



Department of Energy

Washington, DC 20585

October 16, 2008

Dear Colleague,

I want to report to you on the continuing activities involving the strategic planning process that I introduced in my letter of September 19, 2008 (Attachment 1). Because many of you may not have received that original letter laying out the process, I have attached it (Attachment 1) to this message and I recommend that you read it before proceeding to read further.

In the time since the September 19th letter was prepared, the Office of Fusion Energy Sciences (OFES) has been working on the appointment of members to the Magnetic Fusion Energy Sciences (MFES) Research Needs Workshop (ReNeW) Executive Committee (ExCom). I am happy to announce that we have completed that process, and the members of the ExCom and their specific assignments are shown in Attachment 2.

Professor Richard Hazeltine from the University of Texas, Institute for Fusion Studies, has accepted the appointment to be the Program Chair for the workshop, and Dr. David Hill, from Lawrence Livermore National Laboratory, who is working as a member of the DIII-D team at General Atomics in San Diego, has accepted the position of Vice-Chair. In addition, Dr. Hutch Neilson, from the Princeton Plasma Physics Laboratory, who has been assigned to work part time at OFES, will work closely with the Program Chair and Vice-Chair to help them accomplish all of the workshop objectives. Richard and David will lead the ExCom which will also include the Chair and Vice-Chair of each of the five workshop themes. The ExCom will also include five OFES staff members each of whom will be responsible for representing one of the five themes within OFES. We thank all of these individuals for their willingness to serve in these important and difficult positions.

I want to thank all of you who suggested individuals that you believed would be excellent candidates for each of these positions. We received many such suggestions and it was a difficult task to narrow the list down to the 12 individuals from the fusion community shown in Attachment 2. I certainly hope that we can count on all of you who were not selected to be members of the ExCom, and every member of the community to play an active part in the discussions and hard work necessary to prepare for the workshop and the workshop as well.

Now that the ExCom has been named, our next step is to work with this Committee to begin the detailed planning for the workshop. This planning will include:

- agreeing upon exactly what information we want to get from the workshop,
- agreeing how should we go about getting this information,
- agreeing on the structure of the workshop starting with the structure in the Fusion Energy Sciences Advisory Committee (FESAC) Report on "*Priorities, Gaps and Opportunities: Towards a Long-Range Strategic Plan for Magnetic Fusion Energy.*" The issues described in the report will translate into panels under each theme,

- deciding whether there needs to be sub-panels for some of the issues, and
- selecting the panel leaders and, if needed, sub-panel leaders.

I would like to address several of the concerns that we have heard being expressed during the last several weeks about the ReNeW and how we plan to conduct this large effort. First, it is our intention that this effort will be built upon the excellent work that has been done by the above-mentioned FESAC panel that has come to be known as the “Greenwald Panel” and the fine report that this group has produced. We have no interest and see no reason to repeat any portion of that effort. We expect that this thought will also apply to the work and report that will be produced by the FESAC “Toroidal Alternates Panel” or TAP. The TAP is currently working the charge that was given to FESAC on February 20, 2008. The panel is expected to report to FESAC at its November 6-7, 2008 meeting in Gaithersburg, Maryland. Finally, we also expect that the burning plasma state theme will be guided by the report prepared by the U.S. Burning Plasma Organization in response to the Energy Policy Act of 2005. This report entitled “Planning for U.S. Fusion Community Participation in the ITER Program,” June 7, 2006 can be found on the U.S. BPO website at

http://burningplasma.org/ref/fp/BPO_EPAAct_task_June06.pdf

As we began to organize the ReNeW effort, we here at OFES recognized that the structure that we were proposing for the workshop held within it the danger for “stovepiping”, that is that all of the individuals that were working on a particular aspect of fusion research would be forced to join the theme and panel that was most directly related to their work. For example, if you were working on stellarator research, you would be invited to join the “*Optimizing the Magnetic Configuration*” and the Stellarator panel under it. I want to assure you that we do not believe that such an organizational concept would best serve the needs of the fusion program or the output of this workshop. We are proposing two steps to assure that this “stovepiping” does not occur.

First, we will make clear to the members of the ExCom, that we expect that each panel will be organized to include a diverse membership so that every topic that might impact upon the work being considered by that panel will be represented to the extent possible. To follow on with the earlier example, we expect that this would mean that certainly stellarator researchers will be part of the Stellarator panel. In addition, we would expect that individuals with expertise in stellarator research would also be involved in the “High Performance Plasmas” theme and possibly the “Burning Plasma” theme because stellarator research could contribute in both of those areas.

The second approach to assure that we escape the dangers of “stovepiping” is that there will be a requirement for constant cross talk between the five themes during the lead-in to the workshop and even during the workshop. Also, every theme contributes to and gets contributions from the work of all of the other themes. Regularly scheduled inter-theme teleconferences and possibly even face-to-face meetings during the next 7 months will be a part of the operating mode as we prepare for the workshop.

The next step is to have the new ExCom start working together to finalize the structure of the workshop. The current version of the structure, shown in Attachment 3, is based in part on the work done by the Greenwald Panel. While we do not want to redo the work of that panel, we do want to give the Chairs and Vice-Chairs of each theme the opportunity to “fine-tune” the way in which they set about getting their work done. They will consider revisions in the panel structure and whether some panels will need to have sub-panels to assure that every issue is properly covered.

Once the ExCom agrees upon the details of the workshop structure, they will have to select the panel and sub-panel leaders. Then the panel and sub-panel leaders working with their Theme Chair and Vice-Chair will select members to fill their panels and sub-panels. I hope that if you are interested in being a member of one of the panels, you will contact the Chair and Vice-Chair of the theme to which that panel reports and let them know of your interest. However, I have a word of caution for you. These panels will be “working groups” with the emphasis on “working.” Most of their activities will need to be completed before the June 7-13, 2009, ReNeW. Because we will have a limitation on the number of people who can be invited to attend the workshop, each panel will have to limit the number of members it can have. Therefore, if you volunteer to be a member of one of the panels, please be prepared to make the commitment necessary to do the work that needs doing to meet the needs of your panel. We will have room only for “workers” not for “observers.” If you have any questions or concerns about the priorities of your OFES sponsored work activities, please speak to your supervisor or the OFES program manager who is responsible for your program.

As I told you in my previous letter, we have loosely modeled the ReNeW after the Office of Basic Energy Sciences (BES) research needs workshop series. To help people better understand what the BES workshops were all about, I want to direct your attention to the following web page:

http://www.sc.doe.gov/bes/reports/files/BRN_workshops.pdf

At this address you can find a report prepared by BES that explains how they go about planning and organizing their Research Needs Workshops. This is a great resource from which you can learn some of the basic ideas that we are using to organize our workshop, although I want to emphasize that there is not a one-to-one correspondence between what BES does and what we are trying to do.

As I told you in that September 19th letter, we are actually working on two complementary efforts, preparing a Strategic Overview Plan to send to Congress by March 1, 2009 and the Long-Range Strategic Plan that will be prepared using the results of the ReNeW. We are working with Richard Hazeltine and the U.S. Burning Plasma Organization to develop a new web site that will be used to provide you with general information, frequent updates, and many other things of interest on both of these planning activities. As soon as that web site is operating we will let you know how to access it.

I thank you for your continuing support and interest in the Fusion Energy Sciences program and our strategic planning efforts! Please feel free to pass this message and its attachments to anyone in the fusion community that may not have directly received it. We want as many people as possible to understand what we are doing!

Sincerely,

A handwritten signature in black ink, reading "Gene Nardella". The signature is written in a cursive style with a large, prominent initial "G".

Gene Nardella
Acting Associate Director of Science
for Fusion Energy Sciences
Office of Science