exceed NOK 50 million per year, or NOK 300 million in total over the next ten years.



## 8 Completing the spreadsheet "Månedssdata"

Monthly sales quantities for the year to come shall be reported on a separate spreadsheet. The expected value is to be reported for all profiles. The total number for the year must be equal to what is reported in the respective profile sheets. It is important that differences in number of days per month is reflected and that planned workovers are accounted for.

	A	B	C	D	E	F	G
8	<b>Profile_1</b>						
9			Monthly sales oil Base estimate	Monthly sales NGL Base estimate	Monthly sales condensate Base estimate	Saleable gas per calendar year distributed per month 40 MJ/Sm <sup>3</sup>	
11			million Sm <sup>3</sup>	million tonnes	million Sm <sup>3</sup>	billion Sm <sup>3</sup>	
12		jan. 21					
13		feb. 21					
14		mar. 21					
15		apr. 21					
16		mai. 21					
17		jun. 21					
18		jul. 21					
19		aug. 21					
20		sep. 21					
21		okt. 21					
22		nov. 21					
23		des. 21					
24		TOTAL	0,000	0,000	0,000	0,000	

## 9 Quality Assurance

### 9.1 The operator's responsibility

The person responsible for the operator's reporting shall ensure:

- that there is a complete overview of all the projects the operator is to report on
- that a correct profile collection is linked to the various projects
- that correct reporting is submitted to the authorities by the deadline stated in the dispatch letter
- that there is consistency between data types
- that contributions from the respective disciplines are quality assured

Quality implies that the reporting is in accordance with the requirements listed in the General Guidelines and in the Reporting file.

As previously mentioned in the guidelines, it is essential that no changes are made to the structure of the file. An automatic control whether there are reference errors are executed when saving the file. You should not be able to save the file if reference errors occur, it is recommended to undo actions that have affected formula references.

### 9.2 Consistency checks

As part of the quality control, several consistency checks are included in the spreadsheet, below the profile collection. Mainly these checks control the consistency between information reported various places in the spreadsheets. When a consistency check gives a result, there are two alternatives:

- 1) Change the input so that it is consistent
- 2) Explain why the data is still correct

To help secure that this is accomplished, a check is incorporated in the reporting file. If there are unclarified consistency checks, a warning will show up after 1 October indicating which profile sheet this relates to when closing the file.

#### **Description of the checks:**

##### ***Check 1, 3, 5 and 7:***

Control that the same quantity is reported in the sheet "Månedsdata", as in the actual profile collection, as sales forecasts for the next year. A margin of 0.001 is granted for rounding off numbers. It is important that these numbers are correct, since they should be consistent with the production application.

##### ***Check 2, 4, 6 and 8:***

Control that the resources reported in the profile collection equals the numbers reported in the project overview in the profile collection. A deviation of respectively 0.1 and 0.01 for "large" and "small" deposits is allowed. Resources are compared with the originally in place volumes to check correspondence on file level.

##### ***Check 9 and 10:***

Control that the different contributions to CO<sub>2</sub>- and NO<sub>x</sub>-emissions respectively, add up to the total emissions reported.

## **Check 11 and 12:**

Control that there are CO<sub>2</sub>- and NO<sub>x</sub>-emissions every year with production. These checks are not active for profile collections containing reserves in fields without emission from fuel and flare. If there are consistency on a file level (Profil\_Total) no comments are given, else there will be comments in the individual profile sheets with deviations between production and emissions.

## **Check 13:**

Control that there is no production after shut-down costs have been reported. A feedback will be given in the consistency check area in Profile 1 if the production continues after the reporting of the shut-down costs across the various projects in the file (the figures are taken from the Profil\_Total, which sums the figures across the profile collections in the reporting file).

## **Check 14:**

Is only shown in Profile 1 and is based on a summation of all profile collections in the file (Profil\_Total). Control that annual cash flow are positive. The intention is to check sales data versus cost data to reveal significant errors (for instance in units) in the report. In this connection, firm prices have been assumed for all petroleum products:

- Oil: NOK 4500 per Sm<sup>3</sup>
- Gas: NOK 2500 per 1000 Sm<sup>3</sup>
- NGL: NOK 5000 per tonne
- Condensate: NOK 4500 per Sm<sup>3</sup>

It is emphasized that these assumptions do not reflect the authorities' assumptions but are merely intended for use to reveal significant reporting errors.

## **Check 15:**

Check to control the succession of reported decision gates. The assumption is that DG0 will be passed before or in the same year as DG1, DG1 before DG2 etc.

## **Check 16 and 17:**

The checks control that gas flow to and from fields is in balance. The checks are performed on Profil\_Total and if activated, details are shown in individual profiles for troubleshooting. For many fields, the gas system is complex with several flows to and from other fields, therefore, these checks must sometimes be regarded as qualitative, hence, relatively large triggering slacks are applied.

*Check 16 has the following logic:*

Gross gas + Receipt of gas - Deliveries of gas - (Injected gas, fuel and flare) > 0,3 billion Sm<sup>3</sup>.

*Check 17 has the following logic:*

Gross gas + Receipt of gas - (Injected gas, fuel and flare) - Dry sales gas (Col U) > - 0,2 billion Sm<sup>3</sup>.

The checks are performed on Profil\_Total and are activated if the balance is off. If the check is activated, details will be shown in each profile sheet. The input must be changed, or a reasonable explanation for the unbalance must be included.

**A new feature** this year is a reminder to follow-up feedback from controls in the Gassco sheet "1. Gas Export". If the cell area V5:V16 contains messages which are not commented in cell area Z5:Z16, there will be a message; "Please check Gassco Control Area '1. Gas Export' (L3:AC16)".

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**Check 18:**

Control if comment boxes are used. It will be more useful to make comments in the text boxes prepared for this, than to comment in the space next to the response from the consistency check.

**Check 19:**

Check to control the coherence between resource class/sub-class and decision gates reported. Resource class/sub-class shall be reported according to expected status at the end of the reporting year.

**Check 20:**

Control the consistency between the sum of sales gas profiles per calendar year and gas year. Will also check whether input of gas purchase is complete, with both volume, cost and receipt of gas.

**Check 21-24:**

Control of drilling costs. This check will give a result when unit costs per well or unallocated well costs are outside the stated thresholds. The well number can be expressed as a decimal figure to correspond with accrued investments within the same year.

**Check 25:**

Is only shown in Profil\_1. Control that operation costs are reported in the profile collection for the same period as for income. A feedback will be given in the consistency check area in Profile 1 if the condition mentioned above is not fulfilled for the file in total (the figures are taken from the Profil\_Total, which sums the figures across the profile collections in the reporting file).

**Check 26:**

Control that removal and cessation costs are reported for projects in operation or projects containing investments in new infrastructure.

**Check 27:**

Control whether the table for uncertainty regarding production start-up for projects in RC2-5 is filled in and that the timing of respectively early, basis and late is consistent. There will also be feedback if production profiles start in a different year than stated in the table.

**Check 28:**

Control whether the table showing the project attributes is filled in. This table should be filled in for all projects with resources in RC3-5.

**Check 29:**

Control whether there is a correlation between the development concept in the table of attributes and the development investment shown in the profile collections.

The control checks for investment numbers in the columns of floating or fixed facilities when these are selected as development solution, and that there are no investment numbers in these columns when subsea development is selected.

**Check 30:**

Control whether subsea facilities in RC3-5 have reported associated pipeline investment and that necessary investments at the host platform are placed in the correct column.

**Check 31:**

Control whether discoveries have reported costs for concept studies. It also controls whether development projects have reported number of wells.

**Check 32:**

Check to verify input of the assumed general price increase (GPI). A feedback will be given in the consistency check area in Profil 1 if there are cost elements beyond the reporting year and GPI is lacking.

**Check 33:**

This check only appears in Profil 1 and controls whether there are negative values in the forecasted period in the total of all profiles in the reporting file (appears in Profil\_Total).

Normally there should not be any negative figures in the total value for a field, discovery or facility. Negative costs should be recognized as income, negative production as injection etc.

**Check 34:**

Control that service provider are stated when tariffs are entered.

### 9.3 The spreadsheet Cost Control

The input in this sheet is the operator's assumptions for general price increase, if not this is a constant value. In such cases input should be provided in cell AC28 in the sheet Profil\_1. In addition, the sheet contains two visual consistency checks linked to the sheet "Profil\_Total", which give a total of all the profile collections.

General price increase should be the operator's general assumption when converting nominal NOK to real NOK. For example, figures for 2020 apply to the general price increase from 2019 to 2020. This price increase must be used when converting the budget figures in nominal NOK to the reference year in real NOK. We expect the same general price increase to be used for all projects reported by the same operator. We recommend a coordinated input of these data before internal distribution.

The visual consistency checks below give a sum across all profile collections. Calculated net cash flow and costs per well are plotted against year. Any profile collections containing data outside a defined threshold value will be listed. Any comments, if the data is considered valid, should be made in the consistency check table for the relevant profile collections, checks 21-25.

## 10 Error messages

The reporting file has been developed in Microsoft Office Excel 2007. The programming language "Visual Basic" has been used to program the macros. The reporting file should also function in earlier versions of Excel. Contact the NPD if problems or error messages occur that are not described here.

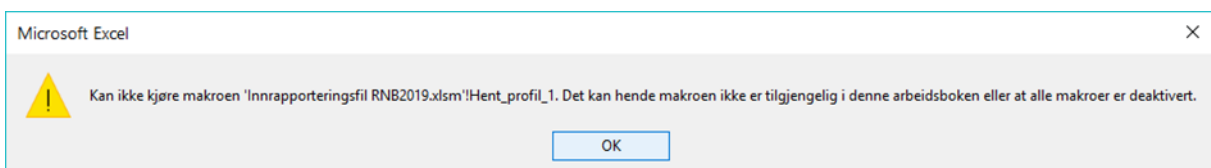
### Error Message 1)

"This document was opened with Macros disabled....."

If the macros were not activated (if "Disable macros" was clicked) when the reporting file was opened, the following error message will appear:

**Error! Objects cannot be made by edited field codes.** Click "OK", close the reporting file and then re-open it. Click on "Enable Macros" when the dialogue box appears.

This error message, or the one shown below, will also appear if the security settings in Excel are set at "High". To change the security settings, open the menu "Tools / Options / Security" and select "Macro security". Here you can select the "Medium" level. Every time you attempt to open an Excel file with built-in macros, a box will be displayed asking whether you want to activate the macros.

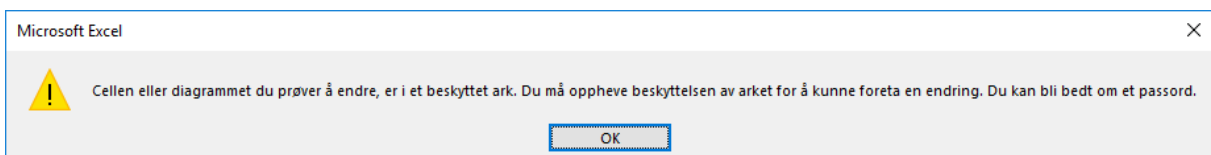


Opening the reporting file without activating the macros will cause several of the spreadsheet functions not to work.

### Error message 2)

"The cell or chart you are trying to change is protected ....."

If you attempt to paste in or enter data in protected cells, the following message will appear:



This can often occur, particularly in connection with pasting in large areas in the profile collections. There are several columns here in which no data can be entered; and some of these are hidden to the user. Click "OK" on the message box and check whether there are protected cells in the entry area. Try to divide the paste area into smaller sections. Remember – you are only allowed to change white cells.

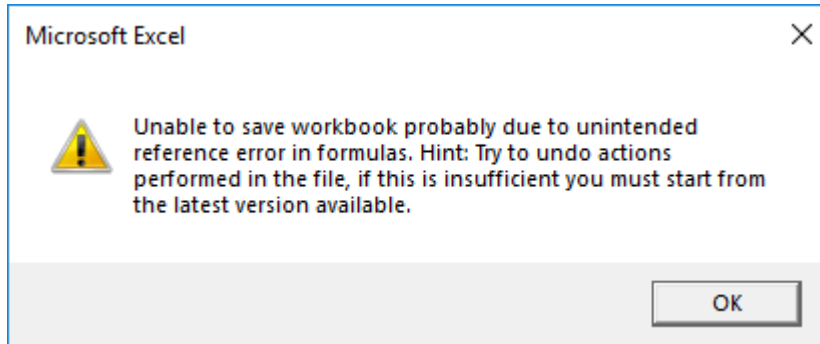
### Error message 3)

The file will not be saved if the entry has resulted in a reference error (#REF!). This error typically occurs when structural changes are made to the file (deleting rows, columns or sheets). The error may also occur with "drag and drop operations", Copy-Paste etc.

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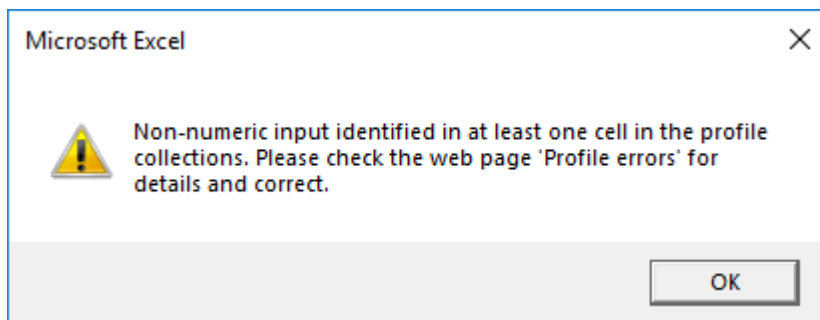
---

The sheets containing #REF cells are listed in a new window 'Profile errors' in your browser. Normally the root to errors will be in the input area for profiles. To continue, you must undo the entry that provoked the error.



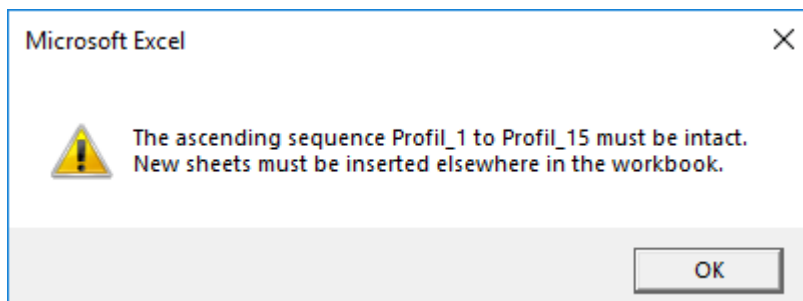
## Error message 4)

Check to avoid non-numeric input in the profile area. A new window 'Profile errors' will open in your browser with cell references to this input. The main purpose is to have an easy access to "invisible" input. These cells must be edited (delete information or insert 0).



## Error message 5)

New check to avoid errors in the summation of Profil\_Total. The sequence of profile sheets must be ascending and unbroken. The solution to this error message is to move sheets unintentionally placed within this range.



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## Error message 6)

After 1 October, a warning will show up if there are unresolved consistency checks when closing the file. This is meant as a reminder that this must be addressed prior to submission of the file. Check the reason for the error message and do one of the following: Update the reporting or give an explanation why this is correct. The Control Area is located below the input area for profiles (cell area H118:U153) in each profile sheet.

