

To: Members of the Bureau of the UNECE Expert Group on Resource Classification

From: David MacDonald, Jim Ross and Charlotte Griffiths

Conference Calls of the Bureau of the Expert Group on Resource Classification (EGRC)

4 December 2014

APPROVED MINUTES

Present on 9am GMT 4 December Call:

1. David MacDonald (Chair)
2. Tunde Arisekola (NGSA)
3. Simplicio Caluyong *representing* Adichat Surinkum (CCOP)
4. Roger Dixon (CRIRSCO)
5. Kjell Reidar Knudsen (NPD)
6. Jim Ross (petroleum sector)
7. Danny Trotman (financial reporting sector)
8. Narendra Verma (petroleum sector)
9. Charlotte Griffiths (UNECE)

Observer: Frank Denelle, Chair, EGRC Task Force on Application of UNFC to Renewable Energy Resources joined for Item 10

Present on 3pm GMT 4 December Call:

1. David MacDonald (Chair)
2. Karin Ask (petroleum sector)
3. Paul Bankes (CRIRSCO *representng* Roger Dixon)
4. David Elliott (financial reporting sector)
5. Michael Lynch-Bell (Chair ex-officio)
6. Jim Ross (petroleum sector)
7. Hari Tulsidas (IAEA)
8. Charlotte Griffiths (UNECE)

Apologies:

1. Fatih Birol (IEA)
2. Dan Diluzio (SPE)
3. Mucella Ersoy (Turkish Coal Enterprises)
4. Gioia Falcone (geothermal sector and academia)
5. John Ritter (SPEE)
6. Igor Shpurov (First Vice Chair, GKZ Russian Federation)
7. Adichat Surinkum (CCOP)
8. Brad Van Gosen (USGS)
9. Claudia Wulz (European Commission)

Draft Agenda for Bureau Calls 4 December 2014

1. Approval of draft agenda
2. Draft minutes of Bureau calls 8 October 2014
3. Bureau membership
4. Update on guidance on environmental and social considerations
5. Feedback from 23rd meeting of the Committee on Sustainable Energy
6. UNFC-2009 and case studies

7. EGRC sixth session
8. Technical Advisory Group update
9. Update on application of UNFC-2009 to nuclear fuel resources
10. Update on application of UNFC-2009 to renewable energy resources
11. Update on application of UNFC-2009 to injection projects
12. Education and outreach
13. Any other business
14. Timing of next meeting

Documentation:

1. Draft agenda for Bureau Calls on 4 December 2014
2. Draft Minutes of 8 October 2014 Bureau Calls
3. EGRC sixth session draft agenda items
4. Minutes of Renewables Task Force Call of 10 October 2014
5. List of Conferences Promoting UNFC in 2014 and 2015 (as at 26 November 2014)

Item 1: Adoption of the Agenda

Documentation: Draft agenda for Bureau Calls

1. The agenda was adopted without amendment.

Item 2: Draft Minutes of Bureau Calls of 8 October 2014

Documentation: Draft Minutes of Bureau Calls of 8 October 2014

2. The draft minutes as circulated on 4 November were approved without amendment.

Item 3: Bureau membership

3. The Bureau was advised that Fatih Birol's alternate, Capella Festa, recently finished her secondment with the International Energy Agency and has returned to Schlumberger. Fatih will advise of his new alternate in due course.

4. The Bureau placed on record its thanks and appreciation for the contribution made by Ms. Festa to the work of the Bureau and the EGRC and for ensuring the continued engagement of IEA in the work of the EGRC.

5. Paul Bankes advised that he has retired from Teck Cominco Ltd and hence has a new email address.

Item 4: Update on guidance on environmental and social considerations

6. The Chair of the E-axis Sub-Group provided an updated noting that the Sub-group is continuing to gather relevant information in relation to the CRIRSCO Template and PRMS. The Sub-group is also looking at accounting issues that may be relevant.

7. The revised Terms of Reference (ToR) for the E-axis sub-group were circulated to the Bureau for review and feedback on 1 December 2014. Comments were requested from Bureau members by 8 December. Concerns were raised by a number of members that the proposed ToR are too broad and the focus should be on environmental and social issues only in order to keep the task manageable. It was proposed that "economic" and "political" considerations be

removed from section 3b. The reference to the Uranium Bridging Document needs to be updated following its finalization and endorsement by the Committee on Sustainable Energy. It was also proposed to remove the reference in section 3b to the potential establishment of sub-classes to distinguish between the various E-axis factors.

8. Membership of the Sub-group Phase 2 was discussed. It was noted that in the absence of any response from Naresh Kumar, David Elliott had offered to Chair the Second Phase and this was accepted with appreciation by the Bureau. Efforts are being made to ensure a good balance in the membership between geography, stakeholder group and commodity-type. Roger Dixon offered to contact the International Council on Mining and Metals (ICMM) to identify a representative to join the Sub-group.

9. The Chair of Sub-group advised that the representative of the European Commission had noted that the terms "'factors' and 'criteria'" are being used interchangeably in the draft ToR. The Preface to UNFC refers to the three axes as "criteria":

“UNFC-2009 is a generic principle-based system in which quantities are classified on the basis of the three fundamental criteria of economic and social viability (E), field project status and feasibility (F), and geological knowledge (G)...”

10. UNFC also uses the word "factors" in the text. There is no consistency in usage either in the CRIRSCO Template or PRMS. The Chair of the Sub-group felt the distinction to be a useful one and made some changes to the latest draft of the ToR – the word "factor", except for in the first paragraph, is now consistent with UNFC as quoted above.

11. The Chair of the Sub-group noted that this issue has implications beyond the E-axis ToR to the whole of UNFC and hence proposed to not formalize a definition solely for the E-axis work, but to make an informal note or an addendum outlining the sense in which the terms are being used in the ToR. The proposal for the purpose of E-axis work is as follows:

Factor: A component that must be addressed in order to classify a resource into one of the UNFC Categories, e.g, Regulatory approval

Criteria: Measures that are considered to sub-classify a factor into one of the sub-categories. E.g, contained in the guidance on classifying the status of Regulatory approval as E1, E2, E3.

As an example for an E-axis **Factor** of Regulatory approval, the **Criteria** could be:

E1: Regulatory approval has been received

E2: Regulatory approval has been applied for and is likely to be granted

E3: Regulatory approval has not been applied for or is not likely to be granted.

12. The Chair of the Sub-group emphasized that he is not proposing a recommendation on the use of the terms and suggested that the Bureau may wish to consider this issue in more detail at a later date, and potentially present it to the EGRC as a separate issue that may be included in a future revision of the generic specifications,

13. The Chair thanked the Chair of the Sub-group and the other members for their time and efforts.

Item 5: Feedback from 23rd meeting of the Committee on Sustainable Energy

14. The 23rd session of the Committee on Sustainable Energy (CSE) was held in Geneva, 19-21 November. The afternoon session on 20 November focussed on the role of fossil fuels from source to use in building a sustainable energy system. Michael Lynch-Bell presented on the work of the EGRC and the Uranium Bridging Document during this session on behalf of the EGRC Chair.

15. The Chair summarized the key outcomes of the CSE meeting relating to the EGRC/UNFC:

(i) The Uranium Bridging Document was endorsed by the CSE. A press release was issued on 3 December. The link will be circulated to the Bureau.

(ii) The CSE took note of the report of the fifth meeting of the EGRC (took note essentially means endorsed).

(iii) The CSE endorsed the extension of the Work Plan of the EGRC for 2013–2014 until the end of 2015 and requested the EGRC to prepare a work plan for 2016–2017.

(iv) The CSE Bureau is now expanded to include the Chairs of the subsidiary bodies as ex-officio members. The Chair noted that this development should help both the constituencies of the CSE and the EGRC, as well help to build a stronger relationship with the CSE Bureau.

16. It was noted that whilst the CSE meeting report was not approved during the meeting good progress is being to finalize it.

17. The Chair noted the good overall support from the CSE for UNFC and the work of the EGRC.

18. The Chair noted with appreciation the agreement on the Uranium Bridging Document and underlined the positive outcome for the further development of UNFC. The Chair and members of the Uranium Task Force were thanked for their work.

Item 6: UNFC-2009 and case studies

(a) UNFC-2009

19. The Bureau discussed the most appropriate timing for the next update of UNFC-2009. As UNFC-2009 only became operational at the end of 2013, it was agreed that it is too soon to be considering updating either UNFC-2009 or the generic specifications. Members noted that the general rule is to have a gap of at least 5 years between updates unless a major problem is identified. The Bureau agreed that in view that UNFC-2009 is only just operational a testing phase of at least five years is needed and work on an update should ideally be considered around end-2015 or early 2016 with a view to issuing a revised text in 2017 or 2018.

20. The Bureau noted that an updated UNECE publication on UNFC was forecast at UNECE for the current biennium (2014-2015) and agreed that the publication should be postponed.

21. Bureau members agreed that all future hard copy publications of updates to UNFC-2009 should include a reference to the UNECE website with a note to check there for any updates.

22. The representative of CRIRSCO sought advice as to whether the update to the CRIRSCO Template Bridging Document is still needed. Bureau members agreed that the update is needed and should be made available on the UNECE website.

(b) Case studies

23. An electronic publication on UNFC case studies was scheduled to be issued during the last biennium (2012-2013) but was put on hold due to the publication “UNFC-2009 incorporating specifications for its application” (ECE Energy Series No. 42) being the priority. The case studies publication has consequently been carried over to the current biennium i.e. 2014-2015. The Bureau discussed the merits of this publication and the best timing for its issue. The Bureau noted that with UNFC-2009 being operational for some 12 months a series of case studies for application to solid mineral, petroleum, uranium and renewables have and are now being undertaken. A member proposed that case studies from operating companies should be sought. The Chair offered to explore the possibility for the RWE Dea AG Mittelplate case study to be used and/or updated. The Bureau agreed that the secretariat should take stock after the EGRC sixth session and prepare a summary of selected case studies to be issued as an electronic publication in the second half of 2015.

24. The representative from India advised that a number of UNFC case studies have been undertaken. The Chair noted this with appreciation and requested that the case studies be submitted to the secretariat so that they can be circulated for review, including by the TAG.

Item 7: EGRC sixth session

Documentation: List of items for EGRC sixth session draft agenda

(a) Provisional agenda

25. The draft list of items for inclusion on the provisional agenda for sixth session that was circulated prior to the call was discussed. Bureau members did not propose any amendments.

26. The Chair advised that a request has been received from Christian Doppler Laboratory for Anthropogenic Resources (of the Institute for Water Quality, Resource and Waste Management of the Vienna University of Technology) to present a UNFC case study on landfill. Bureau members were in agreement that this offer should be accepted and the presentation delivered under the agenda item “Other applications of UNFC”.

27. Discussion focussed on possible inclusion of issues that are consistently raised at Workshops. Competent Person was raised as a key issue. In particular, it was noted there was significant discussion on Competent Person at the IAEA and UNECE Workshop on UNFC held in Johannesburg, 10–14 November.

28. The recent email correspondence between a number of Bureau members on this issue was noted. For ease of reference the text of the response email from Jim Ross to Tunde Arisekola of 29 November 2014 is provided:

“This is a very important point that you raise with regard to Competent Person requirements and it needs careful consideration on how best to address it. From a practical standpoint, as illustrated in the example below, it does not really represent a “key difference” between the CRIRSCO Template and UNFC-2009, bearing in mind the distinction between the Template and a mandatory code that is based upon it.

It should also be kept in mind that using UNFC-2009 for solid minerals reporting purposes

still requires application of the CRIRSCO Template specifications, and hence there is not a major difference in effort required *from a resource classification perspective* between reporting under a CRIRSCO-based code and reporting those same estimates under UNFC-2009 (or, indeed, reporting under both systems). The primary difference is the option to utilise the additional classes and sub-classes of UNFC-2009 (where permitted).

First, then, it is important to note that (i) UNFC-2009 is designed for broad application (just like PRMS) and there is no basis to impose a requirement for a Competent Person (CP) in respect of every possible application of the system, and (ii) even when considering regulatory corporate reporting alone, such a requirement must be left to each jurisdiction to decide if and how it should be specified in law. In the US, for example, there is no requirement for a CP in the SEC regulations covering annual reserve reporting for either petroleum or mining.

The approach taken by the SEC for petroleum under the most recent update to the regulations requires disclosure of the experience of the individual primarily responsible for the reserve estimates, but not their name. Further, where the company represents that an independent third party has prepared or has audited the company's reserves (the latter of which is quite common among the mid-larger oil & gas companies), the SEC requires that the report contains certain specified information and that the report is lodged with the SEC. As far as I am aware, there are no such requirements for mining companies in the SEC regulations. This is not to suggest that I think the SEC approach is better than others: it simply illustrates that there are variations in CP requirements between countries and even between industry sectors in the same country.

Second, it is important to be clear that there is absolutely no reason why the requirement for a Competent Person (CP) cannot be used together with UNFC-2009, where appropriate. As an example, under the ASX Listing Rules (Australia), the mandatory reporting classification system for oil & gas is PRMS, which does not contain any reference to, or requirement for, a CP (or equivalent). This requirement is handled within the ASX rules themselves. Indeed, even though the referenced mining code is based on the CRIRSCO Template (the JORC code), the mandatory use of a CP derives from the legally-binding rules, which reference and incorporate the code. The code provides a definition of CP, unlike PRMS, and hence the rules are able to refer to that definition, but it is a trivial distinction since the definition must still be prepared in a way that is appropriate for that jurisdiction (e.g. by referencing specific "local" organisations of which CP membership is acceptable). It is immaterial to the application of the rules whether the definition of a CP is by reference to another document (i.e. the code, which is in an appendix) or is specified in the rules' own definitions.

Of course, there are many other considerations in establishing a set of listing rules, not least of which is maintaining international consistency where possible. In part, this is facilitated by the concept of Recognised Overseas Professional Organisations (ROPO) within the CRIRSCO codes, allowing for cross-border recognition of appropriate professional bodies (and membership grade) that would qualify for CP status. It is important, however, not to conflate the benefits of a common classification system with the possible requirements for, and specification of, a CP."

29. Following a discussion on the "competent person" issue, it was agreed that it should be placed on the agenda for discussion at the EGRC sixth session. It will be included under the agenda item "Generic specifications for UNFC-2009", with a view to having a discussion at the meeting on why "competent person" is not included in UNFC-2009 and what could be done to provide additional guidance on the issue. It was noted that "competent person" was included in

the first draft of the generic specifications but then removed as consensus could not be achieved on its inclusion.

30. The Bureau agreed that one or two slides on “competent person” should be included in the UNFC standard presentations. The Chair agreed to prepare such slides and circulate them for comment, noting that he wishes to include them in his presentations at the UNFC Workshop in India in January. Bureau members were also in favour of some text being made available on the UNFC web pages on the issue.

31. The secretariat will prepare an annotated agenda for the sixth session and circulate for comment and approval by mid-January.

(b) UNFC Workshop:

32. A UNFC workshop will be held on 28 April as part of the EGRC sixth session. The Chair noted the need for speakers to cover the CRIRSCO Template and PRMS. The representative of CRIRSCO agreed to identify a speaker. There was general agreement that the workshop should focus more time on case studies and keep the standard UNFC presentations to a minimum.

Item 8: Technical Advisory Group (TAG) update

33. The TAG continues to be productive. The current focus is on: the solid minerals case study prepared by Steve Henley – the TAG intends to issue a recommendation shortly; development of the Bridging Document with the new GKZ Petroleum Classification; the generic renewables specifications, which have been circulated to the TAG for comment; the draft specifications being developed by the Recipient Reservoirs Task Force; and the TAG actions items from UNECE Self-Evaluation, including development of a simplified case study and lessons learnt from case studies and any resulting guidance that might be needed.

34. The next TAG call will be held on 11 December 2014.

35. The Bureau thanked the TAG Chair and the other members for their time and efforts.

Item 9: Update on application of UNFC-2009 to nuclear fuel resources

36. The Uranium Bridging Document was endorsed by the Committee on Sustainable Energy (see paragraphs 15 and 18). The Press Release issued on 3 December includes a quote from the UNECE Executive Secretary underlining the support of the senior management at UNECE for UNFC and work of the EGRC.

37. The Uranium Task Force continues to work on development of the guidance for application of UNFC to uranium and thorium resources. Some 6 or 7 case studies are due to be finalized by the end of December. The work on this is being coordinated by the representative of USGS.

38. The representative of IAEA plans to organize a consultancy meeting on the guidelines back-to-back with the EGRC sixth session i.e. from 27–28 April 2015.

39. The Bureau thanked the Task Force Chair and the other members of the Task Force for their continued time, dedication and input.

Item 10: Update on application of UNFC-2009 to renewable energy resources

Documentation: Minutes of Renewables Task Force Call of 10 October 2014.

40. Frank Denelle, Chair of the UNFC and Renewables Task Force joined the call at 10.30 hours GMT for this agenda item and updated the Bureau on the work of the Task Force.

41. The generic renewable specifications were circulated for public comment and the feedback received has been extensively reviewed and the document updated accordingly. The revised version of the generic specifications has been sent to the TAG for comment and will be subsequently sent to the Bureau together with the TAG recommendation. The intent is to submit the generic renewable specifications to the EGRC for comment and agreement at the sixth session and then to the Committee on Sustainable Energy for endorsement.

42. The Task Force is now focussing on the commodity-specific specifications: geothermal, bioenergy and wind/hydro/solar.

43. The terms of reference for the Geothermal Task Force have been finalized. Progress on identifying the members will be made at the International Geothermal Association Workshop “Globally consistent classification for geothermal energy resources”, in Bonn, Germany, 8–9 December. Gioia Falcone is leading the work on geothermal resources.

44. The bioenergy work is progressing with task force members being identified and the terms of reference drafted.

45. For wind/hydro/solar, there is still uncertainty as to whether the three should be addressed together or split into three separate task forces. The terms of reference are being defined and stakeholders identified.

46. A Workshop on UNFC and Renewables was organized in Geneva during the UNECE Sustainable Energy Week, 17-21 November. The workshop was held immediately before the first meeting of the UNECE Group of Experts on Renewable Energy. There was good participation from the wind sector, including wind power experts from DONG Energy, Brazilian Wind Energy Association and also IRENA. The workshop served to usefully identify new stakeholders.

47. The need for cooperation between the E-axis sub-group and the Renewables Task Force was emphasized. It was noted that the Chair of the E-axis sub-group has made contact with the Task Force. The Workshop also raised questions over the G-axis and how it should be used for application to renewables.

48. The Bureau thanked the Task Force Chair and the other members of the Task Force for their continued time and input.

Item 11: Update on application of UNFC-2009 to injection projects

49. Progress continues on development of the draft specifications for application of UNFC-2009 to injection projects. As the work progresses it becomes more apparent how challenging it is, highlighting that the UNFC is being used in a manner for which it was not initially intended.

50. The Task Force will next meet on 9 December at which time it will go through the current draft document and agree on how to proceed. The intent remains to have a draft Specifications Document ready by the end of 2014 and to submit it to the TAG and the Bureau for review.

51. The TAG is kept informed of the Task Force's progress by the TAG focal point Per Blystad.

52. The Bureau noted that the work of the Task Force should also be aligned with the work of the E-axis sub-group.

53. The Bureau thanked the Task Force Chair and the other members of the Task Force for their continued time and input.

Item 12: Education and outreach

Documentation: List of Conferences Promoting UNFC in 2014 and 2015 (as at 28 November 2014)

54. A brief summary of recent and upcoming events was provided:

- International Seabed Authority Workshop on Classification of Polymetallic Nodule Resources, Goa, India, 13–17 November 2014
- IAEA-UNECE Regional Workshop on “Application of United Nations Framework Classification-2009 (UNFC-2009) for Uranium Projects”, Johannesburg, South Africa, 10–14 November 2014
- UNECE Workshop on UNFC-2009 Classification for Renewable Energies – Opportunities and Challenges, Geneva, Switzerland, 17pm–18am November 2014
- MIN WIN-WIN: Establishing Europe-Wide Minerals Reporting Standards – The Key to Reducing Risk and Increasing Opportunity, Brussels, Belgium, 21–23 November 2014
- Minerals4EU “Delivering the European Minerals Yearbook” Workshop, Brussels, Belgium, 3 December 2014
- International Geothermal Association Workshop “Globally consistent classification for geothermal energy resources”, Bonn, Germany, 8–9 December 2014
- CCOP and Department of Mineral Fuels (DMR) of Thailand Workshop on the Application of UNFC 2009: Classification and Reporting of Energy Resources/Reserves and CO₂ Injection Projects, Bangkok, Thailand, 8–11 December 2014
- UNECE Workshop on UNFC-2009 in cooperation with the Association of Petroleum Geologists of India, New Delhi, India, January 2015 during Geo-India 2015, 11–14 January 2015.

55. The representative of CCOP noted that the workshop to be held in Bangkok in December is the first in the series of three events with DMR: the second will take place in April 2015 and the third at the end of 2015.

Item 13: Any other business

56. The Chair of the E-axis sub-group noted that the guidelines for oil and gas and for solid minerals are included in the PRMS and the CRIRSCO Template respectively. He posed the question as to whether the guidelines on environmental and social issues developed by the E-axis sub-group should go in the UNFC or the underlying systems. The Bureau proposed to request the Sub-group to prepare a number of recommendations on this issue.

57. The Chair thanked the Bureau members for their commitment during 2014, noting that eight Bureau calls and three meetings were held in 2014.

Item 14: Timing of next meeting

58. The next Bureau call will be held during the second half of January 2015. An availability message will be circulated as per usual practice.
