

Discussion Paper on Specifications and Guidelines for the United Nations Framework Classification for Fossil Energy and Mineral Resources (UNFC 2009)

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PART 1 – Preamble

Introduction

The purpose of this paper is to discuss the requirements of stakeholders for secondary rules under the UNFC, here called the UNFC Specifications.

The paper has been prepared at the request of the UNECE Ad Hoc Group of Experts on Harmonization of Fossil Energy and Mineral Resources Terminology (AHGE) by members of its Revision Task Force (RTF).

The specifications must be seen in connection with the principal needs that the UNFC aims to meet. These are:

1. The need to produce international mineral and energy studies in support of long sighted and robust policies and strategies – The International Mineral and Energy Studies needs.
2. The needs of Governments in implementing their policies through their resource management – The Government Resource Management Needs.
3. The needs of industry in managing their business processes to serve their host countries, shareholders and stakeholders – The Business Process Management Needs.
4. The needs of the financial community in allocating capital efficiently so as to reduce the capital costs to a minimum – the Financial Reporting Needs.

While the UNFC is structured to meet these needs in an elegant way at a high level, further specifications are required in order to secure that inventories hold information of required quality. Some specifications are generally applicable, some are commodity specific, some are related to the particular application and some may be required to relate the UNFC to local legislation, organisations or practises.

Requirements for quality

The requirements for quality in the UNFC inventories are similar to the relevant requirements that apply to statistical information in general as is currently being researched by the UN Statistical Division in its establishment of the [International Recommendation for Energy Statistics \(IRES\)](#).

Quality requirements of importance for the formulation of specifications under the UNFC are:

Relevance. The information to be read from the UNFC should meet the real needs of users.

Reliability¹. This refers to the confidence that users place in those data based on respect for the responsible agencies producing the data. For the UNFC this translates into assuring that the categories used can be reliably determined on one hand and that the forecasts are reliably reproduced over time on the other. The former may require specifications on how the categories should be understood in detail, while the latter would require a governance of the UNFC that promotes a common understanding of it in time and space, and also that any changes to it are managed in such a way that its reliability over time is not compromised.

Audits, look backs and verification against updated forecasts and, eventually, against actual production provide the ultimate test of reliability and should be provided for.

Coherence. The coherence of fossil energy and mineral inventories reflects the degree to which the data are logically connected and mutually consistent. That is to say, the degree to which they can be successfully brought together with other statistical information within a broad analytical framework and over time. The use of the UNFC itself promotes coherence, as does the use of a common methodology across surveys. Coherence has four important sub-dimensions:

- (i) ***Coherence within a data set.*** This implies that the elementary data items are based on compatible concepts, definitions and classifications and can be meaningfully combined. For the UNFC, this means that the recoverable quantities are related to defined projects from which other relevant information may be obtained, such as costs, production over time, cash flows etc.
- (ii) ***Coherence across data sets.*** This implies that the data across different data sets are based on common concepts, definitions and classifications. The coherence between fossil energy and mineral statistics and other statistics (e.g., economic, environmental) will be ensured if data sets are based on common concepts, definitions, valuation principles, classifications, etc. The UNFC is designed to facilitate this through its project-based approach.
- (iii) ***Coherence over time.*** This implies that the data are based on common concepts, definitions and methodology over time.
- (iv) ***Coherence across preparers and users.*** This implies that the data are based on common concepts, definitions and methodology across preparers and that the users understand and use them in the same manner.

Materiality. It follows from the requirement for relevance that there be a requirement also for materiality. This will ensure that issues of material importance are reflected, and that immaterial detail is not allowed to derail the efforts of producing essential decision support.

Ease of preparation and of use. This implies that:

- The UNFC and its specifications maintain their strong logical rigor, clarity of form and brevity in formulation of necessary rules;

¹ This is related to the term “credibility”, used by the UNSD or “assurance of integrity” used in the IMF Data Quality Assessment Framework

- Arrangements are in place to allow preparers and users to share best practices² with respect to preparing and using UNFC inventories in elegant ways providing a maximum of benefits for a minimum of effort.

The quality requirements are not met easily. In some instances they may be in clear conflict and a compromise must be sought, or at worst, one or more of the criteria must be sacrificed. An attribute may for instance be highly relevant for a certain application, but may not be reliably determined³.

Other general requirements

Integration of classifications: The detailed integration of other classifications into the UNFC should be reviewed. When possible and necessary, specifications should be developed to ensure a one to one relationship. This could be done in the form of specifications to the UNFC or to the other classification.

Reporting of uncertainties. Specifications are required to:

- further standardise the reporting of uncertainty in the quantity that a given project will produce using the G-axis; and
- further standardise the reporting of uncertainty in that a non-committed project may or may not materialise and correcting the estimates of recoverable quantities of a portfolio of projects for this.

Defining the reference point at which recoverable quantities are measured or estimated. The reference point is the interface with other statistical information describing the surface use of the recoverable quantities. It is also an important point in defining the resource in terms of quality, quantity (and thereby value), and in securing material balance in the resource accounting. The initial in place quantities of a non-renewable resources must equal the quantities remaining in the ground when extraction ceases plus the quantities that have been brought past the reference point(s).

Commodity specific specifications

Physical differences between commodities and/or incompatible traditions may require commodity specific specifications.

Application specific specifications

In order to keep the UNFC relevant for the four principal applications, it will be necessary to examine the requirements that they have and to design specifications to meet them. These specifications should, to the extent possible be formulated to provide relevant information also to the other applications⁴.

² through guidelines or otherwise

³ The classical example is the value of a recoverable quantity. This requires information on future social and economic conditions, including market prices that may not be reliably determined. When researching specifications to deal with this issue it would be natural to consider the introduction of standard social and economic conditions of some form, which would make the value less relevant, objectively speaking, but more reliably determined and also more coherent. Alternatively, reliability and coherence could be sacrificed to retain relevance.

⁴ An example is the requirement that investors have for coherence in the form of comparable numbers. This may require that recoverable quantities be calculated for a standard set of economic and social assumptions. However, the other three principal applications also have a requirement for comparability. The research required to define the specifications for financial reporting needs should therefore also consider the need for comparability in energy and mineral studies, in Government resource management and in industry's business process management.

Local specifications

The UNFC is designed to meet the new needs of a globalising economy. It respects that financial markets are global, and that commodity and energy markets are partly global. It also recognises that material partnerships in the development and production of fossil energy and mineral resources often are transnational and woven together globally. The activities are however always local, and must respect national legislation, company procedures and so on. The UNFC can be adapted to many of these needs by a structured subdivision of the categories, by aggregating them in a standard manner or by both.

The Development Process

A strength of the UNFC is its capacity to harmonize classifications as is demonstrated in the Mapping Task Force Report. This offers the advantage of examining the classifications that have been mapped to the UNFC, and to adopt the elements contained in them that may serve as adequate specifications under the UNFC.

If such a process of “linkage” through harmonized terminology is adopted this could eliminate the requirement for the development of new commodity-specific specifications, to the extent that these already exist as integral parts of the specifications mapped to the UNFC.

However, it is recommended that a task force be assigned to do the research required to formulate specifications and to submit their recommended specification to the AHGE. This documentation would then also include an explicit link to the relevant publications of CRIRSCO, SPE/WPC/AAPG/SPEE and others for commodity-specific specifications and, to the extent necessary, explanations of the correspondence between the high-level harmonized generic terminology and that applied at the applications and commodity-specific level.

The development process for petroleum specifications and guidelines has been agreed in the Memorandum of Understanding (of 2006) between the UNECE and SPE (enclosed). Here the responsibilities of the AHGE are to:

1. *Provide a forum of stakeholders to assist in defining the needs to be met by the Texts⁵ and ensure the deliberations resulting from the meetings of the Ad Hoc Group are provided to the SPE OGRC for the continuing development of Texts.*
2. *Include a representative of SPE on the Bureau of the UNECE Ad Hoc Group of Experts.*
3. *Select a representative to participate in OGRC development of the Texts;*
4. *Respect the technical decisions of the SPE in development of the Texts by conducting a due process through which the UNECE Group of Experts may recommend or not the application of the Texts generally, and through which each individual stakeholder may, on an informed basis, accept or reject the implementation of them under their authority*
5. *Promote collaboration with member countries, the petroleum industry, international standard setters, (including standards organizations), regulators and other international organizations in considering applying the recommended Texts in applications of interest.*
6. *Provide a venue for a joint meeting with the Task Force on Solid Minerals at least once a year. This will be Geneva unless all parties agree differently.*

⁵Specifications and guidelines for the application of the UNFC, and the SPE/WPC/AAPG definitions

The Approval Process

Defining an acceptable approval process for specifications is a critical component of both implementation and maintenance. There has to be a well-defined and completely transparent system for approving the specifications when first adopted and for subsequent updates, and also for facilitating the provision of timely responses to interpretation queries on an ongoing basis.

The AHGE/SPE MoU documents how this is arranged for the petroleum-specific specifications. The objective is clearly to protect the rights and responsibilities of the interests involved. From a practical standpoint this agreement would seem to provide a fair and reasonable basis for an approval process. It is a formal and integrated arrangement whereby all stakeholders are duly represented, and which ensures that the rights and obligations of the individual participants are fully protected.

A similar arrangement with CRIRSCO could potentially address the requirements for commodity-specific specifications and guidelines for the minerals sector.

Two issues that require further clarification are:

- i) The current structure of the AHGE, while clearly transparent, is not viable for representative decision-making purposes as it operates on a consensus basis.
- ii) There is a need for a “body” that can take responsibility for addressing interpretational queries on an ongoing basis. A formal structure, which could be established under the auspices of the UNECE, would be able to provide a single contact point for such questions, which could then be channelled to the appropriate group (depending on the commodity concerned) for recommended decisions and provide the assurance that pre-agreed governance and approval controls were followed.

The Maintenance Process

Maintenance would be accomplished through a similar process to that recommended for initial approval, since any changes would need to be subject to the same controls. Proposals for changes could be submitted to the body that facilitates interpretational queries and then dealt with either on an ad hoc basis or, probably better, put forward for consideration by the stakeholders on an annual basis. This would include examining proposals for adapting the UNFC to local requirements, and ensuring that like adaptations are formulated in a like manner and unlike adaptations are formulated in an unlike manner across the various constituencies requiring them.

Part II – Needs to be met by the classification and its specifications

This part would include further justifications for the recommendations below. Some basic elements were circulated for the London Meeting, supplemented by the task forces at and after the meeting.

Part III Recommendations

This should be the TOR for a specifications task force. It should be in a form:

The RTF recommends the nomination of a Specifications Task force to cooperate with the SPE Oil and Gas Reserves Committee (The AHGE Task Force on Petroleum) to research and propose specifications under the UNFC to the AHGE at its annual session in 2010.

The specifications should meet the following general and application specific needs:

1. Ensure that the requirements for relevance, comparability, coherence, materiality and ease of preparation and of use are met for all applications and all commodities.
2.
3. For mineral and energy studies applications... something on completeness and aggregations?
4. For Government resource management applications...
5. For business process management applications... elaboration on the visibility, communication and use of optional projects, valuation? etc..
6. For financial reporting applications.. see D. Elliotts paper..
7. For the petroleum applications, ensure that:
 - a. Exploration potentials are categorised with respect to the nature⁶ and or maturity of the exploration project, the probability that an economically exploitable discovery will be made and the uncertainty in the recoverable quantities given that a discovery is made.
 - b.
 - c.
8. For xx application ...
9. For artisan mining applications...
10. For...

Appendix I List of Members of the Revision Task Force

Extended Bureau members:

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⁶ The Specifications Task Force may wish to consider the merit of categorising petroleum exploration in the common form of play, lead and prospect or some other commonly used manner such as infrastructure led exploration, growth exploration and wildcat exploration. Due regard should be paid to the requirements for ease of preparation and of use. This will limit the complexity of the categorisation to what is easily absorbed and understood by a first user of the classification in the span of time normally allowed for learning to use it.

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Appendix II Memorandum of Understanding between UNECE/AHGE and SPE

The agreement will be included in full here. That has not been done in the draft as the text is on the AHGE web site and well known to all. It is more practical to do the drafting on a smaller file.

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