

**DRAFT Agenda WFEO Energy Committee Meeting:
Thursday, December 11, 2014
9:00 to 13:00.
UNESCO, Bonvin Building, Paris, France**

Attendees:	Ademola Isaac	Reginald Vachon, USA
Sam Grossman, Chair	Olorunfemi, Nigeria	Jorge Spitlanik, Brazil
Michael Michaud, Secretary	Mustafa B. Shehu, Nigeria	Ibrahim Inuwa, Nigeria
Majeed, Al-Qassab, Bahrain	F.C.Chan, Hong Kong	Kim Allen, Canada
Musa Salmamza Mshello, Nigeria	Ruomei Li, China	Tomas A. Sancho, Spain
Ashok Kumar Basa, India	Daniel Favrat, Switzerland	Martin Manuhwa, Zimbabwe
Murau Reddy, India	Konstantinos Alexopoulos, Greece	Ben Rafemoyo, Zimbabwe
	Eng. Julius M. Riungu, Kenya	Carsten Aherns, Germany
		Farai Mauhiya, Zimbabwe

1. The Committee reviewed the 2014 Activity Report, the Mission and Membership.
 - a. The Committee on Energy's mission is "to become the engineering reference for assessing the feasibility of current and cutting edge energy technologies for sustainable development" and "to provide the engineer with updated, unbiased and reliable information on the feasibility of the different energy technologies based on scientific principles, engineering criteria and demonstrated technological development"

The Committee operates through Task groups, holds conferences, produces reports and assists UN and other agencies by providing unbiased technical information.

- b. The committee reviewed the Roster of WFEO Energy Committee Members, noting that the committee totals 75 members from over 25 Countries and works through its 7 Task Groups
 - i. Wind Power (11)
 - ii. Solar Energy (15)
 - iii. Nuclear Energy (7)
 - iv. Sustainable Energy (6)
 - v. Bio Energy (10)
 - vi. Urban Waste (1)
 - vii. Hydrogen (1)

While overall membership is strong, some task groups remain small and are not active.

2. Update on the WFEO website.

It was also noted that the website 1) does not reflect the current roster 2) names and affiliations need to be corrected 3) individual contact information is not on the Website.

Action: Secretary to coordinate with WFEO Staff to update the roster and member listing on WFEO.net; explore possibility of making contact information available

3. Review of Energy Committee Activities since Singapore:

a. Nuclear Energy Feasibility Report

FC Chan provided an overview of the changes that were made to the Nuclear Energy Feasibility report which mainly consisted of updating tables and insertion of data from the Fukushima Daichi incident. When available, data from April 2014 was used. The Committee discussed including the cost per megawatt hour based on recent information released in the UK which included estimates for disposal. The Committee agreed that this information be included in an annex.

- i. Action: D. Favrat to provide the UK's mMW/Hour cost estimates for the annex*
- ii. Action: All Members to review the Nuclear Energy Report and provide feedback by (February 20, 2015)*

b. Solar Energy Feasibility Report

Carsten Ahrens provided an overview of the Solar Energy Feasibility Report, noting that the report still needs some additional information, particularly in Section 5 (others?) capital and maintenance costs, etc., and needs comments and figures from other economies. The committee discusses the need to have factual information and the need for frequent and regular updates; and the need to look at the mineral composition to establish a sustainability footprint for PV; but also the need to complete the report in a timely manner. Expects to have the complete report by Easter

- i. Action: All Members to review the Solar Energy Report and provide feedback by March 31.*

The Committee debated the merits of hard vs electronic copies of the report, deciding on the electronic versions. The Chair stressed the need to come to a timely conclusion on these Reports and urges all committee members to provide feedback within a month. Once the final reports are recirculated for approval a short approval period will also be used and silence will be considered consent/approval.

It was noted that the Sustainable Energy Report is next in line to be updated and a wider committee participation will be needed.

4. Review of comments from the STC Review Committee

a. Suggestions for continued improvement of the Energy committee include:

- i. Improved Communications and member roster management,
- ii. Better transparency of decisions and projects
- iii. Improving minutes and project descriptions on the website;

- iv. Metrics indicating use of the products of the Energy Committee
- v. Succession Planning – Renewal of the Chair and selection of a Deputy Chair

The chair also noted that the Committee Chair and Secretary also rated ourselves and recognize that there are needs for improvement, the most urgent will be updating information on the WFEO Web site.

The Chair noted that his term was renewed for another four years and that a Deputy Chair would be selected at the next Committee meeting. Ideally the Deputy Chair would be in a position to host the Energy Committee in 2019 following the US's term.

5. The next Energy Conference

- a. The Committee entertained a proposal to host the 3rd Sustainable Energy for Developing Countries Conference from Eng. Al Gassab (Bahrain). The proposal is to align the conference with the 2nd Energy Management Conference being planned for 11-13 October 2015 in Manama, Bahrain. Eng. Gassab is offering financial support for keynote speakers who are proposed by the Energy Committee, technical forums or similar special sessions; and is requesting the WFEO Energy Committee provide technical assistance, speaker identification and the use of the logo.

The Committee approved alignment of the 3rd Sustainable Energy for Developing Countries Conference with the 2nd Energy Management Conference and form a taskforce to work with Eng. Gassab to:

- i. Align titles and themes of the two conferences
- ii. Review the Technical Program
- iii. Identify Speakers
- iv. Identify additional WFEO programming opportunities (YEFL, WIE)

Taskforce Members include: Chair Grossman, the Regional Vice Chairs and individual members: Martin Manuhwa, Zimbabwe and Carsten Ahrens, Germany.

ACTION: S. Grossman to chair the taskforce to align these conferences, develop the program and identify speakers.

- b. The Committee also reviewed the World Engineering Conference & Convention November 29-December 2, 2015 in Kyoto, Japan

Specific support from the Energy Committee is requested for Track 2: Energy for Sustainable Society.

- 2.1 Wider applications for fossil resources: conventional and non-conventional
- 2.2 Power Generation Technology
- 2.3 Renewable Energy Sources and Energy Storage Technologies
- 2.4 Energy Saving and Efficient Energy Use
- 2.6 Energy Management
- 2.6 Smart Grid, Smart Community

The Full Program is available on: <http://www.wfeo.net/events/wecc-2015-world-engineering-conference-and-convention/>

- March 10, 2015 Abstract Submission Deadline
- June 1, 2015 Full Paper Submission (max 5,000 words)

ACTION: All Committee members promote the conference and consider submitting papers in their area of expertise.

6. Continued Support of UN/UNESCO programs
7. Dr. Osman Benchikh, Chief of Section, Innovation and Capacity Building in Science and Engineering. Updated the Committee on activities within UNESCO which Coordinator of RENFORUS project.

These programs include:

- a. UNESCO Summer Technical Schools
 - i. An annual, 10-day program to provide education on the Technical, Economic and social dimensions of renewable energy issues. The program will be held in French in Cameroun for Africa and in Kuala Lumpur, Malaysia for South East Asia, and Almaty, Kazakhstan for Central Asia. UNESCO is looking for support for technical information and local instructors.
- b. UNESCO Solar School Project
 - i. One of the major problems in Africa – concept is to provide 75 schools in 5 countries (Benin, Togo, Niger, Mauritania and Madagascar) with solar power to electrify rural schools, provide internet connectivity and computers, etc... UNESCO is requesting that the WFE0 Energy committee and national Members support the program with training, materials and assistance to extend the scope sustainability and impact of the program.
- c. World Library of Science
 - i. The Website (insert here) was just launched. The site was funded by Roche, and the content by provided Nature. While the library currently contains life science related information, future pro First part concerns the life sciences – seeking to expand the scope to engineering and energy subjects

The Committee discussed plans for activities in the next few years and decided to support the following:

- Support Bahrain Conference
 - Taskforce to Align titles and themes of the two conferences, Review the Technical Program and Identify Speakers
- Support the WECC Kyoto Conference
 - Promote the Conference and identify speakers
- Update Sustainable Energy Feasibility Study
 - Taskforce to outline the plan to update the report
- WEC Cooperation
 - Identify 3 individuals who have membership in both organizations to help identify collaborative opportunities

- Consider a project to define key indicators for energy systems

- Support the UNESCO Summer School Project
 - Share project information with Committee and National Members, coordinate participation
- Support the UNESCO Solar School Project
 - Share project information with Committee and National Members, coordinate participation

Other Business:

Daniel Favre noted his recent participation in a Film Festival dedicated to films on Energy. He will present more information and an opportunities for WFEO collaboration at the next meeting.

Next Meeting:

The Next WFEO Committee Meeting will be:

Saturday, November 28, 2015 (afternoon), Kyoto, Japan

<http://www.wfeo.net/events/wecc-2015-world-engineering-conference-and-convention/>