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Expert Group on Resource Classification

Seventh session

Geneva, 26–29 April 2016

Report of the Expert Group on Resource Classification

I. Introduction

1. The seventh session of the Expert Group on Resource Classification was held on 26 to 29 April 2016.¹
2. This report summarizes the discussions on the work of the Expert Group at its seventh session. All the documents and presentations of the seventh 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 ECE member countries: Armenia, Belgium, Canada, Cyprus, Czech Republic, Georgia, Germany, Hungary, Italy, Kazakhstan, Kyrgyzstan, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America and Uzbekistan.
4. Experts from Algeria, Argentina, Australia, Brazil, Cambodia, Cameroon, China, Colombia, Egypt, India, Indonesia, Iraq, Jordan, Kenya, Malawi, Mozambique, Nigeria, Saudi Arabia, Sierra Leone, South Africa, Thailand, Timor-Leste, Tunisia and Uganda participated under Article 11 of the Commission's Terms of Reference.
5. From the United Nations system and Specialized Agencies, representatives of the United Nations Statistics Division (UNSD) and the International Atomic Energy Agency

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=36110>.



(IAEA) attended. Representatives from the European Commission (EC), represented by the EC Directorate-General (D.G.) for Internal Market, Industry, Entrepreneurship and SMEs (D.G. GROWTH) and D.G. Eurostat, participated.

6. The following international organizations were represented: International Energy Agency (IEA) and International Organization for Standardization (ISO).

7. Representatives of the following non-governmental organizations participated: American Association of Petroleum Geologists (AAPG), Centre for Mineral Technology, Committee for Mineral Reserves International Reporting Standards (CRIRSCO), European Association of Geoscientists and Engineers (EAGE), European Federation of Geologists (EFG), EuroGeoSurveys, Global Carbon Capture and Storage Institute, International Geothermal Association (IGA), International Hydropower Association (IHA), Oil and Gas Climate Initiative (OGCI), Pan-European Reserves and Resources Reporting Committee (PERC), SEG Civil Society Support Center, Society of Petroleum Engineers (SPE), Society of Petroleum Evaluation Engineers (SPEE) and World Petroleum Council (WPC).

8. In addition, the private sector was represented by experts from over 30 companies. Academia was also represented by experts from eight universities.

III. Adoption of the agenda (agenda item 1)

Documentation: ECE/ENERGY/GE.3/2016/1

9. The provisional agenda as contained in the document ECE/ENERGY/GE.3/2016/1 was adopted without amendment.

IV. Election of Officers (agenda item 2)

10. The Expert Group elected a Bureau to take over from the end of the seventh session for a term of two years.

11. The Bureau comprises: Mr. David MacDonald (United States of America) as Chair, Mr. Igor Shpurov (Russian Federation) as First Vice Chair, and Mr. Tunde Arisekola (Nigeria), Ms. Karin Ask (Norway), Ms. Mucella Ersoy (Turkey), Mr. Kjell Reidar Knudsen (Norway), Mr. Radoslav Vukas (Serbia), Mr. Brad Van Gosen (United States of America), Mr. Narendra Verma (India), Ms. Anne Auffret (EC D.G. GROWTH), Mr. Fatih Birol (International Energy Agency (IEA)), Mr. Roger Dixon (CRIRSCO), Mr. David Elliott (Geosgil Consulting Ltd), Professor Gioia Falcone (Cranfield University and International Geothermal Association), Mr. Michael Lynch-Bell (KAZ Minerals Plc), Mr. John Ritter (SPEE), Mr. James (Jim) Ross (Ross Petroleum Ltd), Mr. Bernard Seiller (SPE), Mr. Adichat Surinkum (Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP)), Mr. Daniel Trotman (EY) and Mr. Harikrishnan Tulsidas (IAEA) as Vice-Chairs.

12. The ECE secretariat highlighted that the process of electing the Bureau can include nomination of non-governmental candidates and nominations by other than ECE member States but that in all cases nominations are vetted by the existing Bureau prior to the elections.

13. The Expert Group reconfirmed that CRIRSCO and SPE each have a standing seat on the Bureau. It was noted that the Chairman of the Technical Advisory Group is an observer on the Bureau.

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

14. The Chair provided a brief summary of the workshop held on 26 April 2016 with presentations on the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (UNFC-2009) and its application to solid minerals via the CRIRSCO Template, to petroleum via the Petroleum Resources Management System (PRMS), and to nuclear fuels via the Bridging Document to the Organisation for Economic Co-operation and Development (OECD) Nuclear Energy Agency (NEA)/IAEA Uranium Classification 'Red Book'. A series of classroom exercises were conducted during which UNFC-2009 was applied to nickel, uranium and petroleum projects. The event was attended by 85 participants, of which 23 were female.

15. There was broad representation from the solid minerals sector, including nuclear fuel resources, as well as the petroleum and renewable energy sectors. Academia and the financial reporting sectors were also represented. The final programme and presentations delivered at the workshop are available on the ECE website.²

16. Interest was expressed by the participants in the event being repeated as part of the eighth session of the Expert Group. The Expert Group requested the secretariat to organize such a training event. It was requested that efforts be made to ensure the event is as interactive as possible.

VI. Opening remarks (agenda item 4)

17. The session opened with an address by the Deputy Executive Secretary of ECE in which he welcomed the participants as key stakeholders in an industry that is critical for the world's future. He drew attention to the challenge of ensuring reliable and environmentally responsible supplies of energy at prices that reflect market conditions. Greenhouse gas emissions need to be reduced if the world is to avert a climate disaster, but this needs to be achieved in a way that ensures access to the energy needed to support the global economy. The Deputy Executive Secretary noted that the United Nations Sustainable Development Goals were approved in New York in September 2015, that in December 2015 the world agreed to climate goals set by the twenty-first session of the Conference of the Parties (COP 21) of the United Nations Framework Convention on Climate Change (Paris, France, 30 November–12 December 2015), and that 175 individual governments have now signed the Paris climate agreement. He then emphasized that strong, reliable and lasting international standards such as UNFC-2009 are required if the world is to deliver on the enormous task of meeting the Sustainable Development Goals and the climate goals in an integrated manner. Mobilizing the investments required with capital, technology, and management skills is made easier if the rules are clear and well understood by all. Engaging all stakeholders in the development of international standards enhances the credibility of the standards and the breadth of their application. In closing, the Deputy Executive Secretary observed that the Expert Group is considered by ECE to be an excellent example of how public-private partnerships should function.

18. The Director of the Sustainable Energy Division of ECE welcomed participants. He noted that 80 per cent of the world's energy is based on fossil fuels and even under a climate change scenario that meets a 2°C target, fossil energy will still represent 40 per cent

² <http://www.unece.org/index.php?id=41248>.

of the energy mix in 2050. He noted that the fossil energy industry needs to develop a robust narrative on the role of fossil energy in a sustainable energy future. UNFC-2009 puts all forms of energy on a comparable footing, it brings all countries and reporting systems to a common architecture, and it has the imprimatur of the United Nations. The links that ECE has to the other regional commissions and the rest of the United Nations system on energy can be used to accelerate dissemination, capacity-building, and certification processes. He noted with appreciation that Thailand has proceeded with translation of UNFC-2009 into Thai, which is an excellent indicator of the demand and need for UNFC-2009.

19. Professor Scott W. Tinker, Director of the Bureau of Economic Geology (BEG) of the University of Texas and the State Geologist of Texas, United States, presented a keynote speech on SWITCH: The Global Energy Transition³. He noted that although energy impacts every aspect of our lives, it remains a vast and complex subject. During the presentation, Professor Tinker highlighted a number of key issues, including:

- (a) Energy, the economy and the environment are intimately linked;
- (b) The foundational fuels used for 20th century transportation and electricity – oil and coal – are available, affordable and reliable, and thus difficult to replace;
- (c) Renewable sources of energy can contribute to regional demands, but require major advances in energy density and storage if they are to replace oil and coal;
- (d) Natural gas, nuclear and hydrogen may be more effective foundational global energies for the twenty-first century;
- (e) The pace of energy supply transitions is controlled by infrastructure, economics, materials, thermodynamics, kinetics and policy, and thus “the switch” does not happen quickly;
- (f) Energy choices are based on security issues: affordability, availability, reliability and environmental sustainability, and energy security in all its dimensions should be the goal of energy policy;
- (g) Energy efficiency is underappreciated; individual behaviour matters.

20. The Chair welcomed the participants, noting the large number of attendees taking part for the first time. He observed that the level of interest in, and support for, UNFC-2009 and the Expert Group continues to grow worldwide. He advised 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 seventh session.

21. The Chair drew attention to the draft set of conclusions and recommendations circulated prior to the meeting, noting that this was the method of working previously adopted by the Expert Group and that it is in line with the Guidelines on Procedures and Practices for ECE Bodies that were adopted by ECE at its sixty-fifth session in April 2013. He emphasized that the draft conclusions and recommendations were not intended in any way to prejudice the discussions but rather to provide a draft text to facilitate discussions. The Expert Group agreed to consider and approve conclusions as the agenda items were discussed rather than considering them en bloc at the end of the meeting.

22. The Chair noted that he and many of the Vice-Chairs, as well as other members of the Expert Group, had delivered presentations at a number of minerals, petroleum and

³ <http://www.switchenergyproject.com>

renewable energy-related conferences and workshops around the world, and that these all served to promote greater understanding of the benefits of UNFC-2009.

23. Since the sixth session of the Expert Group, the Bureau conducted its work through seven meetings (audioconferences), one face-to-face meeting and regular e-mail correspondence. He noted that the minutes of the Bureau meetings are available on the ECE website⁴.

24. The Chair thanked the Bureau members and their alternates for their work, time and commitment since the sixth session. He also thanked the Chairs and members of all sub-groups of the Expert Group on Resource Classification: Technical Advisory Group, Communications Sub-Committee, Task Force on Application of UNFC-2009 to Nuclear Fuel Resources, Task Force on UNFC-2009 and Recipient Reservoirs, Task Force on Application of UNFC-2009 to Renewable Energy Resources, Geothermal Working Group established under the International Geothermal Association to develop the geothermal specifications for UNFC-2009, Bioenergy Working Group, E axis Sub-group, G axis Sub-group, UNFC-2009 Resourcing Strategy Working Group and the Sub-group working on the Competent Person guidance note.

25. The Chair provided a brief update on the status of the development of UNFC-2009 and the areas of progress, in particular in relation to the Work Plan for 2013–2015.

VII. Introduction of participants (agenda item 5)

26. A tour de table was conducted during which participants introduced themselves. Due to time constraints only ten participants had the opportunity to do so.

VIII. Activities and priorities of the Committee on Sustainable Energy and any matters for consideration by the Expert Group on Resource Classification (agenda item 6)

27. The Director of the Sustainable Energy Division of ECE provided an update on the relevant outcomes of the twenty-fourth session of the Committee on Sustainable Energy, 17–21 November 2015. He advised that the Committee endorsed the Guidelines for Application of UNFC-2009 for Uranium and Thorium Resources; recommended the Expert Group to involve the other regional commissions to support global application of the Guidelines; and endorsed the work plan for 2016–2017 as proposed. The ECE Executive Committee at its meeting in March 2016 approved the Expert Group work plan for 2016–2017. The Committee recognizes the value of the Expert Group and its work on resource classification. The Committee also requested the Expert Group to develop an extrabudgetary project proposal to fund the full and proper continued development and deployment of UNFC-2009.

28. The Director provided an overview of the focus and activities of the ECE sub-programme on sustainable energy noting that the work is organized in three categories aimed at defining the Sustainable Energy System of the future:

(a) Reconciling the reality of fossil fuels' enduring share of the energy mix with the need to address climate change;

⁴ <http://www.switchenergyproject.com>

(b) Enhancing integration of the ECE region's energy markets (strategies targeted at both the demand and the supply side; security of investments; predictability; diversification of supply); and

(c) Facilitating the transition to a sustainable energy system (energy costs relative to household income; energy access as a driver for development).

29. The Expert Group took note of the projects under the Committee on Sustainable Energy on Pathways to Sustainable Energy and methane management in extractive industries, as well as the Seventh International Forum on Energy for Sustainable Development to be held in Baku, Azerbaijan, 18–21 October 2016, and the Eighth International Forum on Energy for Sustainable Development to be held in Astana, Kazakhstan, 10–14 June 2017.

IX. Work plan for 2013–2015 and for 2016–2017 (agenda item 7)

30. The Chair reminded the Expert Group that the Committee on Sustainable Energy at its twenty-third meeting in November 2014 endorsed the extension of the Expert Group's Work Plan for 2013–2014 to the end of 2015.

31. Following a detailed review, the Expert Group noted that it had delivered on its work plan for 2013–2015.

32. The Expert Group reviewed its Work Plan for 2016–2017, noted that significant progress has already been made on its implementation, and recommended the Expert Group continue with the planned work without modification.

X. Governance of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (agenda item 8)

Documentation: ECE/ENERGY/GE.3/2016/3

EGRC-7/2016/INF.4 – Unofficial room document: Technical Advisory Group Annual Report *dated 13 April 2016*

33. The Chair of the Technical Advisory Group provided an update on the significant amount of work carried out by the Technical Advisory Group since the sixth session. He highlighted that for the first time the Technical Advisory Group had reviewed bridging/mapping documents related to a commodity for which there is already in place a UNFC-2009 approved aligned and internationally recognized system i.e. solid minerals and petroleum. This generated the challenge to ensure that the resulting UNFC-2009 classes and categories are comparable and consistent irrespective of the source system.

34. Attention was drawn to the concern of the Technical Advisory Group on maintaining consistency and comparability; as the application of UNFC-2009 is expanded to encompass other energy commodity types, modifications to the definitions to accommodate each system may be needed whilst maintaining the overall principles and overriding generic specifications.

35. Potential issues and challenges for the future work of the Technical Advisory Group were highlighted, including managing the anticipated need for increased user support as the bridging documents started to be applied.

36. The members of the Technical Advisory Group, as approved by the Bureau of the Expert Group for the period April 2016 to April 2018, are Mr. John Etherington

(SPE (Chair)), Mr. Andrew Barrett (Geoscience Australia), Mr. John Barry (Irus Consulting Ltd), Ms. Vera Bratkova (State Commission of Mineral Reserves of the Russian Federation), Mr. Jan Bygdevoll (Norwegian Petroleum Directorate), Mr. Roger Dixon (CRIRSCO), Mr. Alistair Jones (BP), Mr. Dominique Salacz (Evolution Resources), Mr. Alexander Shpilman (Research and Analytical Centre for the Rational Use of the Subsoil, Russian Federation) and Mr. Harikrishnan Tulsidas (IAEA), with the Chair and secretary of the Expert Group as observers.

37. The Expert Group thanked the members of the Technical Advisory Group who had stepped down during 2015 and 2016: Mr. Santosh Adhikari (Indian Bureau of Mines), Mr. Per Blystad (Norwegian Petroleum Directorate), Ms. Leesa Carson (Geoscience Australia), Mr. Michael Lynch-Bell (KAZ Minerals Plc), Mr. Maksim Saakian (State Commission of Mineral Reserves of the Russian Federation) and Mr. Daniel Trotman (EY).

38. A request was made that consideration be given to development of best practice guidance on the use of bridging documents, as well as more case studies on solid minerals and petroleum.

39. The Expert Group expressed its appreciation for the work undertaken by the Technical Advisory Group.

40. The Expert Group discussed possible modifications to UNFC-2009.

(a) Guidance on the application and use of the G axis name, category definitions and supporting explanations in the light of its expanded use by the renewables sector

41. The work on application and use of the G axis name, category definitions and supporting explanations in the light of its expanded use by the renewables sector was presented.

42. The Expert Group noted that significant clarifications had been added to the draft generic specifications for application of UNFC-2009 to renewable energy resources (ECE/ENERGY/GE.3/2016/5) in order to facilitate appropriate interpretation of the G axis for renewable energy. The Expert Group requested that recommendations for possible future changes to the G axis name, category definitions and supporting explanations be submitted to the eighth session and be considered in any future update of UNFC-2009.

(b) Guidance note on the need for, and responsibilities of, a Competent Person or Persons with regard to UNFC-2009

43. Progress on the development on a guidance note on the need for, and responsibilities of, a Competent Person or Persons with regard to UNFC-2009 was provided as well as the range of issues that need to be considered. The Chair of the Expert Group highlighted the differences between countries in the way the relevant regulators impose restrictions on the requirements for a Competent Person.

44. Mr. Arif Zardi Dahlius, Chairman, Indonesian Society of Economic Geologists, provided an overview of the Indonesian Reporting Code for Exploration Result, Resource and Reserve Estimation (KCMI) and its development.

45. The Expert Group requested the Bureau to finalize the draft guidance note on the need for, and responsibilities of, a Competent Person or Persons with regard to UNFC-2009. The Expert Group further requested that the Guidance Note once finalized be made available on the ECE website.

(c) **Guidance note on the definition of a project in relation to UNFC-2009**

46. The draft Guidance Note to support the UNFC-2009 Definition of a Project prepared by Mr. Jim Ross in cooperation with the Bureau was presented (ECE/ENERGY/GE.2/2016/3). The draft Guidance Note reproduces the UNFC-2009 definition of a Project, highlights the differences between this definition and the definition recently adopted in a European Union (EU) accounting directive, documents some of the underlying principles of project-based resource classification, and finally provides a set of guidelines that should enhance the consistency of application of UNFC-2009 by its users.

47. The Expert Group recommended minor amendments to the text of the Guidance Note to support the UNFC-2009 Definition of a Project (ECE/ENERGY/GE.3/2016/3). In addition, the Bureau was requested to take into account existing definitions of 'project' used by relevant bodies around the world when finalizing the text. Once finalized, the Guidance Note should be posted to the ECE website.

48. Clarification was provided that guidance notes do not need to follow the document approval procedure agreed at the fifth session of the Expert Group.

XI. Generic specifications for the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (agenda item 9)

Documentation: ECE/ENERGY/GE.3/2016/4

49. The Expert Group is tasked to ensure testing, review, ongoing maintenance and periodic updating of UNFC-2009 and the generic specifications for its application.

50. The Expert Group reviewed and discussed possible modifications to UNFC-2009. A number of potential changes were discussed, including updating the name of UNFC-2009 to reflect broadening application of the system to encompass renewable energy as well as modifying the text to facilitate application to renewable energy. The updated text of UNFC-2009 should be coherent with national statistical standards. A number of possible areas for modification have already been identified by the sub-groups of the Expert Group and it would be beneficial to involve the Chairs of these sub-groups in the updating sub-group/task force.

51. The Expert Group concluded that an update of UNFC-2009 should be prepared for release, but not before 2018, and requested the Bureau to establish a sub-group/task force to take responsibility for preparing a first revised draft (with the Technical Advisory Group kept informed on an ongoing basis) for presentation to the eighth session.

52. The draft bridging document between the Oil and Fuel Gas Reserves and Resources Classification of the Russian Federation of 2013 and UNFC-2009 (ECE/ENERGY/GE.3/2016/4) was presented by the General Director of the State Commission of Mineral Reserves of the Russian Federation.

53. Following review, the Expert Group recommended that the draft bridging document between the Oil and Fuel Gas Reserves and Resources Classification of the Russian Federation of 2013 and UNFC-2009 (ECE/ENERGY/GE.3/2016/4) be issued for public comment. Following the public comment, the document approval procedure agreed at the fifth session of the Expert Group should be followed (ECE/ENERGY/GE.3/2014/2, paragraph 97) with the aim to submit the document to the Committee on Sustainable Energy at its twenty-fifth session in September 2016.

54. The Expert Group thanked the State Commission of Mineral Reserves of the Russian Federation and the Technical Advisory Group for their efforts in developing the draft bridging document.

55. The General Director of the State Commission of Mineral Reserves advised that a new classification system for solid minerals for the Russian Federation is under development and careful consideration is being taken to seek the best possible alignment with UNFC-2009.

56. An update of the status of the preliminary mapping and the development of bridging documents to the Chinese petroleum classification system and the China Mineral Reserves and Resources Classification System (CMRRCS) was presented by Ms. YANG Hua of the Research Institute of Petroleum Exploration and Development (RIPED) of China National Petroleum Corporation (CNPC) and Mr. LI Jian of the Mineral Resources and Reserves Evaluation Center of the Ministry of Land and Resources of China. The Chinese Task Force hopes to issue draft bridging documents by end-July 2016. It is then planned to discuss the bridging documents at the time of China Mining 2016 to be held in Tianjin, China, 22–25 September 2016.

57. The Expert Group recommended that the development of the draft bridging documents between the Chinese petroleum classification system and UNFC-2009 and CMRRCS and UNFC-2009 continue and that the revised draft documents are submitted as official documents for the eighth session.

XII. Application of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 to solid minerals (agenda item 10)

58. The representative of CRIRSCO provided an overview of the update of the CRIRSCO Template in progress.

59. In view of the update of the CRIRSCO Template of 2013 currently being undertaken, the Expert Group requested that the CRIRSCO representative keep the Bureau fully informed of possible changes to the Template. The Expert Group further requested the Technical Advisory Group to review all proposed changes and prepare a recommendation on the possible need to revise the Bridging Document between the CRIRSCO Template and UNFC-2009 to be submitted to the eighth session. The Bureau should consider responding or endorsing the document publically if there is a public comment period.

XIII. Application of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 to petroleum (agenda item 11)

60. The representative of SPE provided a status report on the update of the Petroleum Resources Management System (PRMS) that has recently started. Amongst the areas of focus are to increase the granularity of the system; improve the coverage of unconventional resources, including in relation to what is a discovery; as well as to align PRMS to the extent possible with the Canadian Oil and Gas Evaluation Handbook (COGEH). It is hoped that an updated draft of PRMS will be ready by May 2016 following which it will be shared (and updated) for comments/agreement with the full SPE Oil and Gas Reserves Committee and the PRMS sister societies: SPEE, WPC, Society of Exploration Geophysicists (SEG) and AAPG and then with other stakeholders such as the Expert Group on Resource Classification. A public consultation period will follow. The aim is to then submit the

document to the SPE Board in Q4 2016 or Q1 2017 and issue the updated PRMS during the first half of 2017.

61. In view of the update of PRMS currently being undertaken, the Expert Group requested that the SPE representative keep the Bureau fully informed in a timely manner of possible changes to the system. The Expert Group further requested the Technical Advisory Group to review all proposed changes and prepare a recommendation to the Bureau on the possible need for a revised Bridging Document between PRMS and UNFC-2009 to be submitted to the eighth session. The Bureau should consider endorsing the document or responding during the public comment period.

XIV. Application of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 to nuclear fuel resources (agenda item 12)

62. The Expert Group was briefed on the endorsement of the Guidelines for the Application of UNFC-2009 to uranium and thorium resources by the Committee on Sustainable Energy at its twenty-fourth session. The objective of the Guidebook is threefold: (i) to assist IAEA and United Nations Member States in the application of the bridging scheme to UNFC-2009; (ii) to provide case studies and examples, which will illustrate the application of the UNFC-2009 Bridging Document in a consistent manner in various situations; and (iii) to look into aspects of sustainability and the environment that should be considered when classifying the projects. The goal is to publish the Guidelines as a joint ECE and IAEA publication in 2016.

63. The publication ‘Application of UNFC-2009 to Nuclear Fuel Resources – Selected Case Studies’ was issued in December 2015 (ECE Energy Series No. 46 and ECE/ENERGY/104). This publication, prepared by the Task Force, includes eight case studies that demonstrate the classification of uranium or thorium resources at different scales, with examples in Argentina, Brazil, China, India, Malawi, Niger and the United States, to test the application of the UNFC-2009 to nuclear fuel resources.

64. The Chair of the Task Force on Application of UNFC-2009 to Nuclear Fuel Resources Task Force provided an update on the work of the Task Force, including on the status of the development of a handbook of good practices for application of UNFC-2009 for uranium and thorium resource management. The table of contents has been agreed for the handbook. He drew attention to the three case studies in Egypt (ECE/ENERGY/GE.3/2016/9), Mongolia (ECE/ENERGY/GE.3/2016/10) and Paraguay (ECE/ENERGY/GE.3/2016/11) prepared for this meeting and noted that others are planned, including for Algeria, Australia, Cameroon, Indonesia and Nigeria. The Malawi case study previously issued will be updated.

65. The current members of the Task Force are: Mr. Tunde Arisekola (Nigerian Geological Survey Agency), Mr. Paul Bankes (CRIRSCO), Mr. Andrew Barrett (Geoscience Australia), Mr. Cassius Chiwambo (Malawi), Ms. Olga Gorbachenchko (Kazatomprom), Mr. Julian Hilton (Aleff Group), Ms. Susan Hall (United States Geological Survey (USGS)), Mr. Michael Haschke (DMT GmbH & Co. KG), Mr. Allaoua Khaldi (Atomic Energy Commission of Algeria), Mr. Luis Lopez (National Atomic Energy Commission of Argentina), Ms. Cristelle Nikoh Mefeugeng (Ministry of Water and Energy, Cameroon), Mr. Roberto Villas-Bôas (Centre for Mineral Technology, Brazil), Mr. Akshaya Sarangi (Uranium Corporation of India Ltd), Mr. Agus Sumaryanto (National Nuclear Energy Agency (BATAN) of Indonesia), Mr. Bradley Van Gosen (USGS), Mr. Jim Ross (Ross Petroleum Ltd), and Mr. Harikrishnan Tulsidas (IAEA (Chair)). The Expert Group Chair and secretary are also members.

66. The results of the case study on Application of UNFC-2009 to phosphate rock - uranium resources: A case study of the El-Sebaeya Projects, Nile Valley, Egypt (ECE/ENERGY/GE.3/2016/10) was presented by Mr. Harikrishnan Tulsidas, IAEA, on behalf of the main author, Mr. Mohamed Taha PhD, Nuclear Materials Authority of Egypt.
67. The results of the case study on Considerations related to application of UNFC-2009 to uranium projects and associated resources in Paraguay (ECE/ENERGY/GE.3/2016/10) were presented by Mr. Luis Lopez, National Atomic Energy Commission of Argentina.
68. The results of the case study Application of UNFC-2009 to the Uranium Resources of the Gurvanbulag Uranium Deposit in Mongolia (ECE/ENERGY/GE.3/2016/11) were presented by Mr. LI Shengxiang, China Uranium Corporation Limited, China National Nuclear Corporation (CNNC).
69. A presentation on a case study in Algeria was presented by Mr. Allaoua Khaldi, Atomic Energy Commission of Algeria.
70. The Task Force provided an update on joint ECE-IAEA capacity-building projects and events on uranium resources management in 2015–2016 (these are included in more detail under Item 18).
71. The Expert Group recommended that the Task Force on Application of UNFC-2009 to Nuclear Fuel Resources present the draft handbook of good practices for application of UNFC-2009 for uranium and thorium resource management to the eighth session.
72. The Expert Group expressed its appreciation for the work undertaken by the Task Force and noted the high quality of the case studies.

XV. Application of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 to renewable energy resources (agenda item 13)

Documentation: ECE/ENERGY/GE.3/2016/5
ECE/ENERGY/GE.3/2016/6

73. The Chair of the Geothermal Working Group, on behalf of the Chair of the Task Force on Application of UNFC-2009 to Renewable Energy Resources, provided an update on the work of the Task Force, including: development of the revised draft Generic Renewable Specifications, the text of which includes comments from the Technical Advisory Group, public, Geothermal Working Group and Bioenergy Working Group; development of draft geothermal-specific specifications with the International Geothermal Association; development of draft bioenergy-specific Specifications; and, formation of a G axis Working Group. The Task Force is currently initiating a Wind Working Group with representatives from the onshore and offshore wind industry with the goal to develop wind-specific specifications by 2017. The work plan for 2016–2020 was outlined. The Task Force will work to put in place a governance and support model to ensure ‘evergreen’ specifications.
74. The challenges faced by the Task Force were outlined. These include the use of the G axis. The Guidance Note to support the UNFC-2009 Definition of a Project will be of value for the Renewable Energy community.
75. Clarification was provided that there is no overlap between the work of the Task Force and the International Renewable Energy Agency (IRENA) and its classification of energy products. The IRENA classification identifies and defines the main types of renewable energy and is used to collect, analyze and present renewable energy statistics. In

the IRENA Classification, energy products are divided into different categories at four different levels. The IRENA Classification and UNFC-2009 have different purposes and are complementary.

76. The members of the Task Force are: Mr. Frank Denelle (Shell (Chair)), Mr. Bernard Charpentier (Total), Ms. Raffaella Cristianetti (DuPont), Ms. Gioia Falcone (Cranfield University of Technology and IGA), Mr. Dhiren Jethwa (Shell), Mr. James Primrose (BP Alternative Energy), Mr. Bernard Seiller (Total), Mr. Daniel Trotman (EY) and the secretary of the Expert Group.

77. The revised generic specifications for the application of UNFC-2009 to renewable energy resources were presented.

78. The Expert Group accepted the revised draft generic specifications for the application of UNFC-2009 to renewable energy resources (ECE/ENERGY/GE.3/2016/5) and recommended they be submitted to the Committee on Sustainable Energy for endorsement.

79. Professor Gioia Falcone, Cranfield University, IGA and Chair of the Geothermal Working Group, presented the draft specifications for application of UNFC-2009 to Geothermal Energy Resources. This document includes 12 case studies.

80. The members of the Geothermal Working Group are: Ms. Gioia Falcone (Cranfield University/IGA), Mr. Miklos Antics (GPC IP/Geofluid), Mr. Roy Baria (Mil-Tech UK Ltd), Mr. Larry Bayrante (Energy Development Corporation), Mr. Paolo Conti (University of Pisa), Mr. Malcolm Grant (MAGAK), Mr. Robert Hogarth (Hogarth Energy Resources), Mr. Egill Juliusson (Landvirkjun), Mr. Harmen Mijnlief (TNO), Ms. Annamaria Nador (Geological & Geophysical Institute, Hungary), Mr. Greg Ussher (Jacobs), and Ms. Kate Young (United States National Renewable Energy Laboratory (NREL)). Mr. Graeme Beardsmore, Chair, IGA Reserves and Resources Committee and Mr. Horst Rüter, Director, IGA Service Company, are observers.

81. The representative from Malawi requested that geothermal case studies should be sought from Africa. It was noted that the Olkaria geothermal power plant in Kenya, which began commercial operation in 2015, is the largest geothermal power plant in the world.

82. The Expert Group requested that the draft specifications for the application of UNFC-2009 to geothermal (ECE/ENERGY/GE.3/2016/6) be issued for public comment. Following the public comment, the document approval procedure agreed at the fifth session of the Expert Group should be followed (ECE/ENERGY/GE.3/2014/2, paragraph 97).

83. Mr. James Primrose, BP Alternative Energy and Chair of the Bioenergy Working Group, presented an overview of the Working Group's work plan and progress made on the development of the draft specifications for the application of UNFC-2009 to bioenergy. He outlined the characteristics of a bioenergy project following which he presented a hypothetical renewable diesel case study, including classification and quantification according to UNFC-2009.

84. The members of the Bioenergy Working Group are: Mr. James Primrose (BP Alternative Energy (Chair)), Mr. Doug Berven (POET), Mr. Benoit Charpentier (Total) Ms. Raffaella Cristianetti (DuPont), Mr. Gustav Grob (International Sustainable Energy Organization), Mr. Richard Hamilton (CERES), Mr. James Leitheiser (Eco Plant Bamboo), and Mr. F. Michael McCurdy (Leidos Engineering).

85. The Expert Group requested the Task Force on Application of UNFC-2009 to Renewable Energy Resources to prepare draft commodity specific-specifications for bioenergy for review at the eighth session.

86. The Expert Group further requested the Task Force to start work on development of draft commodity-specific specifications for solar, wind and hydro dependent upon identifying volunteer support.

87. The Expert Group requested the Task Force to seek to cooperate with IRENA, IEA, Renewable Energy Policy Network for the 21st Century (REN21) and other organizations and associations working on renewable energy, including the ECE Group of Experts on Renewable Energy.

88. The Expert Group expressed its appreciation for the work undertaken by the Task Force on Application of UNFC-2009 to Renewable Energy and the Geothermal and Bioenergy Working Groups.

XVI. Use of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 for classifying injection projects (agenda item 14)

Documentation: ECE/ENERGY/GE.3/2016/7

EGRC-6/2016/INF.2 – Unofficial room document: Summary report of changes made to draft Specifications for Application of UNFC-2009 to Injection Projects for the Purpose of Geological Storage based on comments received during the Public Hearing 2015 *dated 6 April 2016*

89. The Chair of the Task Force on UNFC and Recipient Reservoirs provided an update on the work of the Task Force since the sixth session.

90. The members of the Task Force are: Ms. Karin Ask (Statoil (Chair)), Ms. Michelle Bentham (British Geological Survey (BGS)), Mr. Benjamin Court (Global CCS Institute), Mr. Simplicio Caluyong (CCOP), Ms. Eva Halland (NPD), Mr. Scott Frailey (Illinois State Geological Survey, United States), Mr. Wolf Heidug (King Abdullah Petroleum Studies and Research Centre), and Mr. Martin Hubbig (OMV).

91. The Chair of the Task Force presented the revised draft Specifications for the Application of UNFC-2009 to Injection Projects (ECE/ENERGY/GE.3/2016/7). She clarified what is being classified: the resource is the available reservoir in which a certain quantity of a given fluid can be stored. It is not the injected and stored fluid, although this can be a resource in itself. The quantity is the amount of the fluid in question that can be stored in this reservoir, given a certain project. In the revised draft specifications, the resource is now referred to as Geological Storage.

92. It was proposed that the Task Force could consider cooperating with gas storage operators for example the Gas Storage Operators Forum.

93. Attention was drawn to examples of other ongoing classification initiatives. Notably those being undertaken by Shell, SPE, Carbon Capture and Storage Association (CCSA), the United Kingdom CCS Cost Reduction Task Force's Transport and Storage Development Group (TSDG), and the Oil and Gas Climate Initiative (OGCI).

94. Ms. Lesley Seldon, Shell, presented an overview of Shell's internal storage resource management system (SRMS) and a mapping to UNFC-2009. SPE is seeking to develop an SPE-SRMS. Ms Seldon stated the intention that any SRMS developed would align with UNFC-2009.

95. The Oil and Gas Climate Initiative (OGCI) was introduced. It is an industry-driven initiative launched at COP 21 that aims to catalyze practical action on climate change in

focus areas such as the role of natural gas, carbon reduction instruments and tools, and long-term energy solutions. OGCI is planning to define a methodology for the reporting of CO₂ storage reserves/resources. The representative of OGCI confirmed that OGCI will support both the Expert Group and SPE on developing common standards.

96. The Expert Group recommended that the revised draft specifications for the application of UNFC-2009 to injection projects for the purpose of geological storage (ECE/ENERGY/GE.3/2016/7) be accepted and submitted to the Committee on Sustainable Energy for endorsement.

97. The Expert Group expressed its appreciation for the work undertaken by the Task Force.

XVII. Other potential applications of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (agenda item 15)

98. Integrating Anthropogenic Resources into UNFC-2009, including case studies based on three different types of anthropogenic resources (comparing old landfills, obsolete PCs and the magnets used in in-use wind turbines), was presented by Ms. Andrea Winterstetter, Institute for Water Quality, Resource and Waste Management, Vienna University of Technology. The case studies demonstrate that the classification of different types of anthropogenic resources is possible under UNFC-2009. A number of challenges were encountered, including how to integrate non-monetary effects since anthropogenic resources touch on aspects of both resource management and waste management. For waste flows arbitrary system boundaries need to be defined, either temporal and spatial, as only confirmed 'projects' can be evaluated and classified under UNFC-2009.

99. Mr. Ulrich Kral, Institute for Water Quality, Resource and Waste Management, Vienna University of Technology, introduced the COST Action 'Mining the European Anthroposphere (MINEA)' Project. The project has 20 participating countries and will start in May 2016 and finish in April 2020. He noted that there is no common methodology to prepare inventories and classify anthropogenic resources (stocks and flows) in a standardized way. Such a methodology is the basis for strategies to optimize raw material consumption, for implementing circular economy principles (resource efficiency, recycling), and for securing recovery of e.g. critical raw materials. He invited the Expert Group to participate in the Workshop on Opportunities and Challenges for the Classification and Reporting of Anthropogenic Resources Hungary, 6–7 October 2016, organized by Working Group 4 (WG4) of the project. WG4 focuses on the resource classification of secondary resources.

100. The Expert Group was invited to nominate a representative to the position of MINEA WG4 Vice-Leader. A proposal was also put forward to establish a sub-group on Anthropogenic Resources with the goal to develop Specifications or Guidelines for the application of UNFC-2009 to anthropogenic resources. Mr. Julian Hilton, Aleff Group, volunteered himself for the position of Vice-Leader of WG4.

101. The Expert Group recommended that, subject to volunteers being identified, a small sub-group be established to explore the potential applicability of UNFC-2009 to anthropogenic resources and to report its findings to the eighth session. The work of such a sub-group should link to the work of the System of Environmental-Economic Accounting (SEEA) and its adoption of UNFC-2009.

102. The Expert Group recommended that the Bureau monitor the COST Action ‘Mining the European Anthroposphere (MINEA)’ Project and any implications for UNFC-2009, in particular in relation to mine tailings and provide an update to the eighth session.

103. The Expert Group noted the continued interest in applying UNFC-2009 to groundwater and requested the Bureau to consider placing this on the agenda for discussion at the eighth session.

XVIII. Accommodating environmental and social considerations in the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (agenda item 16)

Documentation: ECE/ENERGY/GE.3/2016/8
ECE/ENERGY/GE.3/2016/8/Corr.1

104. The Chair of the E axis Sub-group presented a progress report on the work of the E axis Sub-group. He introduced the report on the development of draft guidance on accommodating environmental and social considerations in UNFC-2009 (ECE/ENERGY/GE.3/2016/8) which addresses the socio-environmental issues at a high level, and proposes high-level guidance and also clarification of some terms in UNFC-2009. Although UNFC-2009, the associated resource-specific classification guidelines (CRIRSCO Template, PRMS, and the ‘Red Book’) and similar systems, cite social and environmental issues as factors in classification, none of them contain any significant guidance. The recommendations in the report fall into three main areas: (i) clarification of terms related to socio-environmental factors; (ii) high-level guidance on accommodating social and environmental considerations in UNFC-2009; and (iii) the development of detailed guidelines.

105. The members of the Sub-group are: Mr. David Elliott (Geosgil Consulting (Chair)), Mr. John Atherton (International Council on Mining and Metals (ICMM)), Mr. Julio Claudeville (Barrick Argentina), Ms. Kathryn Campbell (Sullivan & Cromwell), Mr. Julian Hilton (U.K.), Mr. Michael Lynch-Bell (KAZ Minerals), Mr. Luis Martins (Colt Resources), Mr. Thomas Schneider (Ryerson University, Canada), Mr. Slavko Solar (EC D.G. GROWTH), Mr. Roberto Villas-Boas (Centre for Mineral Technology, Brazil) and Ms. YANG Hua (PetroChina).

106. The discussion underlined the views of the Expert Group on the importance of social licence and environmental issues on the E axis. Attention was drawn to the Africa Mining Vision (AMV) and the Country Mining Vision (CMV) Guidebook and the social concerns and interests contained therein. AMV also refers to the establishment of a continental system or “AMREC” (African Mineral Resource Classification) under a continental professional body (such as an expanded Southern African Institution of Mining & Metallurgy (SAIMM)).

107. The Expert Group concluded that the E axis Sub-group should continue and requested it to prepare a Guidance Note comprising high-level guidance on accommodating social and environmental considerations in UNFC-2009 for presentation to the Expert Group at its eighth session. In addition, the Sub-group should document any recommendations for modifications to UNFC-2009. The Sub-group should also provide recommendations in relation to the development of the detailed guidelines.

108. The Expert Group expressed its appreciation for the work undertaken by the Sub-group.

XIX. Case studies and testing of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (agenda item 17)

Documentation: ECE/ENERGY/GE.3/2016/9
ECE/ENERGY/GE.3/2016/10
ECE/ENERGY/GE.3/2016/11

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

(a) Mr. Georgii Rudko, State Commission of Ukraine on Mineral Resources (DKZ of Ukraine) presented a case study on UNFC-2009 as a Harmonization Tool for Global Classifications and the Example of Ukraine;

(b) Mr. Zoltán Horváth of the Geological and Geophysical Institute of Hungary (MFGI) and EuroGeoSurveys presented a report on the project to harmonize the Classification of Hungary (MFGI) and the EuroGeoSurveys Mineral Resources Expert Group (EGS MREG) Position;

(c) Mr. Radoslav Vukas, Ministry of Energy and Mining of Serbia, provided an update on the proposed new Serbian Classification of Resources/Reserves of Solid Minerals being prepared for the new Serbian Book of Regulations. The new classification is based on and harmonized with the Pan European Reserves and Resources Committee (PERC) Code of 2013. A mapping with UNFC-2009 through the PERC Code was presented;

(d) An update on the progress in the application of UNFC-2009 to mineral resources in Thailand was delivered by Ms. Siriporn Soongpankhaio, Department of Mineral Resources (DMR), Ministry of Natural Resources and Environment of Thailand. Details of the application of UNFC-2009 to DMR's Mineral Exploration Projects were provided. DMR is working to apply UNFC-2009 as the national mineral classification in Thailand. The Pha Daeng Zinc Mine and Chatree Gold mine case studies were presented. The Expert Group noted with appreciation the translation of UNFC-2009 and Specifications for its Application into Thai.

110. An update on progress on the EU Raw Materials Knowledge Base including Reserve and Resource Classification was provided by Mr. Slavko Solar, EC D.G. GROWTH. He noted that the European Commission within the triangle of the Raw Materials Initiative, as a policy, the European Innovation Partnership, as an implementation framework and the Horizon2020, as a financial tool, supports voluntary efforts for the harmonization and standardization of the classification and reporting of primary and secondary mineral raw materials reserves and resources.

111. Mr. Sigurd Heiberg, Petronavit a.s., provided an update on the UNFC-2009 for Nordic Countries Project that is currently being shaped.

112. Mr. Michael Haschke, DMT GmbH & Co. KG, briefly outlined a number of recent research and development projects on resource efficiency with examples of implementation of UNFC-2009 as distinctive work packages. These address some innovative new or optimized mining technologies and the extraction of critical technology elements, for example REE extraction of rare earth elements (REE) from phosphogypsum. In particular, they highlight the advantages and value-additions of including UNFC-2009 in resource efficiency R&D funded projects, with examples from EU and German Ministry of Education and Research funded projects.

113. It was proposed that countries undertaking bridging and mapping could consider cooperating.

114. The Expert Group requested that case studies on application of UNFC-2009 to all extractive activities, renewable energy and mine wastes be prepared and presented to the Expert Group at its eighth session.

XX. Education and outreach (agenda item 18)

Documentation: EGRC-7/2016/INF.5 – Unofficial room document: Education and Outreach and activities of the Communications Sub-Committee *dated 25 April 2016*

EGRC-7/2016/INF.6 – Unofficial room document: Report from CCOP on its UNFC-2009 Education and Outreach Activities 2015–2016 *dated 21 April 2016*

115. An update on the work and activities of the Communications Sub-Committee since the last Expert Group meeting was provided. The update covered the membership, communications and education strategy, current activities, events attended in 2015 and 2016, and future events and work plans.

116. The proposal to organize webinars on UNFC-2009 was discussed and potential topics were reviewed.

117. The membership of the Communications Sub-Committee is: Mr. John Brooks (AAPG (Co-Chair)), Ms. Carolina Coll (BG Group (Co-Chair)), Mr. Benoit Charpentier (Total), Ms. Tana Garcia Lastra (Corporación de Reservas Estratégicas de Productos Petrolíferos (CORES)), Mr. Sigurd Heiberg (Petronavit a.s.), Ms. YANG Hua (PetroChina), Mr. David MacDonald (Chair, Expert Group on Resource Classification), Mr. Daniel Trotman (EY) and the secretary of the Expert Group.

118. 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.

119. CCOP education and outreach activities related to UNFC-2009 in 2015–2016 (as contained in EGRC-7/2016/INF.6) were noted with appreciation.

120. The Chair provided feedback on the second UNFC-2009 ‘Train the Trainers Workshop’ held in Geneva on 28 April 2016. Interest was expressed in this event being repeated.

121. The Chair, on behalf of the Expert Group, expressed appreciation to the Communications Sub-Committee for its on-going work.

122. Events held in 2015 and 2016 to promote and/or test UNFC-2009 were discussed, including:

(a) China-Ukraine Workshop on Resource Classification: Status, Mapping and Application, Beijing, China, 3–5 June 2015;

(b) Second Scientific-Practical Conference “Subsoil Use in Ukraine. Prospects for Investment”, Truskavets, Ukraine, 5–8 October 2015;

(c) IAEA and ECE Regional Training Course on “UNFC-2009 for Evaluation of Uranium and Thorium Resources and to Leverage Transparent and Effective Communications”, Luxor, Egypt, 18–22 October 2015. The event was organized by the Nuclear Materials Authority of Egypt. Certificates confirming participation were issued to attendees;

(d) Norwegian Petroleum Directorate, ECE, Cuban Ministry of Energy and Mines and Cuban National Office for Mineral Resources National UNFC Workshop for Cuba, Havana, Cuba, 7–9 December 2015. This event was organized with the financial support of the Norwegian Oil for Development Programme.

123. Projects and planned events in 2016 to promote and/or test UNFC-2009 were then discussed, including the IAEA-ECE Interregional training course on uranium, coal and oil and gas classification: Towards a better understanding of energetic basins and application of UNFC-2009, Ulaanbaatar, Mongolia, August, 2016. The event will be hosted by the Geological Policy Division of the Ministry of Energy of Mongolia.

124. The Expert Group recommended that an educational and training session on UNFC-2009 be organized on the first day of the eighth session of the Expert Group.

XXI. Resourcing Strategy for the Expert Group on Resource Classification (agenda item 19)

Documentation: EGRC-7/2016/INF.3 – Unofficial room document: Draft project proposal for UNFC-2009 dated 13 April 2016

125. The Director of the Sustainable Energy Division provided an overview of the draft project proposal to secure extrabudgetary funding to support the work on UNFC-2009 going forwards, noting the challenges and opportunities. The development, promotion of and capacity-building on UNFC-2009 is dependent upon very significant voluntary contributions from experts globally (including man-hours, travel, expertise, and sponsorship of events) and this cannot continue in the longer term without additional administrative support from the ECE secretariat and travel support to the volunteers. The intent is, however not to replace the voluntary contributions but to supplement them with any extrabudgetary funds. It was emphasized that having a voluntary nature helps to ensure the needed degree of independence for the work.

126. The project proposal was developed by the Expert Group on Resource Classification Resourcing Strategy Sub-group. The members of the Sub-group are: Mr. Sigurd Heiberg (Petronavit a.s.), Mr. Julian Hilton (Aleff Group), Mr. Michael Lynch-Bell (KAZ Minerals), Mr. David MacDonald (BP and Expert Group Chair and Chair of the Sub-group), Mr. Slavko Solar (EC D.G. GROWTH), Mr. Harikrishnan Tulsidas (IAEA) and the Director of the Sustainable Energy Division.

127. The Expert Group endorsed the resourcing proposal (as contained in room document EGRC-7/2016/INF.3 dated 21 April 2016), requested that it be presented to potential donors, and further requested the Bureau to provide an update at the eighth session. The Expert Group was further requested to assist with identification of donors and to make introductions.

XXII. Financial reporting (agenda item 20)

128. Ms. Kathryn Campbell, Sullivan and Cromwell LLP, provided an update on Resource Payments Disclosure drawing attention to the SEC Natural Resource Payments to Governments Rule that was repropounded in December 2015. The new rule is similar to its 2012 rule but with certain changes to harmonize the United States disclosure rules with EU Directives, including the EU Accounting Directive and Transparency Directive; the Canadian Extraction Sector Transparency Measures Act (ESTMA); the Extractive Industry Transparency Initiative (EITI) and to address the decision of the district court following the legal challenge to the original rule. The speaker noted that momentum is growing for increased social impact transparency.

129. Mr. Daniel Trotman, EY, provided an overview of developments in financial reporting, as well as points of interest from the 2015 financial reporting cycle. He noted that there were limited substantive changes in financial reporting standards with a direct linkage to reserves and resources estimation and advised that the International Accounting Standards Board (IASB) project started in 2004 to explore development of a future International Financial Reporting Standard (IFRS) for accounting for extractive industries continues to be on hold. Principal areas discussed with respect to the 2015 reporting cycle related to reduced commodity prices and the resulting range of interrelated impacts on reporting – these including the reassessment and rephrasing of projects and capital expenditure, impairment and depreciation, depletion and amortisation calculations and the inherent linkage to reserves and resources estimation.

130. The Expert Group recommended the Bureau to continue to monitor developments related to global financial reporting standards and the required public disclosures and the legal and regulatory framework around resource reporting and to update the eighth session accordingly.

XXIII. System of Environmental-Economic Accounting and the International Recommendations for Energy Statistics (agenda item 21)

131. Ms. Alessandra Alfieri, Chief, Environmental-Economic Accounts Section, UN Statistics Division introduced the System of Environmental-Economic Accounting (SEEA) Central Framework which was adopted as an international statistical standard by the United Nations Statistical Commission in 2012. SEEA is the international statistical standard for measuring the relationship between the environment and the economy. The SEEA Energy is fully consistent with the SEEA Central Framework and provides further details on the energy accounts. It was noted that SEEA has adopted UNFC-2009 for the mineral and energy accounts. SEEA has defined a disclosure framework and has aggregated a number of UNFC-2009 classes, which is explicitly permitted in the system. Implementation of SEEA will hence promote the use of UNFC-2009 in countries. The speaker advised that countries have now started to compile mineral and energy resource accounts using SEEA-2012.

132. A representative of the OECD Statistics Directorate is coordinating the work of an international Task Force on the implementation of SEEA. Mineral and energy resource accounts are one of the priorities of OECD. The Bureau of the Expert Group has contributed to a briefing note prepared by the Task Force and provided clarification on the application of UNFC-2009, including on mapping, minimum E and F axis category requirements, residuals, monetary accounting and aggregation.

133. The Chief of the Energy Statistics Section, UNSD, introduced the International Recommendations for Energy Statistics (IRES) which were approved by the UN Statistical Commission in 2011. The energy statistics addressed in IRES cover the flows of energy products within an economy and includes production, transformation, different forms of use, trade etc. However, IRES does not include resources, i.e. “not yet produced” energy products. Since data items on reserves are not crucial for (core) energy statistics, IRES references the definitions provided in UNFC-2009 and SEEA. The SEEA reference was chosen, since that is the most likely application of such data and UNFC-2009 is referenced for the definitions

134. The Expert Group concluded that cooperation with the United Nations Committee of Experts on Environmental Economic Accounting (UNCEEAA), United Nations Statistics Division and the OECD Statistics Directorate should be strengthened in relation to their use of UNFC-2009 and the collection of data. The Bureau of the Expert Group was requested to continue to provide feedback on the mapping.

XXIV. The role of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 in implementing the Sustainable Development Goals and combatting climate change (agenda item 22)

135. An overview of the Sustainable Development Goals was provided.

136. The Expert Group reviewed and discussed the value of UNFC-2009 as a tool to facilitate implementation of all seventeen Sustainable Development Goals. With the broadening of the application of UNFC-2009 to encompass renewables, UNFC-2009 also has an important role to play in delivering on the climate goals agreed to at COP 21.

137. The Expert Group requested the Communications Sub-Committee to develop a leaflet and an area on the ECE website highlighting the role of UNFC-2009 in implementing the Sustainable Development Goals and mitigating climate change. The Expert Group further requested the Bureau to consider these issues in any potential update of UNFC-2009.

XXV. Cooperation with other organizations (agenda item 23)

138. Ms. Mercè Ferrés Hernandez, Technical Programme Manager of ISO/TC82, ISO Central Secretariat, presented an overview of the ISO/TC 82 Mining. This Technical Committee was created in 1955 and has developed 36 International Standards dealing with a range of mining issues, including: mining machinery, coalface machinery, mining ropes, drilling equipment, geological and petrographic symbols. Methods of calculation of mineral reserves is included in its scope of work. The Committee was dormant for a number of years and then reactivated in 2013.

139. An ongoing project is the development of a “Reporting template for the public reporting of exploration results, mineral resources and mineral reserves”. This was proposed by the American National Standards Institute (ANSI) and approved on 30 October 2015. The project aims to harmonize different existing reporting templates (e.g. Canada, Australia, USA, South Africa, Europe) in one ISO Standard. It will be based on the CRIRSCO Template. The work has been assigned to ISO/TC 82/WG 7, “Public reporting of Exploration Results, Mineral Resources and Mineral Reserves”. The participating countries are: Canada, Germany, Republic of Korea, South Africa, Spain, and United States.

140. The speaker outlined the ISO liaison mechanism for cooperation.

141. The Expert Group requested the Bureau to explore cooperating with ISO to ensure synergies and complementarity of efforts between ISO and the Expert Group so as to avoid overlap and duplication.

XXVI. Other business (agenda item 24)

142. Following discussion and careful review and in the light of the expanded scope of application of UNFC-2009, the Expert Group agreed that its eighth session needs to be held over four days, including an educational and training session on UNFC-2009, but with an option to reduce the total number of days commensurate with the required agenda items. The proposed dates for the eighth session are 25 to 28 April 2017.

143. The Expert Group requested to the Committee on Sustainable Energy that its annual sessions be supported by parliamentary documents and reports as needed in relation to the implementation of the 2016–2017 work plan. The Expert Group recommended to the

Committee on Sustainable Energy that the secretariat be invited to continue supporting its work by, inter alia, the following: organizing planned work plan activities, preparing formal documentation required for the development, approval, implementation and reporting of work plan activities, including the translation of official documents in the three official ECE languages (English, French, Russian) to service the Expert Group's meetings.

144. No other issues were raised.

XXVII. Adoption of conclusions and recommendations (agenda item 25)

Documentation: EGRC-7/2016/INF.1 – Unofficial room document: Draft Conclusions and Recommendations for the Expert Group on Resource Classification Sixth Session *dated 15 April 2016*

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

XXVIII. Adoption of the report and close of the meeting (agenda item 26)

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