

**Minutes of the November 2015 ANS Fusion Energy Division
Executive Committee Meeting**

November 8, 2015, 3:00 to 5:00 pm EST (Eastern Standard Time)
Marriott Wardman Park, Park Tower 8219, Washington, DC

DETAILED MEETING MINUTES: (see Attachment 1 for Agenda)

In attendance:

Arnie Lumsdaine (ORNL) – Vice Chair and Acting Chair
Blair Bromley (CNL) – Executive committee member
Nermin Uckan (ORNL) – Editor Fusion Science and Technology Journal/Awards Chair
Robert Addis (SRNL) – Tritium 2016 Chair
Keith Rule (PPPL) – TOFE 2016 Chair and FED Executive Committee member
Andy Klein (OR St.) – ANS President-Elect and ANS Board Liaison
Gene Nardella (DOE-FES)
George Miley (U. IL) – ANS Fellow and former FED ExCo member
Leigh Winfrey (U. FL)
Gregg Morgan (SRNL)
Greg Staack (SRNL)
Keeton Ross (UC Berkeley)
Anthony Ferrar (U. FL)
Joseph Labrum (UC Berkeley)
Madison Martin (U. FL)
Matthew Jasica (UW) – 2016 ANS Student Conference General co-chair
Kalin Kiesling (UW) – 2016 ANS Student Conference General co-chair
A.J. Gross (UW) – 2016 ANS Student Conference General co-chair

Phone:

Paul Humrickhouse (INL) – Secretary/Treasurer
Kelsey Tresemer (PPPL) – Executive committee member
Neill Taylor (CCFE) – Executive committee member

Item #1: Call to order (Lumsdaine)

Acting Chair Arnie Lumsdaine called the meeting to order, welcomed all attending live and by phone, and led a series of introductions of those attending in person and by phone. Executive committee members Ahmad Ibrahim (ORNL) and Kevin Kramer (Terrapower) and Chair Susana Reyes (LLNL) were unable to attend, but Arnie held their proxy votes for this meeting.

Item #2 – Discussion of November Meeting Minutes (Humrickhouse)

The previous FED executive committee meeting was held on June 7, 2015 in San Antonio, TX. The minutes of this meeting were approved by the committee via email vote and transmitted to Toni Bishop at ANS headquarters on July 6, 2015. The minutes may be retrieved from the division website at (<http://fed.ans.org/meeting-minutes>). There was no further discussion of the minutes at this time.

Item #3 – Treasurer’s Report (Humrickhouse)

Current Status of 2015 budget

As of June 30, 2015 (the end of the second quarter), our division had a balance of \$61,283. Our only income for this calendar year has been \$864 in member dues, half of what we are to receive for the year. Our primary expenses for the year have been student support in the form of a contribution to the ANS student conference at Texas A&M (\$500) and student travel to national meetings (\$300); our \$500 annual contribution to the ANS NEED program will be paid later this year. Our projected year-end balance is \$60,395.

The 2016 budget was recently approved by the committee via an email vote and submitted to ANS. We anticipate similar revenues from member dues. We have budgeted \$1700 for awards (the Technical Accomplishment award, Outstanding Achievement award, and Best Student Paper award) and plaques for the 2016 TOFE; \$600 for national meeting costs (i.e. conference call telephones); \$3800 in student support including \$3000 for student travel to the TOFE, \$500 for the ANS student conference at the University of Wisconsin, and \$300 for travel to national meetings; \$500 to support the ANS NEED program; and \$500 for miscellaneous expenses. While we have two Class I sponsored meetings in 2016 (TRITIUM and TOFE), the books are not expected to close on either meeting within the year, so any income from these meetings will not be realized until 2017. Because the expenses related to TOFE are still incurred in 2016, our projected year-end balance will be lower, at \$55,023.

Arnie raised the possibility of increasing the amount of the ANS student conference support since the next such conference is at the University of Wisconsin, where a stronger fusion presence is expected. This was to be taken up later in the meeting.

Item #4 – Student Scholarship Sub-committee (Winfrey)

Leigh Winfrey distributed a draft of the ANS-required form for initiation of a scholarship, and the committee discussed a variety of modifications to the name and requirements for the scholarship. The official name of the scholarship is the “Dr. Kenneth R. Schultz Fusion Energy Scholarship.” Dr. Schultz was selected by the executive committee in a previous vote as the namesake of the scholarship and has agreed to lend his name to it. There was considerable discussion on the exact wording of the title, as the committee desired that it make clear that the intended recipients are students working on engineering and technological aspects of fusion, not pure science or plasma physics, as those fields are already well supported by another society (APS). It was ultimately decided to keep the title general and reflect that desire in the language of the document itself.

As agreed at a previous meeting, it will be an undergraduate scholarship, without restrictions on the year of the recipient in their studies. The committee decided that applicants will be required to be members of the ANS-FED, have a STEM major, and demonstrate some interest and involvement in fusion-related study, e.g. by enrollment in a course or participation in a research group; this will be verified by the student’s transcripts and recommendation letters submitted with their application. The amount of the

scholarship will be \$2500 based on our presently available funds, and it is intended that this be raised to \$3000 when sufficient funds (20 times the scholarship amount) are available. The committee voted to approve the draft as modified in this meeting and it will be reviewed at the ANS scholarship committee meeting later in the week.

Item #6 – Student-related Items

Since our student representatives were present, we skipped to item #6 at this time.

6.1 – Update on 2016 Student Conference (UW-Madison)

Matthew Jasica, Kalin Kiesling, and AJ Gross from the University of Wisconsin were present to report on planning of the 2016 student conference and ask for our support. The theme of the conference is “Being a critical member of the nuclear industry”, and in a play on the four-factor formula, emphasizes: (η) nuclear opportunities, (f) forming our public image, (p) professional development, and (ϵ) entrepreneurship. They noted that UW is engaged in many fusion-related research activities and they plan to emphasize this at the student conference. A panel discussion on fusion energy and plasma technology is planned; the committee was asked to participate in the panel or help identify panelists. They are also in need of reviewers for papers, and judges to attend the conference and judge the presentations themselves. Keith Rule offered to share some contact information of potential reviewers collected for the upcoming TOFE.

Leigh Winfrey noted that there was considerable interest in the fusion panel at the Penn State student conference; several committee members are considering participation. Leigh further noted that she regularly attends the student conference and finds it great way to meet and recruit students, and generate interest in fusion.

Another feature of the conference is an “innovation competition”, modeled after innovation days at UW-Madison; students will have an opportunity to submit an innovative idea prior to the conference, and an award will be given based on judging by a committee of professionals and entrepreneurs.

Item #5 – Conferences

5.1/2 – Report on ICENES 2015 and IFSA 2015 (Lumsdaine)

ANS-FED was a class IV sponsor both the 2015 ICENES meeting (held in October 2015 in Istanbul, Turkey, after a date and location change) and the 2015 IFSA meeting (held in September 2015 in Seattle). None of the committee members present attended these meetings so no further information was available on them. Neither publishes a proceedings in Fusion Science and Technology.

5.3 – Update on 22nd TOFE (Rule)

Final approval for publications (abstracts and papers) was received from ANS prior to this meeting. A call for papers had been recently posted to the ANS website; Keith noted (and

Nermin confirmed) that this was better referred to as a call for *abstracts*, since only abstract submission is handled by ANS (*paper* submission is through the Fusion Science and Technology journal). Keith is going to correct this. Accepted abstracts may present at the conference; subsequent paper submission to FS&T is optional and a separate process. The deadline for full paper submission will be on or around the start date of the conference, which will be held in Philadelphia on August 22-25 2016. The final budget and program approvals will be sought at the quarterly ANS meeting in February.

A question was asked about typical attendance at the TOFE. Keith noted it is usually around 200, but also that international participation in TOFE is growing and that we were hoping for a strong international contingent this time as well.

Blair Bromley asked a question about organizational co-sponsors. Keith is planning to contact potential organizations (e.g. IEEE-NPSS, the Atomic Energy Association of Japan, etc.) in the near future. Blair suggested APS and ASME as additional possibilities.

Keith further noted that they are particularly interested in attracting a strong student presence at the meeting and that Kelsey Tresemer is assisting in this effort. Arnie noted that student registration at the 2012 TOFE was inexpensive (\$100) and was refunded if requested. A program similar to the student helper program at the main ANS meetings may also be pursued.

A workshop on the neutronics code Attila is to be held on Sunday, the day before the conference begins.

5.4 – Update on TRITIUM 2016 (Addis)

Rob Addis gave an update on status of TRITIUM-2016 (11th International Conference on Tritium Science and Technology), to be hosted by Savannah River National Laboratory (SRNL) in Charleston and held on April 17–22, 2016. Final approval of the budget by ANS is anticipated on Wednesday of this week. Abstract submission for the meeting is presently open and has been extended to November 15. Completion of abstract reviews and construction of the program is anticipated by the end of the calendar year. 163 abstracts have been submitted so far; it is hoped that 200 will be ultimately received. The hotel contract is already in place, and the room rate (\$169) is considerably below the government rate (\$209).

Rob gave a preliminary schedule for the conference. It will be preceded by a reception on Sunday, open with a plenary session on Monday morning, and continue with parallel sessions through Wednesday morning. On Wednesday afternoon there will be a tour of the Savannah River site. Savannah River Nuclear Solutions has contributed \$20,000 to cover the tour and the banquet Thursday night. The meeting will conclude with a plenary on Friday morning.

Attendees will receive a program/abstract book at the conference, and submitted full-length papers will be published in Fusion Science and Technology. Funding for the publication is being pursued from DOE-FES. A number of (non-monetary) co-sponsors of the meeting

have been recruited, including The Atomic Energy Society of Japan, The European Nuclear Society, the Canadian Nuclear Society, and the Institute for Nuclear Materials Management (INMM). Members of these societies can register at the ANS member rate.

Rob summarized some history of this conference series. It began as an ANS-sponsored meeting, but rotates between North American, European, and Asian countries, and is held only every third year. The ANS class I sponsorship was lost when the meeting was held out of the country or by a university, but has been re-established for this meeting. Therefore, any net income will benefit ANS and the FED.

The registration fee is still being determined, but there will be a considerably lower student rate (\$100). A question was asked about the difference between ANS member and non-member registration rates; this is presently fixed at \$150, but this is being debated by the ANS national program committee.

5.5 – Update on other Co-sponsored Sessions (Lumsdaine)

Arnie noted that there is a dedicated Fusion Energy session at this ANS meeting, and that it is the largest such session he has been involved with (there are seven talks). We are co-sponsoring two other sessions, one on Physics and Fusion and Subcritical Systems (6 talks), and another on Radiation Protection and Shielding of Fusion and Fission Power Systems (4 talks). The poster session also includes some fusion-related posters.

Arnie noted that the 2018 summer ANS meeting is in Philadelphia; this is a year in which the TOFE will be embedded. Since the 2016 TOFE will be held in that city, the winter meeting is a more likely host for the embedded TOFE. Organizers are needed for this meeting. Leigh Winfrey and Rob Addis expressed interest in participation.

Item #7 – Report on Ex-Comm Candidates (Lumsdaine on behalf of Yoda)

Minami Yoda (nominating committee chair) distributed a list of candidates for the executive committee and officers prior to the meeting. They are:

Chair – Arnie Lumsdaine (ORNL)

Vice Chair – Keith Rule (PPPL)

Secretary/Treasurer – Kelsey Tresemer (PPPL)

ExCo Members – Nicole Allen (PPPL), Leigh Winfrey (UFL), and Lauren Garrison (ORNL)

The slate of candidates will be voted on later this fall.

Item #8 – Update on Tactical and Succession Plans (Lumsdaine)

In the interest of time we discussed the Tactical and Succession plan and Strategic Plan only briefly. Arnie noted that both are available for review if desired, and distributed copies to those in attendance. Our top priorities presently are ensuring the success of our conferences, and releasing a policy statement. An update to the policy statement has long been in the works, and approval by ANS HQ is hoped for this week.

Current and future plans for offices and committee chairs are outlined in the Tactical and Succession plan. The nominating committee chair is held by the Past Chair; Nermin Uckan has long held (and will continue to hold) the honors and awards committee chair. The Vice Chair also serves the role of Program Chair (e.g. for ANS national meetings) and ANS national program committee member. Ahmad Ibrahim holds the position of Membership Committee Chair. Laila El-Guebaly is the current newsletter editor, but we anticipate needing a new member in this role in the not-too-distant future. Webmaster Mark Tillack is retiring, and ExCo Member Kelsey Tresemer will take over this role. A replacement will also be sought for the position of ANS board Liaison since Andy Klein has ascended to the position of ANS President. Also due to the impending retirement of Mark Tillack, a new IEEE Liaison is needed.

Blair noted that Liaisons to other ANS divisions may also be fruitful.

Item #9 – FED Publications

9.1 Newsletter (El-Guebaly)

Laila El-Guebaly is preparing the December newsletter and has received most of the articles to be included in it. The newsletters appear online at (<http://fti.neep.wisc.edu/fednews>).

9.2 *Fusion Science and Technology* journal (Uckan)

Nermin gave an update on the Fusion Science and Technology (FS&T) journal and upcoming conference proceedings and journal special issues. The FST full journal report and statistics are given in attachment 3.

Item #10 – Honors & Awards Committee update (Uckan)

ANS-FED bestows two awards at each TOFE meeting: one for Technical Accomplishment (a specific accomplishment) and another for Outstanding Achievement (a lifetime achievement award). Nermin has submitted a call for nominations to Laila for inclusion in the December Newsletter. Nermin noted that that laid-back nature of our community can result in few nominations for these awards, and that this is something we need to improve on; there are many deserving potential recipients and many noteworthy accomplishments in the community. We have a similar issue in that there are few ANS fellows in FED; the committee was encouraged to help identify worthy candidates and help in preparing nomination packages.

Item #11 – Compliance with other ANS Division Metrics

11.1 – Update on Public Policy Statement (Lumsdaine)

Arnie distributed the latest revision of the Public Policy Statement, which is to be voted on later in the week by the Public Policy Committee. This has been in the works for a long time; the Public Policy Committee had wanted to tie this to the release of the FESAC panel

report, but elected not to as this had proved controversial within the community. It will now be tied to the series of workshops recently held. Neil asked if there had been significant changes since the last version; Arnie noted that there had only been minor changes, including the removal of a fifth point and fixing a typo. The statement has been made more generic, and not tied specifically to ITER.

11.2 – Liaison – Standards Board (Lumsdaine)

Arnie received a request from ANS to appoint a liaison from the FED to the ANS standards board. The duties of the liaison are to participate in consensus committees (1-2 meetings per year, by telephone). There are eight consensus committees:

Environmental and Siting Consensus Committee (ESCC)
Fuel, Waste and Decommissioning Consensus Committee (FWDCC)
ANS/ASME Joint Committee on Nuclear Risk Management (JCNRM)
Large Light Water Reactor Consensus Committee (LLWRCC)
Nuclear Criticality Safety Consensus Committee (NCSCC)
Nonreactor Nuclear Facilities Consensus Committee (NRNFCC)
Research and Advanced Reactors Consensus Committee (RARCC)
Safety and Radiological Analyses Consensus Committee (SRACC)

Arnie noted that we are moving into an era in which licensing issues are important to fusion, and that a voice in this process is probably warranted. Rob Addis concurred that fusion involvement in the licensing process is important. Blair noted that tritium issues are especially important in this process. Arnie asked for volunteers for the position. Leigh expressed interest and agreed to fill this position.

11.3 – Involvement of New Members (Tresemer)

Kelsey has been trying to identify new members and “put them to work” to keep them involved in the division. A primary avenue for doing this is meetings, e.g. the TOFE. We have some interaction with the Young Members Group, in which Ahmed Ibrahim is also involved. Keith and Kelsey will discuss involving the YMG in TOFE at the next TOFE committee meeting. Nermin asked if Kelsey has access to a list of new members; she does not. Arnie noted that Susana has been sending a welcome email to new members, but no “list” is known of. Nermin recalled a previous committee discussion about adding new members to the referee pool for conference papers, another way to get them involved, help their development, and get to know them.

Arnie agreed to talk to Susana and Toni about obtaining a new member list. Keith noted that there may be some privacy issues here; there was difficulty, for example, in obtaining a list of ANS members working at PPPL.

Arnie will try to attend the YMG meeting and workshop at this week’s meeting.

Item #12 – New Business

12.1 – New FED website (Tresemer)

Kelsey Tresemer has taken over for Mark Tillack as the FED webmaster, and we have recently unveiled a new website; ANS had sought a common look and feel for all the division websites. Kelsey noted that the transfer from the old website went very smoothly. Juliusz Kruszelnicki (a U. Florida student) has been enlisted to help with updating, maintaining, and adding to the website. The possibility of having a student blog on the site was discussed.

12.2 – Others (all)

Arnie noted the existence of the “ANS Collaborate” online tool for members of ANS leadership to communicate and document activities. It is presently being beta tested, which Arnie is to participate in.

Arnie and the committee thanked Gene Nardella for taking the time to attend the committee meeting. Arnie noted that APS has a strong voice within DOE-FES, and expressed an interest in the technology community interacting more frequently with the agency.

Blair noted that Toni Bishop will be retiring at the end of the year. She is under consideration for a service award from the Education, Training, and Workforce Development Division, and Blair suggested that our (and other) divisions might participate in this award as well. Blair is to put Arnie in contact with the ETWDD to orchestrate this.

Blair noted that the second Canadian Workshop on Fusion Energy Science and Technology (CWFEST-2015) was held on October 18, 2015, in Ottawa, Canada. There were about 35 attendees. The workshop went well and will likely be held again in two years. Sandra Brereton (from LLNL/NIF) gave a fine presentation, and a tour of the Chalk River facility was given. Arnie asked if the FED was a sponsor; we were not, but a class IV sponsorship of the next CWFEST may be pursued.

Item #13 – Close meeting (Lumsdaine)

The meeting was adjourned shortly after 5pm EST.

Attachment 1

Fusion Energy Division Executive Committee Meeting Agenda

November 8th, 2015, 3:00 to 5:00 pm EST (Eastern Standard Time)
Marriott Wardman Park, Washington, DC, Park Tower 8219

1. Call to Order (Lumsdaine)
 - 1.1 Welcome and Roll Call
2. Discussion of Summer Meeting Minutes (Humrickhouse)
3. Treasurer's Report (Humrickhouse)
4. Student Scholarship Sub-committee (Winfrey)
5. Conferences
 - 5.1 Update on ICENES 2015 (Lumsdaine)
 - 5.2 Update on IFSA 2015 (Lumsdaine)
 - 5.3 Update on 22nd TOFE (Rule)
 - 5.4 Update on TRITIUM 2016 (Addis)
 - 5.5 Update on other Co-sponsored Sessions (Lumsdaine)
6. Student-related Items
 - 6.1 Update on 2016 Student Conference (UW-Madison)
7. Report on Ex-Comm Candidates (Yoda)
8. Update on Tactical and Succession Plans (Lumsdaine)
9. FED Publications
 - 9.1 Newsletter (El-Guebaly)
 - 9.2 *Fusion Science and Technology* Journal (Uckan)
10. Honors & Awards Committee Update (Uckan)
11. Compliance with ANS Division Metrics
 - 11.1 Update on Public Policy Statement (Lumsdaine)
 - 11.2 Liaison – Standards Board (Lumsdaine)
 - 11.3 Involvement of New Members (Tressemer)
12. New Business
 - 12.1 New FED website (Tressemer)
 - 12.2 Others (all)
13. Close meeting (Lumsdaine)

Attachment 2

List of Officers and Executive Committee Members

FED Officers:

Susana Reyes (LLNL)	Chair (14-16)
Arnold Lumsdaine (ORNL)	Vice Chair/Chair-elect (14-16)
Paul Humrickhouse (INL)	Secretary/Treasurer (14-16)

Executive Committee:

Kelsey Tresemer (PPPL)	(13-16)
Jean Paul Allain (UIUC)	(13-16)
Kevin Kramer (Terrapower)	(13-16)
Blair Bromley (CNL)	(14-17)
Craig Taylor (LANL)	(14-17)
Neill Taylor (CCFE)	(14-17)
Keith Rule (PPPL)	(15-18)
Ahmad Ibrahim (ORNL)	(15-18)
Takeo Muroga (NIFS)	(15-18)

Past Chair:

Minami Yoda (GIT)	(14-16)
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FED Standing Committee Chairs:

Nominating: Minami Yoda (GIT) - Chair
Honors and Awards: Nermin Uckan (ORNL) - Chair
Program Committee: Arnold Lumsdaine (ORNL) - Chair

FED Representatives on National Committees:

ANS Publications: Nermin Uckan (ORNL)
ANS Public Policy: Susana Reyes (LLNL)
ANS Program Committee: Susana Reyes (LLNL)

Editors:

Newsletter: Laila El-Guebaly (UW)
Fusion Science and Technology Journal: Nermin Uckan (ORNL)

Liaisons to other organizations and ANS divisions:

ANS Board: Andrew Klein (OSU)
MS&T: Lance Snead
IEEE: Mark Tillack (UCSD)
RPS: Paul Wilson (UW)
YMG: Ahmad Ibrahim (ORNL)

Webmasters:

FED Website: Kelsey Tresemer (PPPL)
UW Website: Dennis Bruggink (UW)