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Expert Group on Resource Classification

Fourth session

Geneva, 23-26 April 2013

Report of the Expert Group on Resource Classification

I. Introduction

1. The fourth session of the Expert Group on Resource Classification was held on 23–26 April 2013.¹
2. This report summarizes the discussions on the work of the Expert Group at its fourth session. All the documents and presentations of the fourth session are available on the United Nations Economic Commission for Europe (ECE) website.

II. Attendance

3. The meeting was attended by experts from the following UNECE member countries: Denmark, Georgia, Hungary, Kazakhstan, Norway, Poland, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Turkey, Ukraine and United States of America.
4. Experts from Argentina, Australia, Brazil, China, India, Iraq, Japan, Mexico, Mongolia, Mozambique, Thailand, Trinidad and Tobago, Uganda and Vietnam participated under Article 11 of the Commission's Terms of Reference.
5. From the United Nations system and Specialized Agencies, representatives of the International Atomic Energy Agency (IAEA) attended. Representatives from the European Commission, represented by the Directorate General (D.G.) Enterprise and Industry, D.G. Eurostat and D.G. Joint Research Centre, participated.

¹ Official documents of the session are available at <http://documents.un.org/>. Unofficial room documents and presentations delivered at the meeting are available on the ECE website at: <http://www.unece.org/index.php?id=31719>.

6. The following international organizations were represented: Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) and the International Energy Agency (IEA).
7. Representatives of the following non-governmental organizations participated: American Association of Petroleum Geologists (AAPG), Committee for Mineral Reserves International Reporting Standards (CRIRSCO), European Federation of Geologists (EFG), EuroGeoSurveys, International Geothermal Association, Latin American Mining Organization (OLAMI), Society of Exploration Geophysicists (SEG), Society of Petroleum Engineers (SPE), and Society of Petroleum Evaluation Engineers (SPEE).
8. In addition, experts from the private sector and academia attended.

III. Opening of the session

9. The session opened with a welcome address by the Deputy Executive Secretary of ECE, who drew attention to the voluntary nature of the work on development of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (UNFC-2009), noting that the progress made to date was a result of significant in-kind contributions (time, travel, and sponsorship) provided by experts from around the world and that these contributions are greatly appreciated. He also noted that the Expert Group works via consensus, with consensus being general agreement characterized by the absence of formal objection to substantial issues. Deciding by consensus is a compromise process that involves seeking to take into account the views of all parties concerned and to reconcile conflicting arguments. Consensus is not to be equated with unanimity.
10. The Deputy Executive Secretary advised the Expert Group that a report on the Status of the Implementation of UNFC-2009 has been requested for the current biennium (2012–2013) as part of the programme and performance monitoring programme. He further advised that this report will need to be prepared for presentation to the Committee on Sustainable Energy at its twenty-second session in November 2013.
11. A self-evaluation of the work related to UNFC-2009 is required for the current biennium to assess the efficiency, effectiveness, relevance and impact of the work undertaken by the Expert Group in relation to UNFC-2009. It was noted that the secretariat will conduct this self-evaluation and Expert Group members will receive a questionnaire over the coming months.
12. In closing, the Deputy Executive Secretary drew attention to the priority for the meeting to finalize the draft generic specifications for application of UNFC-2009.
13. The Expert Group noted the need to prepare a report on the Status of the Implementation of the UNFC-2009 and tasked the Bureau to prepare such a document for presentation to the Committee on Sustainable Energy at its twenty-second session.
14. The Expert Group further noted the requirement for a self-evaluation of the work related to UNFC-2009 and tasked the Bureau to provide feedback to the secretariat on this. The Expert Group requested that the results be presented to the fifth session and any relevant documentation prepared.

IV. Adoption of the agenda (agenda item 1)

Documentation: ECE/ENERGY/GE.3/2013/1
ECE/ENERGY/GE.3/2013/1/Corr.1

15. The provisional agenda as contained in the document ECE/ENERGY/GE.3/2013/1 was adopted without amendment.

V. Officers (agenda item 2)

16. At the third session of the Expert Group, a Bureau was elected to take over from the end of that session for a term of two years.

17. The current Bureau comprises: Mr. David MacDonald (United Kingdom) as Chair, Mr. Michael Lynch-Bell (United Kingdom) as Chairman Ex-officio, Mr. Yuri Podturkin (Russian Federation) as First Vice Chair, and Ms. Karin Ask (Norway), Mr. Fatih Birol (IEA), Mr. Roger Dixon (CRIRSCO), Ms. Leesa Carson (Australia), Mr. David Elliott (Canada), Ms. Mücella Ersoy (Turkey), Mr. Adichat Surinkum (CCOP), Mr. Kjell Reidar Knudsen (Norway), Mr. Brad Van Gosen (United States of America), Mr. James Ross (United Kingdom), Mr. Rawdon Seager (SPE), Mr. Tim Smith (SPEE) and Mr. Harikrishan Tulsidas (IAEA) as Vice-Chairs.

VI. Workshop on the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (agenda item 3)

18. The Chair provided a brief summary of the workshop held on 23 April noting that it was attended by 60 participants representing all UNFC-2009 end-users with the exception of the financial reporting sector. There was broad representation from the solid minerals sector, including nuclear fuel resources, as well as the petroleum sector. The renewable energy sector was also represented. Twenty per cent of the participants were female. The final programme and presentations delivered at the workshop are available on the ECE website.²

19. Interest was expressed by the participants in the event being repeated as part of the fifth session of the Expert Group. The Expert Group requested the secretariat to organize such a workshop.

VII. Opening remarks from the Chair (agenda item 4)

20. The Chair opened the meeting by welcoming participants noting the large number of attendees taking part for the first time. He observed that the level of interest in and support of UNFC-2009 and the Expert Group is continuing to grow worldwide. He also noted that a large number of countries and companies had sent apologies, but all had underlined their strong support for the work of the Expert Group and requested to be informed on the outcome of the fourth session.

21. The Chair noted that he and many of the Vice Chairs had delivered presentations at a number of minerals and petroleum-related conferences and workshops around the world and that these all served to promote greater understanding of the benefits of UNFC-2009.

22. Since the third session of the Expert Group, the work of the Bureau has been conducted through eight meetings (audioconferences) and regular e-mail correspondence. Four meetings of the Bureau were held in collaboration with the Specifications Task Force. He noted that the minutes of the conference calls of the Bureau are available on the ECE website.

² <http://www.unece.org/index.php?id=32755>

23. The Chair thanked the Bureau members and their alternates for their efforts and commitment since the third session. He also thanked the Specifications Task Force, and in particular its Chair Mr. James Ross, for the significant work undertaken since May 2012 in relation to the draft specifications for application of UNFC-2009. The work of the Task Force on the Technical Advisory Group, the Communications Sub-Committee and the Task Force on UNFC and Recipient Reservoirs was also acknowledged with appreciation.

24. The Chair provided a brief update on the status of the development of UNFC-2009, and, in particular, the areas where progress has been made: (i) the development of specifications for UNFC-2009; (ii) the development of draft terms of reference for the Technical Advisory Group; (iii) the work of the Task Force on UNFC and Recipient Reservoirs to explore if UNFC-2009 can be used to classify injection projects; (iv) the work of IAEA to develop a draft nuclear fuel resources bridging document; and, (v) the potential application of UNFC-2009 to renewable energy resources.

25. The Chair drew attention to the draft set of conclusions and recommendations circulated prior to the meeting, noting that this was a new method of working for the Expert Group. It is, however in line with the Guidelines on Procedures and Practices for ECE Bodies that were adopted by the Economic Commission for Europe at its sixty-fifth session in April 2013. He emphasized that the draft conclusions and recommendations would be updated as the meeting discussions progressed.

VIII. Introduction of participants (agenda item 5)

26. A tour de table was conducted during which all participants introduced themselves.

IX. Activities and priorities of the Committee on Sustainable Energy and any matters for consideration by the Expert Group on Resource Classification in light of the review of the Economic Commission for Europe Reform of 2005 (agenda item 6)

Documentation: ECE/ENERGY/89
E/ECE/1468
Operationalizing Document for the Subprogramme on Sustainable Energy *as at 22 April 2013*
Proposed Activities for the Expert Group on Resource Classification – Response to Outcome of the Review of the ECE Reform of 2005 *as at 30 March 2013*

27. The secretariat provided an overview of the review of the ECE Reform of 2005 since the third session and the implications for the Expert Group. Attention was drawn to the Outcome of the review of the 2005 reform of ECE document (E/ECE/1468) approved by the Commission at its sixty-fifth session (Geneva, 9-11 April 2013). Attention was then drawn to Annex II, section VI of document E/ECE/1468 relating to UNFC-2009, as well as the Guidelines on procedures and practices for ECE bodies contained in Annex III.

28. It was noted that there is positive support for the work of the Expert Group from ECE member States. Details of the efforts to operationalize the Outcome Document from the ECE Executive Committee Informal Consultations on Sustainable Energy (E/ECE/1468, Annex II) were explained. It was noted that the Operationalizing Document for the Subprogramme on Sustainable Energy dated 22 April 2013, copies of which were

made available, provides the starting point for the current discussions with member States on the programme of work for the ECE subprogramme on sustainable energy, including the work of the Expert Group.

X. Review of the programme of work for 2012–2013 (agenda item 7)

Documentation: ECE/ENERGY/GE.3/2012/2, paragraph 86

29. The Chair provided a brief overview of the programme of work for 2012–2013 as agreed at the third session and contained in the meeting report (ECE/ENERGY/GE.3/2012/2). He highlighted the key issues: the priority work of the Specifications Task Force Phase Two; the work of the Task Force on the Technical Advisory Group to develop draft terms of reference; the activities of the Communications Sub-Committee and the promotion of UNFC-2009 through conferences, workshops, articles and technical papers; the work of the Task Force on UNFC and Recipient Reservoirs; and, on-going monitoring of financial reporting issues of relevance to the Expert Group.

XI. Specifications for the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (agenda item 8)

Documentation : ECE/ENERGY/GE.3/2013/3
ECE/ENERGY/GE.3/2013/4
EGRC-4/2013/INF.1 – Unofficial room document: Compilation of
Comments submitted during Public Consultation on Draft
Specifications for the Application of UNFC-2009
EGRC-4/2013/INF.4 – Unofficial room document: Terms of
Reference for the Specifications Task Force *as at 10 April 2013*

30. The Chair of the Expert Group provided an update on the work carried out by the Specifications Task Force Phase Two since the third session of the Expert Group. The members of the Task Force are Mr. Ferdinando Camisani-Calzolari (who withdrew in mid-2012, CRIRSCO), Mr. Daniel Diluzio (SPE), Mr. Roger Dixon (CRIRSCO), Mr. David Elliott (financial reporting sector), Mr. Timothy Klett (who withdrew in early 2012, United States Geological Survey), Mr. Kjell Reidar Knudsen (Norwegian Petroleum Directorate), Mr. Ian Lambert (Geoscience Australia) replaced by Ms. Leesa Carson (Geoscience Australia) in mid-2012 (supported by Mr. Yanis Miezitis (Geoscience Australia), Mr. David MacDonald (Chair, Expert Group and petroleum Sector), Mr. Yuri Podturkin (State Commission on Mineral Resources of the Russian Federation and supported by the Russian Working Group), Mr. James Ross (Chair and petroleum Sector) and Mr. Daniel Trotman (financial reporting sector).

31. Attention was drawn to the two draft documents circulated to the Expert Group prior to the fourth session: document ECE/ENERGY/GE.3/2013/3 is the final draft Specifications for the Application of UNFC-2009 and document ECE/ENERGY/GE.3/2013/4 is the final draft report documenting the basis for establishing the specifications for the application of UNFC-2009. These documents were provided to the Expert Group with the full consensus of the Specifications Task Force Phase Two and the Bureau of their readiness for publication as the specifications for application of UNFC-2009.

32. A presentation was delivered which covered the requirement for specifications, the development process followed in the preparation of the final draft of the specifications, the proposed generic specifications and proposed bridging documents.

33. Following the presentation and discussion and clarification of terms and issues, a Tour de Table was held to identify any outstanding concerns that needed to be addressed prior to achieving consensus of the Expert Group on the documents.

34. During the Tour de Table on the Specifications for Application of UNFC-2009, six principal points of discussion were identified. These issues were noted and discussed in detail at a joint meeting of the Bureau and Specifications Task Force that followed the close of the first day of the fourth session. Each issue was considered, and it was considered that no issue was of sufficient concern to require major modification of the specifications document (ECE/ENERGY/GE.3/2013/3). The issues raised and the comments of the Bureau and the Specifications Task Force Phase Two on each were as follows:

(a) The need for further clarification of the impact of environmental and social impediments and barriers on the E axis.

35. The Bureau felt that the definition and specifications within UNFC-2009 and the specifications documents are sufficient to address in a principles-based manner the issues surrounding environmental and social impediments and barriers. The Bureau advised that the Technical Advisory Group would, as part of its Terms of Reference, provide additional guidance and examples of how these issues should be handled within UNFC-2009. Revised text for paragraph 11 of the specifications document (ECE/ENERGY/GE.3/2013/3) was provided to the Expert Group which clarified the importance of these issues across the project life cycle.

36. The following alternative text was suggested and approved to replace paragraph 11 in the specifications document:

In particular, the identification and consideration at the time of the estimate of all known environmental or social impediments or barriers to the project during its entire life cycle is recognized as an integral part of the project assessment. The presence of environmental or social impediments can prevent a project from proceeding or it can lead to the suspension or termination of activities in an existing operation. Refer to Generic Specification H for further details.

37. This modified text was agreed by the Expert Group.

(b) Questions were asked regarding who would be responsible for the control of public application of UNFC-2009, specifically around identifying misuse. Additionally the need for certification of auditors was raised.

38. The Bureau was in agreement that the role of the Expert Group is in the development and dissemination of the classification framework, and not in the management or control of its application. Control of use and any selection of auditors should be managed by the organization requesting the disclosure. It was mentioned that it was likely that the private sector would provide a service for review of UNFC-2009 estimates similar to services currently available for the Petroleum Resource Management System (PRMS³) and the CRIRSCO Template.

³ Society of Petroleum Engineers (SPE)/World Petroleum Council (WPC)/American Association of Petroleum Geologists (AAPG)/Society of Petroleum Evaluation Engineers (SPEE) Petroleum Resources Management System of 2007 (PRMS) which has been endorsed by SPE, WPC, AAPG, SPEE and the Society of Exploration Geophysicists (SEG)

(c) Need for assistance with the mapping of UNFC-1997 to UNFC-2009.

39. The Technical Advisory Group as part of its Terms of Reference will be available to provide assistance in the application of UNFC-2009, which will include guidance on the transition from earlier versions of the UNFC to UNFC-2009.

(d) Concern was expressed that the wording in paragraph 22 of the draft specifications relating to national resource reporting that estimates on a national level may differ from those at a corporate reporting level could worry users.

40. The Bureau acknowledged that the wording could cause concern but the statement is factual. The Bureau noted that education on the application of resource classification systems is needed for unsophisticated users, however this does not fall within the remit of the Expert Group.

(e) Could economic uncertainties around price and costs be handled within UNFC-2009 as an uncertainty element on either the E or G axis?

41. The Bureau advised that different economic criteria should be handled through additional assessment scenarios and not within a single assessment. This is consistent with the treatment in PRMS and the CRIRSCO Template and the Organisation for Economic Co-operation and Development (OECD) Nuclear Energy Agency (NEA)/IAEA “Red Book”.

(f) A vote of consensus was proposed to thank Mr. James Ross, Chair of the Specifications Task Force Phase Two, for his diligence and efforts in preparing the specifications document and report.

42. The Expert Group was in complete agreement.

43. The Expert Group endorsed the Specifications for the Application of UNFC-2009 as contained in document ECE/ENERGY/GE.3/2013/3. This document contains the generic specifications for UNFC-2009, together with the solid minerals and petroleum-specific specifications. The Expert Group recommended that the Specifications for Application of UNFC-2009 be submitted to the Committee on Sustainable Energy and the Executive Committee of ECE for approval. The Expert Group requested that the final text be issued as a publication in all languages of the United Nations as soon as practicable in order to facilitate further implementation of United Nations Economic and Social Council (ECOSOC) Decision 2004/233. The Expert Group further requested that the Specifications for the Application of UNFC-2009 be published together with the text of UNFC-2009 in view of the fact that the specifications operationalize UNFC-2009 and therefore should preferably be disseminated as one “package”. The publication containing UNFC-2009 and the specifications for its application should be circulated to all major stakeholders/end-users of UNFC-2009 by December 2013, but ideally by August 2013.

44. The Expert Group recommended that the Specifications Task Force continue until such time as the Technical Advisory Group is established. The Expert Group endorsed the revised Terms of Reference for the Specifications Task Force as contained in informal document EGRC-4/2013/INF.4 dated 10 April 2013.

XII. Technical Advisory Group (agenda item 9)

Documentation: ECE/ENERGY/GE.3/2013/5

45. The Chair of the Technical Advisory Group Task Force led a discussion on the issues relating to the formation of a Technical Advisory Group to provide additional guidance and advice on the application of UNFC-2009. The draft terms of reference for the

Expert Group on Resource Classification Technical Advisory Group (ECE/ENERGY/GE.3/2013/5) were outlined.

46. The members of the Technical Advisory Group Task Force are: Ms. Leesa Carson (Geoscience Australia), Ms. Carolina Coll (petroleum sector), Ms. Mucella Ersoy (Turkish Coal Enterprises), Mr. David MacDonald (Chair, Expert Group) and Mr. John Ritter (Chair and SPEE).

47. It was noted during the discussion that there are still a number of outstanding areas of concern in the implementation of the Technical Advisory Group relating to the number of members required and the overlap of duties with the Communications Sub Committee relating to training and communication. The Technical Advisory Group will have the ability to call on additional support on an ad hoc basis to provide needed support, and to revise its Terms of Reference to better reflect the needs of users.

48. The Expert Group on Resource Classification endorsed the draft Terms of Reference for the Technical Advisory Group as contained in document ECE/ENERGY/GE.3/2013/5 and recommended that they be submitted to the Committee on Sustainable Energy and the ECE Executive Committee for adoption. The Expert Group recommended that the Technical Advisory Group be established as soon as practicable, but preferably by December 2013. The Expert Group tasked the Bureau to identify the membership of the Technical Advisory Group and circulate to the Expert Group for endorsement.

XIII. Use of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 for classifying injection projects (agenda item 10)

49. The Chair of the Task Force on UNFC and Recipient Reservoirs provided an update on the work of the Task Force since the third session, as well as recommendations for future activities.

50. The members of the Task Force are: Ms. Karin Ask (Chair and petroleum sector), Mr. Dragutin Domitrovic (petroleum sector), Ms. Eva Halland (Norwegian Petroleum Directorate) and Mr. Martin Hubbig (petroleum sector).

51. The Expert Group recommended that the Task Force on UNFC and Recipient Reservoirs (established according to the Programme of Work for the Expert Group on Resource Classification for 2009-2010) assess the documentation that would be required for UNFC-2009 to be used to classify injection projects, in particular for the storage of carbon dioxide, and requested that the Task Force prepare a proposal and timeline for this and that this be submitted to the Bureau for review prior to submission to the twenty-second session of the Committee on Sustainable Energy in November 2013. The proposal and timeline will be made available to the Expert Group for information and comment.

52. One delegate noted that clarification is needed on the scope of the work of the Task Force and whether it only covers permanent underground storage and carbon dioxide applications.

XIV. Status of the development of other applications of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (agenda item 11)

(a) Application of UNFC-2009 to Nuclear Fuel Resources

Documentation: ECE/ENERGY/GE.3/2013/7

53. The IAEA representative provided an overview of the two-day consultation meeting held 22–23 April 2013 in Geneva to discuss the draft bridging document between the NEA/IAEA Uranium Classification and UNFC-2009 (ECE/ENERGY/2013/7).

54. The Expert Group noted the information provided and thanked IAEA for its significant efforts to test and map UNFC-2009 for nuclear fuel resources.

55. The Expert Group recommended that a Task Force led by the International Atomic Energy Agency be established to finalize the draft bridging document between the NEA/IAEA Uranium Classification and UNFC-2009. The Task Force will be established by and report to the Bureau of the Expert Group between Expert Group sessions. The Task Force will cooperate with the NEA/IAEA Uranium Group. The outputs of the Task Force will be posted periodically to the ECE website. The term of the Task Force is for a period of one year or until the bridging document is finalized if that occurs sooner. The Expert Group requested that a revised draft bridging document be presented to the fifth session of the Expert Group for endorsement or if finalized sooner that it be circulated to the Expert Group for endorsement.

(b) Application of UNFC-2009 to Renewable Energy Resources

Documentation: Report by Bloomberg New Energy Finance: Renewable Reserves – Testing the Concept for US and Brazil⁴

56. An overview was provided of the work of the Renewable Resources Working Group. This is a cross industry group working externally to the Expert Group and which comprises representatives of the four main UNFC-2009 stakeholder groups. The Renewable Resources Working Group has been working to develop a universal standard for the classification of all types of renewable energy resources which will allow projects to be compared and contrasted. It began its work using UNFC-2009 as the basis for its classification system, building a draft bridging document similar to those available in the specifications document.

57. The Renewable Resources Working Group has identified a number of similarities with minerals and petroleum classification and some unique issues for renewable energy reserves which need to be addressed. The Renewable Resources Working Group would like to further its work under the auspices of the Expert Group to leverage the classification experience of the Expert Group.

58. An overview was provided on the status of geothermal resource classification worldwide and the key stakeholders. It was noted that geothermal classification standards are needed to reduce risks to investors and to increase confidence in geothermal development. There are currently no universally recognized standards for classifying and reporting geothermal resources.

59. The Expert Group noted decision A(65) Outcome of the review of the 2005 reform of ECE, which states that the Expert Group should “Develop ideas on how UNFC could apply to and integrate renewable energy by December 2013”.

60. The Expert Group noted with interest the presentations delivered and the work progressed by the Renewable Resources Working Group. The Expert Group concluded that UNFC-2009 can be applied to renewable energy resources subject to the development of appropriate bridging documents. The Expert Group requested the Bureau to prepare an outline document detailing how the task will be accomplished with an accompanying timeline for each of the deliverables and that this be submitted to the twenty-second session of the Committee on Sustainable Energy in November 2013. The deliverables of the Task

⁴ http://www.unece.org/fileadmin/DAM/energy/se/pdfs/egrc/egrc4_apr2013/BNEP_RenewReservReport.pdf

Force will be circulated to the Expert Group. The Expert Group recommended that a Task Force on Renewable Resources be established, together with a number of renewable technology-specific sub-Task Forces. The Task Forces will be established by and report to the Bureau of the Expert Group between Expert Group sessions.

(c) **Other applications of UNFC-2009**

61. The Expert Group noted the potential application of UNFC-2009 to water resources and agreed that this is not a priority at this time.

XV. Case Studies (agenda item 12)

62. A series of presentations were delivered relating to testing of and mapping to UNFC-2009:

(a) A comparison of the classification of selected Polish coal seams using UNFC-2009, the CRIRSCO Template and the Polish national classification system was delivered by Mr. Marek Niec, Mineral and Energy, Economy Research Institute of the Polish Academy of Science.

(b) An overview of the uranium resources of Kazakhstan was delivered by Mr. Nurlan Ryspanov, Deputy Chairman of the Board of JSC "NAC" Kazatomprom, Kazakhstan. A suggestion was made, reconfirming earlier discussions, that additional guidance on the application of the E axis to environmental and social issues was needed. A proposal was made to examine the wording of the F axis to ensure that projects based on enrichment technologies can be appropriately classified.

(c) Status of the harmonization of the mineral resources classification of the Ukraine and UNFC-2009 was delivered by Mr. Georgii Rudko, Chairman of the State Commission of Ukraine on Mineral Resources. The representative of the State Commission expressed interest in organizing a national workshop in the near future, during which the experience of Ukraine in mapping to UNFC-2009 would be presented.

(d) An overview of the mining dialogue in Latin America with a linkage to the E axis and social issues was provided by Mr. Roberto Sarudiansky, San Martin National University, Argentina. The presentation highlighted that it is essential for Governments, at various levels, to be represented and engaged in dialogue groups.

(e) The Status of the Chinese Mineral Classification System and Mapping with UNFC-2009 was provided by Mr. ZHANG Dawei, Director, Mineral Resources and Reserves Evaluation Center, Ministry of Land and Resources, P.R. China.

(f) The status of the planned UNFC-2009 pilot study in Mexico was provided by Mr. Oscar Roldan, National Hydrocarbons Commission of Mexico. The speaker raised the need to have the specifications in Spanish for the pilot study to progress. He offered to facilitate the Spanish translation of the specifications. This offer was accepted with appreciation.

(g) An overview of the Application of UNFC-2009 to Mineral Resources in Thailand was delivered by Mr. Rachata Wunapeera, Department of Mineral Resources (DMR), Ministry of Natural Resources and Environment of Thailand. Thailand plans to apply UNFC-2009 for estimation of mineral resources nationally. A workshop involving national agencies and companies is being planned in Bangkok in 2013 or 2014. E-learning related to classification of limestone resources is available on the DMR website and it is planned to make similar learning available on classification of mineral resources. The Expert Group noted its interest in benefitting from the E-learning experience of DMR.

63. The Expert Group noted that widespread testing of UNFC-2009 and specifications is essential to ensure the classification meets the needs of its end-users and also to ensure it remains current. The Expert Group further noted that the Committee on Sustainable Energy has previously directed the Expert Group to reinforce its efforts to encourage testing and application of UNFC-2009 as widely as possible and that feedback on this should continue to be monitored and reviewed at least every two years. The Expert Group tasked the Bureau to prepare relevant documentation outlining proposals for modifications to UNFC-2009 and to present this to the fifth session of the Expert Group.

XVI. Education and outreach and activities of the Communications Sub-Committee (agenda item 13)

Documentation: ECE/ENERGY/GE.3/2013/6

64. The Chair of the Communications Sub-Committee provided an update of the work and activities of the Sub-Committee since the last Expert Group meeting (ECE/ENERGY/GE.3/2013/6), covering the membership, communications and education strategy, current activities, events attended in 2012 and 2013, and future events and work plans.

65. The membership of the Communications Sub-Committee is: Mr. John Brooks (Chair and AAPG), Mr. Stephen Henley (CRIRSCO), Mr. David MacDonald (Chair, Expert Group), Mr. Jan Roelofsen (energy studies), Mr. Tim Smith (SPEE), Mr. Daniel Trotman (financial reporting sector) and the secretariat.

66. The Communications and Educations Strategy for the Expert Group encompasses: conferences and workshops; the relationship with other industry bodies and associations; publications, technical journals and articles; media; the website; and the membership of the Expert Group.

67. The revised draft version of an animated presentation explaining UNFC-2009 was presented. It was noted with appreciation by the Expert Group. It was agreed that the animated presentation should be posted to the ECE website as soon as it is finalized. Consideration should also be given to translating the voice over in languages other than English and to use both female and male speakers.

68. Members of the Expert Group were encouraged to identify events at which a presentation on UNFC-2009 could usefully be delivered and also to volunteer to deliver such presentations.

69. The Chair, on behalf of the Expert Group, expressed appreciation to the Communications Sub-Committee for its efforts to date.

70. Projects and planned events in 2012 and 2013 to promote and/or test the UNFC were then discussed, including in Chile, India, Kazakhstan, Thailand and potentially Ukraine. The Expert Group encouraged organization of a workshop for countries of sub-Saharan Africa.

(a) UNFC-2009 Workshop, Mexico City, September 2012

71. An update was provided on the national workshop on UNFC-2009 held in Mexico City, 27-28 September 2012. The event, which was organized by the Ministry of Energy of Mexico (SENER), the National Hydrocarbons Commission (CNH), and the Mexican Geological Survey (SGM), focussed on the minerals and the petroleum sectors in Mexico – this was noted to be the first time the two sectors had communicated. The renewable energy sector also participated. The Workshop was hosted by the Government of Mexico and organized in cooperation with the United Nations Economic Commission for Latin America

and the Caribbean (ECLAC) and ECE. Amongst the more than 80 participants attending the two-day event were representatives from SENER, the Ministry of Economy, Petróleos Mexicanos (PEMEX), Instituto Mexicano del Petróleo, CNH, SGM, and the private sector. As a result of this event, Mexico is committed to undertaking a pilot study on UNFC-2009.

(b) IAEA, Ibero-American Programme for Science, Technology and Development (CYTED) and ECE Interregional UNFC-2009 Workshop, Lisbon, October 2012

72. An update was provided by the representative of IAEA on the interregional workshop on Recent Developments in Evaluation of Uranium and Thorium Resources and Possibilities for Application of UNFC-2009 held in Lisbon, Portugal, 15-18 October 2013. The Workshop, which was organized jointly by IAEA, CYTED and ECE, in collaboration with the Directorate General for Energy and Geology, Ministry of Economy and Employment, Portugal and Empresa de Desenvolvimento Miniero (EDM), marked the first time that IAEA had organized a technical cooperation workshop with other partners. More than 60 Government representatives with expertise in uranium, thorium and other minerals participated from Argentina, Brazil, Cameroon, Chile, China, Cuba, Democratic Republic of Congo, Egypt, Indonesia, Iraq, Mongolia, Nepal, Niger, Nigeria, Paraguay, Philippines, Poland, Portugal, Spain, Sri Lanka, Sudan, Tajikistan, Tanzania, Thailand, Turkey, Uganda, United Kingdom, and Venezuela. The experts presented details of a large number of case studies being undertaken by various Government entities around the world regarding the possible adoption of UNFC-2009 for uranium and thorium. There was a unanimous request for increased technical assistance to facilitate application of UNFC-2009 at the national, regional and global levels.

(c) IAEA, CYTED, ECLAC and ECE UNFC-2009 Workshop, Santiago, Chile, 9-12 July 2013

73. A Workshop on UNFC-2009 Applications in Uranium and Thorium Resources: Focus on Comprehensive Extraction will be held in Santiago, Chile, 9-12 July 2013. The event is being jointly organized by IAEA, CYTED, ECLAC and ECE. The local organizers are the Ministry of Mining of Chile and the Chilean Nuclear Engineers Association. Approximately 60 participants are expected to attend.

(d) National or Regional Workshop, India

74. Mr. S. K. Srivastava, Secretary, Government of India, Ministry of Coal, confirmed that a national or regional workshop will be held in India in 2013 for application of UNFC-2009 to solid minerals, petroleum and renewables.

75. An overview of the INSPIRE Directive and its implications for UNFC-2009 was delivered by a representative from the European Commission Joint Research Centre. The INSPIRE Directive establishes an infrastructure for spatial information in Europe to support Community environmental policies, and policies or activities which may have an environmental impact. The following recommendation is included in the final version of the INSPIRE Data Specifications on Energy Resources: "Recommendation 7: The standardisation and harmonisation of classification of resources has been considered in great detail. In order to achieve a greater degree of interoperability, the use of the UNFC 2009 classification is recommended where its use is possible and feasible." The representative of the Joint Research Centre offered to share implementation experiences with UNFC-2009 within the INSPIRE framework.

76. An update was provided on the EuroGeoSource project⁵, which was completed in the first quarter of 2013.

77. An overview was delivered on the status of reserves and resources reporting in the countries of the European Union (EU) as well as EU-funded projects of relevance for the work of the Expert Group.

78. OLAMI offered its support to help disseminate information on UNFC-2009 in Argentina and other countries of Latin America. The National San Martin University from Argentina offered to disseminate information on UNFC-2009 through national and Latin American academic networks.

79. The Communications Sub-Committee will continue to implement the Communications and Educations Strategy.

80. The Expert Group recommended that the mandate of the Communications Sub-Committee be updated to reflect (i) the range of UNFC-2009 end-users, including the renewable energy resources sector; (ii) the need to coordinate its work with the Technical Advisory Group once established; and (iii) the need to encompass academic institutions. In the interim the Communications Sub-Committee should coordinate its work with the Specifications Task Force as required. The Expert Group tasked the Communications Sub-Committee to prepare a revised mandate and submit it to the Bureau for review prior to submission to the Expert Group at its fifth session.

XVII. Update on financial reporting (agenda item 14)

81. An update on transparency disclosure requirements was provided. It was noted that transparency initiatives are designed to: (a) improve accountability by governments in resource rich-countries; (b) reduce corruption; and (c) encourage more funding for social and economic development

82. An update was provided on the International Accounting Standards Board (IASB) extractive activities project noting that it is currently on hold. Any future standard for extractive activities was felt to be a long way off.

83. A presentation was delivered on the impact of unconventional resources on financial reporting and the importance of and need for technical guidance for the evaluation and reporting of resources other than reserves in the petroleum sector.

84. The Expert Group noted the need to monitor any changes or developments in the financial reporting sector globally with implications or potential implications for UNFC-2009. The Expert Group tasked the Bureau to monitor the above and prepare a status report or other documentation as relevant for the fifth session of the Expert Group.

XVIII. Terms of reference and rules of procedure for the Expert Group on Resource Classification (agenda item 15)

Documentation: EGRC-4/2013/INF.2 – Unofficial room document: Draft Rules of Procedure for the Expert Group on Resource Classification *as at 23 April 2013*

⁵ <http://www.eurogeosource.eu/>

EGRC-4/2013/INF.3 – Unofficial room document: Draft Revised
Terms of Reference for the Expert Group on Resource Classification
as at 19 April 2013

85. The Expert Group endorsed the revised Terms of Reference for the Expert Group (unofficial room document EGRC-4/2013/INF.3 dated 19 April 2013) noting that the revised text takes into account the Outcome of the Review of the 2005 ECE Reform. The Expert Group recommended that the revised Terms of Reference be submitted to the Committee on Sustainable Energy and the ECE Executive Committee for approval.

86. The Expert Group noted that its five-year mandate expires in December 2014 and strongly endorsed the need for the renewal of this term. UNFC-2009 stakeholders or end-users need the assurance of continuity and long-term governance offered by a five-year mandate. Resource classification is a lasting, dynamic issue, as demonstrated by the periodic modifications and updates experienced by commodity-specific resource classification schemes. In particular, the development of new technologies means that any resource classification system cannot remain static. There is a need for on-going maintenance, technical advice, guidance and periodic updates in order to ensure that UNFC-2009 remains relevant, useful, and operates efficiently. All stakeholders using the classification system need the assurance that technical advice and improvements to UNFC-2009 will be provided as necessary to adapt and refine its capabilities.

87. The Expert Group agreed that a renewal of its five-year mandate on expiry be submitted to the twenty-second session of the Committee on Sustainable Energy in 2013 for endorsement and to the Executive Committee for approval.

88. The Expert Group noted that the draft Rules of Procedure for the Expert Group (unofficial room document EGRC-4/2013/INF.2 dated 23 April 2013) had been prepared as a discussion paper, largely based on the Guidelines on Procedures and Practices for ECE Bodies. The Expert Group agreed to task the Bureau to prepare documentation proposing operational procedures for the Expert Group for discussion at its fifth session.

XIX. Programme of work for 2013–2014 (agenda item 16)

89. After discussion and review of the programme of work for 2012–13 as recommended at the third session and included in the report of that meeting (ECE/ENERGY/GE.3/2012/2) and in the light of the Outcome of the Review of the 2005 ECE Reform, the Expert Group agreed on its programme of work for 2013–2014 as provided below and recommended that it be submitted to the Committee on Sustainable Energy and the ECE Executive Committee for endorsement.

(A) Specifications for UNFC-2009

Description: Specifications (or basic rules of application) are needed for UNFC-2009 in order to ensure an appropriate level of consistency and coherence when it is applied. They provide additional instructions on how the definitions contained in UNFC-2009 must be applied in specific circumstances including, where appropriate, commodity-specific rules. At the first session of the Expert Group, the Specifications Task Force Phase Two (established by and reporting to the Bureau) was tasked to consider all issues raised by stakeholders that are not currently addressed fully in the CRIRSCO Template and/or PRMS and as contained in the final version of the report of the original Specifications Task Force (ECE/ENERGY/2010/8). Following agreement on the final text of the specifications at the fourth session, the Expert Group recommended them for endorsement by the Committee on Sustainable Energy and subsequently by the ECE Executive Committee. With the finalization of the specifications, UNFC-2009 is now ready for the first rounds of full scale application, in order to fulfill ECOSOC Decision 2004/233.

Work to be undertaken: The generic specifications and the commodity-specific specifications appropriate to solid minerals and petroleum (based on bridging documents to the CRIRSCO Template (for solid minerals) and PRMS (for petroleum)) as agreed at the fourth session are to be published together with UNFC-2009 in all official languages of the United Nations to facilitate further implementation of ECOSOC Decision 2004/233. Prior to the formation of the Technical Advisory Group, the Specifications Task Force is to provide technical advice to UNFC-2009 stakeholders regarding the application of UNFC-2009 and related matters according to its revised Terms of Reference (EGRC-4/2013/INF.4, dated 10 April 2013). The specifications as agreed at the fourth session will be submitted to the Committee on Sustainable Energy and the ECE Executive Committee for endorsement in the second quarter of 2013.

Deliverables:

- (a) Publication of UNFC-2009 together with the specifications as a single publication in all United Nations languages;
- (b) A summary report to be presented to the fifth session of the Expert Group of any advice provided by the Specifications Task Force under its revised Terms of Reference, containing among other things:
 - (i) recommendations for recognizing bridging documents to other classifications;
 - (ii) review options for broadening the application of UNFC-2009;
 - (iii) an account of other substantial achievements since the last report; and
 - (iv) electronic dissemination of the publication containing UNFC-2009 and the specifications where appropriate.

Timeline:

- (a) Publication of UNFC-2009 with specifications as soon as practicable following approval to do so by the Committee on Sustainable Energy and the ECE Executive Committee and preferably by August 2013.
- (b) 2013 to ongoing.

(B) Technical Advisory Group

Description: At the first session of the Expert Group it was agreed that the Bureau should progress establishment of a Technical Advisory Group, including development of a mandate, methodology of operation and rules of procedure, list of deliverables, membership list and potential sources of extrabudgetary funding, for consideration at the second session of the Expert Group. A recommendation from the fourth session of the Expert Group, for submission to the Committee on Sustainable Energy for endorsement, is made to establish a Technical Advisory Group. This Group is needed to provide assistance and advice on how to interpret, apply and/or map to UNFC-2009 as and when requested, as well as to compile and analyze the results of such initiatives.

Work to be undertaken: Once consent is obtained from the Committee on Sustainable Energy for the Bureau to establish the Technical Advisory Group, it will perform in accordance with the terms of reference outlined in document ECE/ENERGY/GE.3/2013/5. The Bureau will review the terms of reference on an ongoing basis and should any modifications be proposed they would be submitted to the Expert Group for consideration.

Deliverables: Technical Advisory Group established by end-2013 and operational during 2013 or first-half of 2014.

Timeline: 2013 to ongoing.

(C) Testing and review of UNFC-2009

Description: Widespread testing of UNFC-2009 is essential to ensure the classification meets the needs of its stakeholders and also to ensure it remains current. The Committee on Sustainable Energy has also directed the Expert Group to reinforce its efforts to encourage testing and application of UNFC-2009 as widely as possible and that feedback on this continue to be monitored and reviewed at least every two years.

Work to be undertaken: Encourage members of the Expert Group to test UNFC-2009 in their own work environments. Encourage stakeholders to carry out cross-mapping with other systems. Ideally, this would include government to government mapping, mapping to commercial systems, and testing of the bridging documents to the CRIRSCO Template and PRMS. Results should be compiled and analyzed by the Specifications Task Force (until the Technical Advisory Group is established) and reported to the Bureau and to the Expert Group.

Case studies shall be sought to demonstrate that UNFC-2009 meets the needs of the four principal applications for which it has been designed (international energy and mineral policy formulation; Government resource management; industry business process management; and financial analyses and capital allocation).

Results of testing and case studies on UNFC-2009 should be prepared for review by the Expert Group and then compiled in an electronic publication and posted to the ECE website.

The Bureau is to review UNFC-2009 to determine if any modifications or additions are required to meet the needs of end-users and to facilitate its broader application as envisaged in the Outcome of the Review of the ECE Reform of 2005.

As required under the programme and performance monitoring programme for the current biennium (2012–2013) a report on the Status of the Implementation of UNFC-2009 should be prepared for presentation to the Committee on Sustainable at its twenty-second session in November 2013.

Deliverables: Case studies demonstrating how a UNFC-2009 inventory is built, and how it may be used for: international energy and mineral policy formulation; Government resource management; industry business process management; and financial analyses and capital allocation.

A Status Report on the Implementation of UNFC-2009 for submission to the Committee on Sustainable Energy at its twenty-second session in November 2013. A draft of this will be circulated to the Expert Group prior to submission.

Proposals for modifications to UNFC-2009 to be presented to the fifth session of the Expert Group.

Timeline: 2013 to ongoing. The work will be undertaken when opportunities avail themselves respecting that there are currently no funds available to commission it. Results will be reported when available. A summary report of the activities will be made at each meeting of the Expert Group.

(D) Education and Outreach

Description: The Expert Group established a Communications Sub-Committee at its first session, with a mandate to develop and implement a communications and education strategy to ensure that opportunities to promote UNFC-2009 globally and to deliver a consistent message are maximized, including through conferences, workshops, articles and technical papers. The Sub-Committee was also tasked to assist with identification of experts in countries and organizations not already represented in the Expert Group. Following

finalization of the specifications for application of UNFC-2009, the Communications Sub-Committee will cooperate with the Technical Advisory Group in relation to the increased education and outreach that will be needed to facilitate the roll-out of UNFC-2009. The Communications Sub-Committee will propose a revised mandate to reflect (i) the range of UNFC end-users, including the renewable energy resources sector; (ii) the need to coordinate its work with the Technical Advisory Group once established; and (iii) the need to encompass academic institutions. In the interim the Communications Sub-Committee will coordinate its work with the Specifications Task Force as required.

Work to be undertaken: The Communications Sub-Committee is to continue its work to promote the Expert Group and UNFC-2009 as per its mandate, with a review of activities to be prepared for the fifth session of the Expert Group. Subject to resources (human and financial), attention is to be given to organizing national and regional workshops globally.

Deliverables: A report of the activities of the Communications Sub-Committee to be delivered to the fifth session of the Expert Group.

Timeline: 2013 to ongoing (to be reviewed annually).

(E) Use of UNFC in classifying injection projects

Description: It was recommended at the first session of the Expert Group that a Task Force on UNFC and Recipient Reservoirs be established by and report to the Bureau to continue to research and develop views on this potential use of UNFC-2009 and identify additional key stakeholders who could provide critical analysis and feedback on the practicality of applying UNFC-2009 for these types of projects. The Task Force is carrying out research on the potential use of UNFC-2009 for classifying injection projects (e.g., storage of carbon dioxide, natural gas storage or other waste disposal projects).

Work to be undertaken: Continue work to investigate how, for example, oil and gas companies classify and evaluate the maturity of their gas injection projects today, and propose a draft bridging document. An update on any findings is to be provided to the fifth session of the Expert Group and relevant documentation prepared for that session.

Deliverables: An assessment of how stakeholders classify and evaluate the maturity of their gas injection projects today. A bridging document for application of UNFC-2009 to injection projects, in particular to the storage of carbon dioxide.

Timeline: 2013–2014 (subject to review at the fifth session of the Expert Group).

(F) Application of UNFC-2009 to nuclear fuel resources

Description: Classification of nuclear fuel resources is currently undertaken according to the NEA/IAEA “Red Book” classification system. The NEA/IAEA “Red Book” will be aligned with UNFC-2009. This is the response to the extensive efforts of IAEA to build technical capacity on UNFC-2009 globally and the ensuing requests from a number of governments. Work on this proposed activity has been underway since 2010 and considerable achievements have been made.

Work to be undertaken: A Task Force, to be led by IAEA, will be established to undertake the necessary work for UNFC-2009 to be applied to nuclear fuel resources.

Deliverables: Establishment of a Task Force led by IAEA to facilitate application of UNFC-2009 to nuclear fuel resources. A bridging document relating to the NEA/IAEA “Red Book” classification of nuclear fuel resources to UNFC-2009 and vice versa will be presented to the Expert Group for consideration and recommendation at its fifth session. Appropriate guidelines will be incorporated to ensure consistent application of UNFC-2009 to nuclear fuels thereby allowing use of the higher granularity of UNFC-2009 and its harmonization advantages.

Timeline: 2013–2014 (subject to review at the fifth session of the Expert Group).

(G) Application of UNFC-2009 to renewable energy projects

Description: Renewable energy resources increasingly provide sustainable and much needed fuel and power globally. As the renewable industry becomes a fully commercialized sector, it is important to quantify in a common and transparent way the amount of resources contributed both at a project level and to the regional and global energy systems. This must be undertaken in a way that allows a comparison with other energy resources using common frameworks. If UNFC-2009 could also be applied to renewable energy resources, this would for the first time allow development of a classification system for renewable and non-renewable projects and improve the view of energy sustainability. A general classification system for renewable energy does not currently exist worldwide.

Work to be undertaken: Produce a written assessment of how UNFC-2009 can be applied to renewable energy resources with an accompanying timeline for each of the deliverables. The Bureau will establish a Task Force on Renewable Resources with a number of renewable technology specific sub-task forces.

Deliverables: Establishment of a Task Force on Renewable Resources and sub-task forces as appropriate. A written outline of how the application of UNFC-2009 to renewable energy resources will be accomplished with a timeline for each deliverable will be circulated to the Expert Group and outputs made available on the ECE website prior to submission to the Committee on Sustainable Energy.

Timeline: By 1 November 2013 for submission to the twenty-second session of the Committee on Sustainable Energy.

(H) Financial reporting

Description: UNFC has been designed to meet, to the extent possible, the needs of all applications pertaining to financial reporting standards, particularly those promulgated by the International Accounting Standards Board (IASB). The Expert Group cooperates closely with the IASB, which has undertaken an extractive activities research project to analyse the unique financial reporting issues applicable to extractive activities and to identify a basis on which a financial reporting model might be developed to address these issues. If the IASB decides in the future to add an International Financial Reporting Standard (IFRS) for extractive activities to its active agenda, the objective would be to develop an IFRS on accounting for extractive activities that would supersede IFRS 6: Exploration for and Evaluation of Mineral Resources.

Work to be undertaken: The Bureau of the Expert Group is to monitor relevant developments in financial reporting globally that might have an impact on reserves and resources and prepare any necessary documentation for the fifth session.

Deliverables: Status report on any changes or developments in the financial reporting sector globally with implications or potential implications for UNFC-2009.

Timeline: 2013 to ongoing (with annual review).

(I) Collaboration and cooperation with other bodies

Description: UNFC-2009 has been designed to meet essential needs in international energy and minerals policy formulation, Government resources management, industry business processes management and capital allocation. This has required close collaboration and cooperation with stakeholders from these four areas of application.

Work to be undertaken: Continue to collaborate and cooperate with as wide a range of stakeholders as possible and identify new partners, particularly within non-UNECE member countries.

Deliverables: A list of stakeholders who either participate actively in meetings of the Expert Group or who have expressed an interest in doing so is to be prepared for the fifth session of the Expert Group.

Timeline: 2013 to ongoing.

(J) Electronic communication

Description: The dissemination of Expert Group deliverables to relevant stakeholders and end users will continue to be made using electronic communication facilities whenever these are fit for purpose. The Expert Group will likewise use electronic communication internally in the Group and throughout its network. To this end, the network of experts will be maintained using a central inventory of contacts. These activities will reflect the position of ECE as the United Nations-wide centre of excellence on resource classification.

Work to be undertaken: Electronic dissemination of the deliverables of the Expert Group to the extent possible and practicable. Development of a centralized database of UNFC-2009 end-user contacts.

Deliverables: An enhanced and centralized database of UNFC-2009 end-user contacts. Electronic dissemination of the deliverables of the Expert Group.

Timeline: 2013 to ongoing.

XX. Adoption of conclusions and recommendations (agenda item 17)

Documentation: EGRC-4/2013/INF.5 – Unofficial room document: Draft Conclusions and Recommendations for the Expert Group on Resource Classification Fourth Session *as at 10 April 2013*

90. The conclusions and recommendations were adopted and are included under the relevant agenda items.

XXI. Other business (agenda item 18)

91. The fifth session of the Expert Group on Resource Classification is provisionally scheduled to be held in Geneva, 7–9 May 2014, subject to room availability at the Palais des Nations. Once the dates are confirmed they will be communicated to the Expert Group electronically.

92. Following discussion and careful review and in the light of the programme of work prepared for 2013–2014, the Expert Group agreed that its fifth session will need to be held over three days in order to cover all the agenda items that will be required.

XXII. Report of the meeting (agenda item 19)

93. The report of the meeting was adopted subject to any necessary editing and formatting. The report will be posted to the ECE website.