AGENDA
2014-2015 BOARD OF GOVERNORS

Day & Time: Friday, September 19, 2014 9:00 AM – 12:00 PM*
Location: ASME Headquarters

1. Opening of the Meeting 9:00 AM – 9:05 AM

1.1. Call to Order J. Robert Sims

1.2. Adoption of the Agenda J. Robert Sims ACTION
A motion should be made to accept the Agenda as circulated on September 4, 2014.

1.3. Announcements and Recognition of Special Guests J. Robert Sims

2. Discussion Items 9:05 AM – 11:10 AM

2.1. Committee of the Whole J. Robert Sims ACTION
A motion should be made to approve going “as if in Committee of the Whole,”
where open discussion is permitted and only a memo of issues discussed by topic
is maintained by the Secretary.

2.2. Report on Executive Session (5 minutes) INFORMATION
J. Robert Sims

2.3. Sector Management Committee Report (5 minutes) INFORMATION
Julio Guerrero
(Agenda Appendix 4.1.5)

2.4. BOG Re-Org Communications Task Force (15 minutes) INFORMATION
Stacey Swisher Harnetty
(Agenda Appendix 2.4)

2.5. BOG Coordination and Reporting Task Force (CRTF) (10 minutes) INFORMATION
Bernard Hrubala
(Agenda Appendix 2.5)

*Executive Session planned for September 18. A separate agenda will be sent to those invited
to attend.
2.6. **Investment Update** *(45 minutes)*  
William Lowery  
(Agenda Appendix 2.6)

**Break (10:25 AM – 10:40 AM)**

2.7. **Follow-on from Retreat Discussion** *(30 minutes)*  
J. Robert Sims and Thomas Loughlin  
(Agenda Appendix 2.7)

3. **Action Items**  
11:10 AM – 11:15 AM

3.1 **Motion to Return to Formal Session**  
A motion should be made to move out “as if in Committee of the Whole.”

4. **Consent Calendar**  
11:15 AM – 11:25 AM

The Consent Calendar is limited to items of a routine or non-controversial nature, grouped together to save Board time. **Consent Items for Receipt** are report items for information, followed by **Consent Items for Action** that the Board is asked to take action on as a group.

Governors are encouraged to contact ASME Headquarters with their questions prior to the meeting as it is not expected that Consent Receipt or Action items are to be removed from the Agenda. Reports, whether for information or action, are to be in writing and part of the Consent Calendar, unless otherwise approved by the President.

4.1. **Consent Items for Receipt**

4.1.1 **COR Annual Report**  
Larry Luna  
(Agenda Appendix 4.1.1)

4.1.2 **CPP Annual Report**  
Thomas Barlow  
(Agenda Appendix 4.1.2)

4.1.3 **COH Annual Report**  
Cristina Amon  
(Agenda Appendix 4.1.3)

4.1.4 **COG Report**  
Richard Laudenat  
(Agenda Appendix 4.1.4)
4.1.5 SMC Report  
Julio Guerrero  
(Agenda Appendix 4.1.5)

4.1.6 Motion for Receipt  
ACTION

4.2 Consent Items for Action

4.2.1 Identification of Items to be removed from Consent Calendar  
Any action items to be removed from Consent Calendar by request from any member of the Board of Governors.

4.2.2 Approval of Minutes from Meeting on June 8, 2014

4.2.3 Approval of Minutes from Meeting on June 11, 2014

4.2.4 Proposed Appointments  
Larry Luna  
(Agenda Appendix 4.2.4)

4.2.5 Proposed By-Laws for First Reading  
Larry Luna

4.2.5.1 By-Law B4.1  
(Agenda Appendix 4.2.5.1)

4.2.5.2 By-Law B4.2  
(Agenda Appendix 4.2.5.2)

4.2.5.3 By-Law B5.2.4.2  
(Agenda Appendix 4.2.5.3)

4.2.5.4 By-Law B5.3  
(Agenda Appendix 4.2.5.4)

4.2.5.5 By-Law B6.1.2  
(Agenda Appendix 4.2.5.5)

4.2.5.6 By-Law B6.2  
(Agenda Appendix 4.2.5.6)

4.2.5.7 By-Law B8.1  
(Agenda Appendix 4.2.5.7)
4.2.6 Proposed Society Policy Revision
Larry Luna

4.2.6.1 Society Policy P-15.6
(Agenda Appendix 4.2.6.1)

4.2.7 Approval of FY15 Auditor
John Elter
(Appendix 4.2.7)

4.2.8 ASME Position Paper on STEM
William Wepfer
(Appendix 4.2.8)

4.2.9 2015-2016 Public Policy Agenda
William Wepfer
(Appendix 4.2.9)

4.2.10 Proposed New Society Award
Adaptive Structures and Material Systems Award
Cristina Amon
(Appendix 4.2.10)

4.2.11 Dates of Future Meetings.

<table>
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<th>DATE</th>
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<td>Saturday</td>
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<td>Thursday</td>
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</table>

(a) 2014-2015 Board of Governors  (b) 2015 – 2016 Board of Governors

4.3 Motion for Consent Action ACTION
5. Contingency Time for Discussion and Other Business

Subject to the President’s discretion, Contingency Time may be used for discussion of items pulled from the Consent Calendar and Other Business.

6. Adjournment
   12:00 PM
List of Appendices

2.4 BOG Re-Org Communications Task Force
2.5 BOG Coordination and Reporting Task Force (CRTF)
2.6 Investment Update
2.7 Follow-on from Retreat Discussion
4.1.1 COR Annual Report
4.1.2 CPP Annual Report
4.1.3 COH Annual Report
4.1.4 COG Report
4.1.5 Sector Management Committee Report
4.2.4 Proposed Appointments
4.2.5.1 By-Law B4.1 for First Reading
4.2.5.2 By-Law B4.2 for First Reading
4.2.5.3 By-Law B5.2.4.2 for First Reading
4.2.5.4 By-Law B5.3 for First Reading
4.2.5.5 By-Law B6.1.2 for First Reading
4.2.5.6 By-Law B6.2 for First Reading
4.2.5.7 By-Law B8.1 for First Reading
4.2.6.1 Society Policy P-15.6
4.2.7 Approval of FY15 Auditor
4.2.8 ASME Position Paper on STEM
4.2.9 2015-2016 Public Policy Agenda
4.2.10 Proposed Adaptive Structures and Material Systems Award
Date Submitted: 9/4/2014
BOG Meeting Date: 9/19/2014

To: Board of Governors
From: (Sector/Unit/Task Force/Other) Committee on Governance
Presented by: J. Robert Sims and Thomas Loughlin
Agenda Title: Follow-on from Retreat Discussion

Agenda Item Executive Summary: (Do not exceed the space provided)

Information regarding the Board Retreat held in August 2014.

Proposed motion for BOG Action: (if appropriate) None

Attachments: Presentation
2014 RETREAT AGENDA

Session 1  Non-Profit Governance in 2014 - Speaker/Facilitator: John Stout
Session 2  Concurrent Sessions:
  - Governance Implications (BOG)
  - Role & Function in the New ASME (SMC)
Session 3  Engineering Education: Status & Trends in Undergraduate and Continuing Education - Speaker: Bill Wepfer
Session 4  Advanced Manufacturing - Speaker: Tom Kurfess
Session 5  Energy – New Frontiers - Speaker: Kevin Hurst
Session 6  Panel Discussion – Exploring the Impact on ASME’s Mission - Moderator: Tom Loughlin; Panelists: Bill Wepfer, Tom Kurfess, Kevin Hurst, Laura Hitchcock & Bill Berger
Session 7  Open Discussion - Discussion Facilitator: Bob Sims
Session 8  Future Generative Topics - Discussion Facilitator: Rich Laudenat

Highlights & Actions

BOG:
1. The governance issues will be addressed by the board in a timely and appropriate manner. Proposals will be developed based on retreat discussions.
2. Conversation/presentations on Education, Advanced Manufacturing and Energy have been shared with appropriate units within ASME for further consideration and action. ASME continues to advance the conversation in each of these areas with numerous specific initiatives.
3. ASME Standards were discussed in relation to the above topics. Laura Hitchcock has been asked to head a team to produce a position paper to codify issues and opportunities. The paper will be shared with the board and lead to an updated and refreshed strategy.
“Highlights & Actions”

BOG (continued):

4. Overall strategy was identified as an area of interest. Several actions are underway, including:
   a) The Industry Advisory Board (IAB) will help lead/shape the generative conversations at future board meetings. This will give voice to our industry partners and help the board be better informed on issues of common interest.
   b) Time during future Board meetings will also be devoted to the update/execution of Pathway 2025 in order to understand and communicate ASME’s strategy.
   c) Other focus on strategy (e.g. Pathway 2025 sub-strategies, international, fostering innovation, integration of organizational structure with mission-related business development, annual growth) will be planned and discussed in future BOG meetings.

5. The survey results have been collected and will be used in the planning for the 2015 Board Retreat.

SMC:
The SMC also met concurrently on the afternoon of day 1 and Julio is working with the committee on their activities.
Date Submitted: 9/2/2014
BOG Meeting Date: 9/19/2014

To: Board of Governors
From: (Sector/Unit/Task Force/Other) Committee on Organization and Rules
Presented by: Larry Luna
Agenda Title: Committee on Organization and Rules Annual Report

Agenda Item Executive Summary: (Do not exceed the space provided)

Committee on Organization and Rules Annual Report for FY14.

Proposed motion for BOG Action: (if appropriate) None

Attachments: Report
The Committee on Organization and Rules (COR) provided support to the Board of Governors, the Committees reporting to the Board of Governors and the Sectors. For FY2013-2014, the committee held one in-person meeting and seven meetings via telephone.

COR reviewed proposed changes to two Constitution articles and recommended the changes be endorsed by the Board of Governors for approval at the June 2014 ASME Business Meeting for the amendments to be sent to the corporate membership for adoption.

COR reviewed proposed changes to fourteen By-Laws and recommended changes to be adopted by the Board of Governors.

COR reviewed twelve Society Policies adding efficiency for the Society since additional action by the BOG was not required. Seven of the twelve Society Policies were sent to the Board of Governors with a recommendation to be adopted.

COR reviewed 24 appointments or reappointments and made recommendations for approval to the BOG. COR continued to strictly enforce the examination process of appointments and re-appointments to make sure they were in compliance with Society Policies.


As ASME continues to evolve, the importance of being agile to make necessary changes to its governance documents quickly and efficiently is important. COR is responsive to these needs and brings a corporate history and continuity to the process.
Date Submitted: August 28, 2014  
BOG Meeting Date: September 19, 2014

To: Board of Governors  
From: Committee of Past Presidents  
Presented by: Thomas Barlow  
Agenda Title: 2013-2014 Committee of Past Presidents Annual Report to the BOG

Agenda Item Executive Summary: (Do not exceed the space provided)

A report of the activities of the Committee of Past Presidents during 2013-2014 follows for information for the BOG as a Consent Item for Receipt.

Proposed motion for BOG Action: (if appropriate)
Receipt

Attachments:
Report
Committee of Past Presidents  
2013-2014 Annual Report

During the past year, individual members of the Committee of Past Presidents (CPP) continued to play a vital role as ASME volunteer leaders. Service included participating in ASME activities in the various sections, VOLT, Fellows, History and Heritage, the Nominating Committee, the ASME Foundation and BOG Standing Committees including: Pension Plan Trustees, Committee on Finance and Investment, Committee on Honors, Committee on Executive Director Evaluation and Staff Compensation and Committee on Organization and Rules.

The CPP held two meetings during fiscal year 2014, on November 18, 2013 and June 9, 2014.

**Congress**

Deborah Johnson, ASME Staff member, presented an overview of the new .Org site. All were encouraged to register and participate on the CPP Community Site.

The ASME Outside Awards Subcommittee, submitted applications for the John Fritz Medal, Enrico Fermi Award, Bush Award and the National Engineering Award.

Past Presidents continue to be encouraged to submit names for the Dedicated Service Award.

The Committee hosted a private dinner for its members in San Diego. Everyone enjoyed catching up with one another.

The CPP once again sponsored the post Honors Dinner Reception, capping off the evening that began with the Honors Assembly.

**Annual Meeting**

Amos Holt, CPP Vice Chair led the meeting.

The CPP members continue to nominate members for DSA’s and Fellow recognitions.

The four applications submitted for outside awards were not selected. The application for the Bush Award will automatically be resubmitted for 2014 and 2015.

Terry Shoup is the new chair of the Fellow Review Committee (FRC). Tom Barlow, Gene Feigel, Reginald Vachon, and Sam Zamrik are the other CPP members on the FRC.

William Weiblen is Chair and Robert Simmons as Vice Chair of the Ethics Committee for the 2014-17 term.
Nathan Hurt and Keith Thayer will serve on the Committee on Organization and Rules for the 2013-16 term.

Susan Skemp will become the new Chair of the ASME Outside Awards Subcommittee.

The Presidential and Executive Team provided updates on ASME’s three initiatives, the establishment of the Technical Events and Content Sector (TEC Sector) and Pathway 2025

The 2013 – 2014 ASME ECLIPSE Interns gave a presentation on “Adding Value to ASME Through Online Video Content.”

Michael Cowan and Roger Torda, ASME Staff members, presented the webpages for the Presidential History Archives and Landmark designations.

We would like to congratulate Nancy Fitzroy for being honored with the Davies Medal for Engineering achievement from Rensselaer Polytechnic Institute. She is the first woman to receive this award.

Art Bergles, ASME’s 109th President died on March 17, 2014. Mary and Harry Armen represented ASME at his funeral on March 22.

The CPP again hosted the Leadership Recognition Reception to acknowledge service by outgoing officers. This year, the event took place the Oregon Museum of Science and Industry.
Date Submitted: August 28, 2014
BOG Meeting Date: September 18, 2014

To: Board of Governors
From: Committee on Honors
Presented by: Cristina Amon
Agenda Title: Committee on Honors Annual Report

Agenda Item Executive Summary: (Do not exceed the space provided)

Committee on Honors Annual Report for Fiscal Year 2013

Proposed motion for BOG Action: None

Attachments: Report
Committee on Honors Annual Report to the Board of Governors
2013-2014

The Committee on Honors (COH) held two face-to-face meetings and two teleconferences during the 2013-2014 year. Major activities were in the following areas:

a. Rules of Award Review.

COH conducted its triennial review of the rules of award to ensure the procedures reflected in the documents corresponded to those of the award committees. This ongoing activity helps to identify areas of concern that must be addressed, as well as to provide the Committee and Special Award Committees the opportunity to make suggestions relative to procedures.

b. New Society Award.

COH considered the Aerospace Division’s request to elevate the Adaptive Structures and Material Systems Prize and the Gary Anderson Early Achievement Award to Society Level Awards.

COH voted to recommend to the Board of Governors, approval of the Divisional Adaptive Structures and Material Systems Prize to the ASME Adaptive Structures and Material Systems Society-Level Award.

c. Diversity.

COH continues to promote diversity within the COH Membership striving to create a balance between academia and industry, and seeking more women to serve on the committee. For the first time, there are three women serving on the COH.

d. Selection of Award Recipients.

During the year, the General Awards Committee and the Committee on Honors reviewed and acted favorably upon nominations for 69 of the Society’s 74 awards. Twelve recipients were international. Seventeen recipients were from Industry.

The Committee considered four nominations for the 2014 Honorary Membership. Three nominations for Honorary Membership were recommended to the Board of Governors for approval. The Committee also considered three nominations for the 2014 ASME Medal, and recommended one nomination for approval by the Board of Governors.


e. Membership Promotion.

To attract and retain ASME membership, COH continues to offer award recipients, who are non-members a free year of membership, and young engineers three years of free membership.

Nine honorees were invited to join ASME. Four have joined so far.
f. Dedicated Service Award.

Program Effectiveness. The presentations are intended to bring recognition to those individuals who have provided 10 years of significant service to ASME. Of the 81 potential Dedicated Service Awards, 37 nominations were submitted.
The Committee on Governance has not held any meetings this fiscal year, pending a review of ASME’s governance structure.

Proposed motion for BOG Action: (if appropriate) None

Attachments: None
Date Submitted: September 4, 2014
BOG Meeting Date: September 19, 2014

To: Board of Governors
From: (Sector/Unit/Task Force/Other) Committee on Organization and Rules
Presented by: Larry Luna
Agenda Title: Proposed Appointments

Agenda Item Executive Summary: (Do not exceed the space provided)

Proposed appointments reviewed by the COR on August 18, 2014.

Proposed motion for BOG Action: (if appropriate)

Approve the proposed appointments.

Attachments:

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<td>Max Jakob Memorial Award</td>
<td>George Homsy</td>
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<td>7/1/2014 – 6/30/2017</td>
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<td>Yogesh Jaluria</td>
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<td>7/1/2014 – 6/30/2017</td>
<td>Appointment</td>
<td>Past: Heat Transfer Division Chair</td>
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<td>Max Jakob Memorial Award</td>
<td>Michael Yovanovich</td>
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<td>7/1/2014 – 6/30/2015</td>
<td>Reappointment</td>
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ASME Board of Governors
Agenda Item
Cover Memo

Date Submitted: September 4, 2014
BOG Meeting Date: September 19, 2014

To: Board of Governors
From: (Sector/Unit/Task Force/Other) Committee on Organization and Rules
Presented by: Larry Luna
Agenda Title: By-Law Revision B4.1, First Reading

Agenda Item Executive Summary: (Do not exceed the space provided)

Changes to B4.1.9 and B4.1.10 reflect the need to update the By-Laws so that they are in compliance with the changes that were made as a result of the New York Non-Profit Revitalization Act that allow for electronic communication and define committee of the governing board.

Proposed motion for BOG Action: (if appropriate)

Revise B4.1 as attached

Attachments:

Word Document
The Board of Governors may create such special committees of the Board as it may deem desirable. The members of such committees shall be appointed by the President with the consent of the Board. Special committees shall have only the powers specifically delegated to them by the Board. If a special committee shall include individuals who are not Governors, it is not a committee of the Board and may not bind the Board.

Each special committee shall serve at the pleasure of the Board. Any or all members of any committee may be removed, with or without cause, by resolution of the Board of Governors, adopted by a majority of the Board.

Any committee of the Board may adopt rules governing the method of calling and time and place of holding its meetings. Unless otherwise provided by the Board of Governors, a majority of any committee shall constitute a quorum for the transaction of business, and the act of a majority of the members of the committee present at a meeting at which a quorum is present shall be the act of the committee. Each committee shall keep a record of its acts and proceedings and shall report thereon to the Board of Governors whenever requested to do so.

Any action required or permitted to be taken by the Board of Governors or any special committee thereof may be taken without a meeting if all members of the Board or the committee consent in writing or by electronic mail to the adoption of a resolution authorizing the action. The resolution and the written consent thereto shall be filed with the minutes of the proceedings of the Board or the committee.

Any one or more members of the Board of Governors or any special committee thereof may participate in a meeting of the Board or committee by means of a conference telephone, videoconference, or similar communications equipment, allowing all persons participating in the meeting to hear each other at the time, propose, object to and vote on specific actions to be taken by the Board or committee. Participating by such means shall constitute presence in person at the meeting. All members of the Board of Governors or any special committee thereof must be given adequate prior notice about the arrangements for such meetings.

The Board of Governors may delegate to the sectors and the standing committees reporting to of the Board as established in these By-Laws, for a period of one year, specific responsibilities for the management of one or more programs of the Society, subject to the supervision of the Board and to any limitation prescribed by the Board of Governors or by applicable law.
This revision clarifies the stagger of the terms of the Nominating Committee members.
B4.2 NOMINATING COMMITTEE

B4.2.2 The Nominating Committee shall consist of one voting member and an alternate selected by each unit of a sector that is led by a Vice President. At the option of a sector, as described in the sector's Operation Guide, one additional alternate may be named by the sector. In the event that a sector has only one Vice President, that sector may have two voting members and two alternates and may name one additional alternate as determined by the sector Operation Guide. The TEC Sector shall have seven voting members and seven alternates selected by the Sector. The Voting members of the Committee shall serve staggered two-year terms such that approximately one-half of the voting members from each sector will have terms that expire each year annually. Nominations for open positions for voting members and alternates shall be made as provided in By-Law B4.2.2.3 and shall be voted upon at the Business Meetings as provided in By-Law B4.2.2.1.
The Committee on Finance and Investment requested a change in its composition.

Proposed motion for BOG Action: (if appropriate)

Revise B5.2.4.2 as attached

Attachments:

Word Document
B5.2 SECTORS AND COMMITTEES
REPORTING TO THE BOARD OF GOVERNORS

B5.2.4.2 The Committee on Finance and Investment shall consist of a Chair, a Vice Chair and a membership as determined by the Board of Governors.

The Treasurer shall be an ex officio member of the Committee with vote shall serve as Vice Chair and a representative from the ASME Foundation shall be an ex officio member with vote only on items pertaining to investment. The Assistant Treasurer and Second Assistant Treasurer shall be ex officio members of the Committee without vote.
ASME Board of Governors
Agenda Item
Cover Memo

Date Submitted: September 4, 2014
BOG Meeting Date: September 19, 2014

To: Board of Governors
From: Committee on Organization and Rules
Presented by: Larry Luna
Agenda Title: By-Law Revision B5.3, First Reading

Agenda Item Executive Summary: (Do not exceed the space provided)

Changes to B5.3 reflect a modification of the organization of the Public Affairs and Outreach Sector.

The Strategic Issues Committee is being sunset because market intelligence is an enterprise function. Environmental Scans, which feed into the enterprise, are conducted by the Marketing Department.

The Innovation Committee is being sunset because program and product development is an enterprise function.

The Board on Global Outreach is being sunset because it does not have a portfolio.

The Board on Education will become the Board on Engineering Education.

The Pre-College Committee is being formed because K-12 education has a unique demographic and its work needs to be recognized separate from Engineering Education.

The Engineering for Global Development Committee is being formed because it represents an emerging market for ASME and requires the highest level of engagement and prioritization.

Proposed motion for BOG Action: (if appropriate)

Revise B5.3 as attached.

Attachments:
Word document
B5.3 PUBLIC AFFAIRS AND OUTREACH SECTOR

B5.3.1.1 The Public Affairs and Outreach Sector, under the direction of the Board of Governors, is responsible for the coordinated outreach to industry, government, education, and the public, as well as initiatives that address diversity and humanitarian programs. The Public Affairs and Outreach Sector will maintain a current Sector Operation Guide that will contain operational details of the Public Affairs and Outreach Sector that are not in these By-Laws.

B5.3.1.2 The Public Affairs and Outreach Sector shall be led by a Council that consists of the following voting membership: a Senior Vice President as Chair; three members-at-large; the Vice Presidents for the following Boards: Engineering Education; Global Outreach; and Government Relations and the Chairs of the following Committees: Industry Advisory Board; Engineering for Global Development Committee; Pre-College Education Committee; Innovation Committee; Strategic Issues Committee; Diversity and Inclusion Strategy Committee. The Associate Executive Managing Director, ProgramsPublic Affairs and Outreach, is a non-voting member.

B5.3.1.3 The incoming Senior Vice President, Public Affairs and Outreach shall be nominated by the Public Affairs and Outreach Council from among its past or present volunteer members for appointment by the Board of Governors for a term of three years. In the event that a past or present volunteer member is not available from the Public Affairs and Outreach Council, then the Council shall defer to the Board of Governors for the selection. Vice Presidents who have been elected to a term that extends more than one year into a new term of the Senior Vice President of Public Affairs and Outreach are not eligible to become the Senior Vice President.

B5.3.1.4 The members-at-large shall be appointed by the Board of Governors, as recommended by the Public Affairs and Outreach Council. The term of the members-at-large shall be one year and they may be re-appointed for up to three terms.

B5.3.2.1 The following Boards will report directly to the Public Affairs and Outreach Council: Board on Engineering Education; Board on Global Outreach; and Board on Government Relations; and Industry Advisory Board.

B5.3.2.2 The Board on Engineering Education, under the direction of the Public Affairs and Outreach Council, is responsible for the activities of the Society that relate to engineering education and pre-college education. The Board shall consist of a Vice President, Engineering Education as Chair and a membership as determined by the Public Affairs and Outreach Council.

B5.3.2.3 The Board on Global Outreach, under the direction of the Public Affairs and Outreach Council, is responsible for the activities of the Society that relate to public awareness of engineering and humanitarian programs. The Board shall consist of a Vice President, Global Outreach as Chair and a membership as determined by the Public Affairs and Outreach Council.
B5.3.2.3 The Board on Government Relations, under the direction of the Public Affairs and Outreach Council, is responsible for the development of programs for interaction between the Society and government at all levels. The Board shall consist of a Vice President, Government Relations as Chair and a membership, as determined by the Public Affairs and Outreach Council. The Board on Government Relations shall recommend policies and procedures, and supervise activities that involve Society interaction with government entities.

B5.3.2.5 The Industry Advisory Board, under the direction of the Public Affairs and Outreach Council, is responsible for providing a voice for industry within ASME through the communication and advocacy of industry needs. The Industry Advisory Board shall consist of a Chair and Vice Chair, appointed by the Senior Vice President of the Public Affairs and Outreach Council.

B5.3.2.6 The following committees shall report directly to the Public Affairs and Outreach Council: Industry Advisory Board; Engineering for Global Development Committee; Pre-College Education Committee; Innovation Committee; Strategic Issues Committee and Diversity and Inclusion Strategy Committee.

B5.3.2.7 The Innovation Committee, under the direction of the Public Affairs and Outreach Council, shall provide insight through internal and external sources for innovations that further ASME strategic objectives. The Committee will consist of a Chair, appointed by the Senior Vice President, Public Affairs and Outreach and a membership as determined by the Public Affairs and Outreach Council.

B5.3.2.8 The Strategic Issues Committee, under the direction of the Public Affairs and Outreach Council, shall provide internal and external sources to support environmental scanning, competitive intelligence and best practices, and keep the Society informed on strategic issues, opportunities, trends and initiatives. The committee shall consist of a Chair, appointed by Senior Vice President, Public Affairs and Outreach and a membership as determined by the Public Affairs and Outreach Council.

B5.3.3.1 The Engineering for Global Development Committee, under the direction of the Public Affairs and Outreach Council, shall be responsible for the collaboration among the engineering and global development stakeholders to create avenues and opportunities within ASME and mechanical engineering around the world to meet the challenges faced by under-served communities. The Committee shall consist of a Chair, appointed by the Senior Vice President, Public Affairs and Outreach, and a membership, as determined by the Public Affairs and Outreach Council.

B5.3.3.4 The Pre-College Education Committee, under the direction of the Public Affairs and
Outreach Council, shall be responsible for educational activities aimed at enhancing pre-college science, technology, engineering, and mathematics education. The Committee shall consist of a Chair, appointed by the Senior Vice President, Public Affairs and Outreach, and a membership, as determined by the Public Affairs and Outreach Council.

B5.3.3.52.9 The Diversity and Inclusion Strategy Committee, under the direction of the Public Affairs and Outreach Council, shall provide insight and advice into promoting diversity within ASME and mechanical engineering. The Committee will consist of a chair, appointed by the Senior Vice President, Public Affairs and Outreach and a membership, as determined by the Public Affairs and Outreach Council.

In addition, the Vice President for Education will be re-named the Vice President for Engineering Education and the Vice President for Global Outreach will be deleted from the list in B4.3.8.
ASME Board of Governors
Agenda Item
Cover Memo

Date Submitted: September 4, 2014
BOG Meeting Date: September 19, 2014

To: Board of Governors
From: (Sector/Unit/Task Force/Other) Committee on Organization and Rules
Presented by: Larry Luna
Agenda Title: By-Law 6.1.2 Revision, First Reading

Agenda Item Executive Summary: (Do not exceed the space provided)

Changes to B6.1.2 reflect the need to update the By-Laws so that they are in compliance with the changes that were made as a result of the New York Non-Profit Revitalization Act that allow for electronic communication.

Proposed motion for BOG Action: (if appropriate)

Revise B6.1.2 as attached

Attachments:

Word Document
B6.1.2 A notice of each Business Meeting shall be given by the Executive Director to each member either by written communication or other announcement. If such notice is given personally or by first class mail or electronic mail it shall be given not less than 10 nor more than 50 days before the date of the meeting. If the notice is mailed by any other class of mail it shall be given not less than 30 nor more than 60 days before such date.
ASME Board of Governors
Agenda Item
Cover Memo

Date Submitted: September 4, 2014
BOG Meeting Date: September 19, 2014

To: Board of Governors
From: Committee on Organization and Rules
Presented by: Larry Luna
Agenda Title: By-Law 6.2 Revision, First Reading

Agenda Item Executive Summary: (Do not exceed the space provided)

Changes to B6.2 reflect the need to update the By-Laws so that they are in compliance with the changes that were made as a result of the New York Non-Profit Revitalization Act that allow for electronic communication.

Proposed motion for BOG Action: (if appropriate)

Revise B6.2 as attached

Attachments:

Word Document
B6.2 VOTING AT OR BY PROXY AT THE FIRST BUSINESS MEETING OF THE FISCAL YEAR

B6.2.1 At least Ten to 60 days prior to the first Business Meeting of the fiscal year, the Executive Director shall mailprovide a proxy to each corporate member. This proxy shall solicit the authorization by such member for the three most recent available past Presidents or any one of them to exercise the vote of the corporate member for the election of Officers and for any other business that is presented to the first Business Meeting of the fiscal year or any adjournment thereof. A list of the nominees proposed by the Nominating Committee and any special nominating committee shall be a part of the proxy mailingdistribution.

A member shall return the proxy in a manner specified by the Society, which may be by mail, facsimile or electronic mail, provided such electronic mail is transmitted with information from which it can be reasonably determined that the proxy was authorized by such member.

B6.2.2 If any special nominating committee (as defined in B4.2.8) has been organized and has presented a list of nominees to the Executive Director, the Executive Director shall include in the mailingprovide to each member entitled to vote a proxy listing the nominees proposed by the Nominating Committee and the nominees proposed by such special nominating committee. Biographical and other material included with the proxy shall give equal exposure to all nominees.

B6.2.4 At the first Business Meeting of the fiscal year the Committee of Inspectors of Proxies and Ballots shall report on the number of proxies thereon returned by corporate members to the Society headquarters. Following the report of the Committee of Inspectors of Proxies and Ballots, the Presiding Officer shall conduct an election for Officers of the Society. Corporate members present who have not executed proxies will vote in person. Corporate members who have executed proxies but have withdrawn the proxies prior to the tabulation presented by the Committee of Inspectors of Proxies and Ballots, may also vote in person. Corporate members holding valid proxies will cast proxy ballots. When the results of the election are known, the Presiding Officer will announce the results of the election to the Business Meeting.
Date Submitted: September 4, 2014
BOG Meeting Date: September 19, 2014

To: Board of Governors
From: (Sector/Unit/Task Force/Other) Committee on Organization and Rules
Presented by: Larry Luna
Agenda Title: By-Law 8.1 Revision, First Reading

Agenda Item Executive Summary: (Do not exceed the space provided)

Changes to B8.1 reflect the need to update the By-Laws so that they are in compliance with the changes that were made as a result of the New York Non-Profit Revitalization Act that allow for electronic communication.

Proposed motion for BOG Action: (if appropriate)

Revise B8.1 as attached

Attachments:

Word Document
B8.1 AMENDMENTS

B8.1.1 FourteenSeven days or more before the closing of a ballot the proxy vote on an amendment to the Constitution, the President shall appoint three tellers, whose duty shall be Committee of Inspectors of Proxies and Ballots shall be convened to canvass the votes cast.

B8.1.2 The tellers Upon the close of the proxy vote, the Committee of Inspectors of Proxies and Ballots shall canvass the proxy ballots returned to the Society and shall certify the result to the Presiding Officer at the next Business Meeting of the Society.

B8.1.3 The terms of office of the tellers Committee of Inspectors of Proxies and Ballots shall expire when their report of the canvass has been presented and accepted.
Date Submitted: September 4, 2014
BOG Meeting Date: September 19, 2014

To: Board of Governors
From: [Sector/Unit/Task Force/Other] Committee on Organization and Rules
Presented by: Larry Luna
Agenda Title: Society Policy P-15.6

Agenda Item Executive Summary: **(Do not exceed the space provided)**

The revision reflects the organization change that the History and Heritage Committee is now independent of the Public Affairs and Outreach Sector.

Proposed motion for BOG Action: **(if appropriate)**

Revise Society Policy P-15.6 as shown

Attachments:

Word Document
SOCIETY POLICY

HISTORY AND HERITAGE LANDMARKS

I. PREFACE

Society By-Law B2.1 states, “The Society shall publicize the engineering profession through the achievements of engineers.” B5.3.2.3 states in part, “The Board on Global Outreach, under the direction of the Public Affairs and Outreach Council, is responsible for the activities of the Society that relate to public awareness of engineering and humanitarian programs.”

II. PURPOSE

A. The American Society of Mechanical Engineers wishes to:

1. Encourage mechanical engineers and others to become aware of their technological heritage;
2. Inform the public of such contributions;
3. Foster the preservation of the physical remains of historically important engineering works;
4. Provide an annotated roster of landmarks, sites, and collections in mechanical engineering for engineers, students, educators, historians, scholars and travelers;
5. Promote the inclusion of information about such achievements in guidebooks and maps for use by the general public; and finally,
6. Call attention to the great mechanical engineers who were associated with the invention, development or production of these singular technological achievements.

B. Occasionally a certain work may be recommended as a joint landmark with other professional or engineering organizations.

III. POLICY

The criteria to designate historic mechanical engineering work are:

A. The work must be an example of mechanical engineering. Where the historic mechanical engineering work is part of a larger entity, the mechanical engineering work must be specifically identified in the nomination.
If the work is designated, the designation will be specific to the mechanical engineering work and not to the larger entity.

B. The work must be:

1. An artifact that was (or could have been) conceived, designed, developed, or constructed by a mechanical engineer, and/or

2. A body of knowledge, analytical tool or code of practice developed or produced primarily by a mechanical engineer for use primarily by mechanical engineers, and/or

3. A place of historic significance to the practice and profession of mechanical engineering.

For 1., 2., and 3. above, the Policy is to designate tangible mechanical engineering work, e.g., artifacts, and not to designate something that is conceptual only or no longer exists. Similarly, processes will not be designated, but the associated machinery may be.

C. The work must represent a significant step in the history of mechanical engineering.

D. The work must have made a contribution to humanity in general and the profession and/or practice of mechanical engineering in particular.

A military work (e.g., weaponry) will be considered for designation in terms of its contribution to the practice of mechanical engineering.

E. The work must be distinguished by being unique (e.g., one-of-a-kind, last-surviving example of a widely used type) or possessing some other distinction. Complete reconstructions are usually not designated, but will be considered on their merits.

F. The designation of the historic mechanical engineering work must:

1) Enhance the public's understanding of the role of mechanical engineers in society, and/or

2) Celebrate and enhance the profession of mechanical engineering in general, and ASME in particular.

Preference will be given to a work that is accessible to mechanical engineers, historians, and the public.

G. Although work of any age will be considered for designation, sufficient time must have elapsed to enable objective judgment to be made of its lasting value.
H. The work should be tangible, visible, and accessible to mechanical engineers, historians, and/or the public.

I. The ASME designation should be the first such recognition of the historic mechanical engineering significance of the work by a professional society or historical organization. If such recognition has already been made, the Policy is to only consider a designation by ASME when it adds important value to the existing recognition.

Works already in museum collections are considered for designation only under extraordinary circumstances since their importance is already recognized.

IV. PROCEDURE

A. PROCEDURES FOR NOMINATING LANDMARKS (INCLUDING HERITAGE SITES AND COLLECTIONS)

The ASME member who nominates a candidate for landmarking has the responsibility for submitting the nomination form with proper documentation, written acceptance of ASME unit sponsorship, and appropriate district, community, and correspondent notifications. ASME unit sponsorship includes responsibility for completion of the designation process through the preparation, execution and funding of the designation ceremony and publication of the approved commemorative brochure.

B. PROCEDURE FOR NOMINATING JOINT LANDMARKS

The Chair of the History and Heritage Committee will forward the nomination to the appropriate organization, requesting consideration of joint sponsorship with ASME. The nominating ASME unit will be advised of the action.

When Landmarks are co-sponsored, the staff liaisons of the respective organizations work closely together on brochure copy, invitations, mailing lists and ceremony details with the involved ASME units. All costs are shared equally.

C. APPROVALS

When a Landmark is approved by the Committee, the Chair informs the nominator in writing. The staff works closely with the sponsoring unit in arranging the ceremony, brochure, invitations and plaque casting.

D. FUNDING

Although there is no quota on the number of landmarks to be designated each year, the location, designation ceremony costs, availability of funds, and other factors must be considered in arranging the specific designation date and ceremony.
E. DEFERRALS

Decision on a proposed landmark may be deferred for lack of sufficient information until the next Committee meeting. In these cases the Chair writes to the nominator explaining the reason for the deferral, what further information is required and when the next meeting will be, so that the nominator has time to respond. This information is sent to the staff liaison for transmittal to the History and Heritage Committee.

F. REJECTIONS

When a proposed landmark is rejected, the chair writes to the nominator, explaining why the nomination did not meet the criteria. The nominator may return to the Committee with additional information asking that the nomination be reconsidered.

G. DESIGNATION PROCEDURES

A formal designation ceremony is held for each Landmark. In addition to the ceremony, a brochure is prepared and a plaque is made for permanent display at the Landmark. The formal designation is developed with the assistance of the ASME staff liaison and generally includes a brief ceremony, a luncheon, dinner, or suitable refreshments, and tour where appropriate. The President of ASME is generally present, as is a representative of the History and Heritage Committee.

H. BUDGETING

The History and Heritage Committee's budget contains modest funds for plaques, Committee representation, staff assistance in planning, web publishing, promoting and related communications and to assist sponsoring ASME units with the printing of commemorative brochures and invitations, should aid be necessary. Nominating sponsors (ASME units) are responsible for all other expenses incurred, and this may include funds raised or provided in-kind from local sponsors and the landmark owner. The History and Heritage staff liaison should be consulted early in the planning stages for assistance.

Responsibility: History and Heritage Committee

Reassigned from Public Affairs and Outreach Sector 9/19/14

Reassigned from Centers Board of Directors/Board on Public Awareness 6/2012
Reassigned from Council on Public Affairs/Board on Public Information 6/12/05
Adopted: January 19, 1984

Reaffirmed: March 17, 1995

Revised:
(editorial changes 6/87)
(Revised 3/95)
March 17, 1995
June 12, 1996
(Revised 8/88)
(Revised 11/97)
June 9, 1999
June 12, 2005
(Unit Reassignment Due to Reorganization 6/2012)
Date Submitted: September 5, 2014
BOG Meeting Date: September 25, 2013

To: Board of Governors
From: John Elter – Audit Committee Chair
Agenda Title: Approval of FY15 Auditor

Agenda Item Executive Summary:
Recommendation of ASME’s Auditor

Proposed motion for BOG Action: (if appropriate)

The Audit Committee recommends that the ASME Board of Governors appoint KPMG to be the auditor of ASME’s FY2015 financial statements.

Attachments:
None
### ASME Board of Governors
**Agenda Item**
**Cover Memo**

<table>
<thead>
<tr>
<th>Date Submitted:</th>
<th>August 14, 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOG Meeting Date:</td>
<td>September 19, 2014</td>
</tr>
<tr>
<td><strong>To:</strong></td>
<td>Board of Governors</td>
</tr>
<tr>
<td><strong>From:</strong> <em>(Sector/Unit/Task Force/Other)</em></td>
<td>Public Affairs &amp; Outreach Council</td>
</tr>
</tbody>
</table>
| **Presented by:** | William Wepfer, Senior Vice President, PAO  
Kalan Guiley, VP, Government Relations |
| **Agenda Title:** | General Position Paper on “Strengthening Pre-college Science, Technology, Engineering, and Mathematics (STEM) Education in the U.S.: A Technological Literacy and Workforce Imperative” |

**Agenda Item Executive Summary:** *(Do not exceed the space provided)*

This paper is an update to ASME’s 2010 position paper of the same name. The content is essentially the same, but it includes more updated statistics.

**Proposed motion for BOG Action:** *(if appropriate)*

To approve this update of ASME’s general position paper on STEM education.

**Attachments:**
General Position Paper

on

Strengthening Pre-College Science, Technology, Engineering and Mathematics (STEM) Education in the U.S.:

A Technological Literacy and Workforce Imperative

September 2014
Introduction

Over the past quarter century, there has been an increased understanding and support by many federal, state, and local policymakers about the importance of strengthening U.S. science, technology, engineering, and mathematics (STEM) concepts and skills in the pre-college (K-12) education curriculum. Yet, a more focused effort is needed as U.S. students continue to be average or below average on international tests, and the number of workers engaged in scientific and engineering research continues to rapidly increase worldwide. With this ever increasing global and technology-driven workforce, it is essential that the United States align its K-12 core curriculum to the expectations of its 21st century workforce, ensuring its future leaders remain competitive in the global economy.

Strong K-12 STEM education is not just for those students wishing to pursue technical degrees in higher education. In a world in which so many emerging industries are based on technology and its applications, all citizens should be technologically literate, and able to participate in an increasingly technological society. Additionally, with the predicted changes in future U.S. workforce demographics by the middle of the 21st century, bolstering the access to and participation of women and underrepresented groups in the U.S. STEM workforce is essential to fueling innovative and diverse ideas for the future.

Every two years, ASME, a professional technical society of more than 130,000 members worldwide, surveys its members regarding their public policy priorities. K-12 STEM education has remained one of the Society’s top priorities for action by public policymakers for several years. Since 1992, the Society’s Committee on Pre-college Education has been actively developing and supporting programs and materials that strengthen STEM education in the K-12 classroom through its own initiatives and in partnerships with many other organizations. For more information, please visit: https://community.asme.org/board_education_pre_college_engineering/default.aspx

Recommendations

Parents, educators, governments at all levels, and the private sector each have important roles in ensuring that future generations will possess the skills and critical competencies necessary to be successful in a highly competitive, global, and technologically sophisticated 21st century economy. These stakeholders must work together to ensure that all children receive the STEM education and training essential for future success.

ASME offers the following recommendations for improving K-12 STEM educational performance:

- Support efforts to strengthen the inclusion of engineering and technology concepts in K-12 STEM education through the promotion of high-quality common standards and assessments.
- Recruit, train, and retain qualified K-12 STEM teachers to meet demand.
- Encourage women and underrepresented groups to pursue STEM coursework and careers.
- Increase federally funded research focused on STEM teaching and learning, especially grants to schools that are focused on implementation, adoption, and widespread expansion of evidence-based teaching methods.
- Foster partnerships among educational institutions, industry, and non-profit organizations to leverage resources and improve STEM education.

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Support efforts to strengthen the inclusion of engineering and technology concepts in K-12 STEM education through the promotion of high-quality common standards and assessments.

Development of effective STEM curriculum and assessment tools must be based on high standards of achievement. These standards should extend well beyond requiring knowledge of fundamental STEM facts, processes, and techniques. They should support curricula that cultivate creative, critical thinking skills and encourage interdisciplinary approaches to issues and problems.

According to the National Academy of Engineering report, *Engineering in K-12 Education: Understanding the Status and Improving the Prospects*, the introduction of engineering education to the K-12 classroom has the potential to promote critical thinking, provide new levels of relevancy to motivate students to learn science content, make engineering and engineering careers more accessible to all students, and prepare the next generation to solve global problems facing humanity.³

ASME has been supportive of the next generation science standards (NGSS) since their inception, especially since it is the first time engineering content has been included in K-12 science standards in such a meaningful way. While exposure to formal engineering education has increased dramatically over the past 20 years, most students in the United States have never experienced an engineering course or lesson, or still have a misperception and misunderstanding about engineering.

Policymakers can help strengthen K-12 STEM education through efforts that:

- Support the development of hands-on, open-ended problem-solving curricula and modules of engineering problems, grouped by discipline and level of difficulty and based on research, for the K-12 classroom;
- Promote engineering habits of mind, including systems thinking, creativity, collaboration, communication, and attention to ethical considerations;
- Fully incorporate the engineering design process into NGSS and other K-12 state and local standards;
- Pursue the development of better assessment mechanisms aligned with state and local standards;
- Resist the tendency to “push back” standards when assessment results are less than satisfactory; and,
- Improve coordination of existing STEM education programs across the federal science and engineering agencies.

Recruit, train, and retain qualified STEM teachers to meet demand.

High-quality teaching can have lasting effects on students.⁴ According to the 2014 Science and Engineering Indicators, however, “novice science teachers—those with 2 or fewer years of experience—are more prevalent at schools with the highest proportions of low-income and non-Asian minority students.”⁵ Other school factors like the pursuit of reduced class sizes or pay differentials between individual school districts also increase the demand for more qualified STEM teachers.

A related concern is the number of teachers who are currently teaching out of their respective fields of expertise, especially in the middle and high school grades. In 2012, 73% of high school mathematics

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teachers had an undergraduate or graduate degree in mathematics or mathematics education, and 82% of high school science teachers had an undergraduate or graduate degree in science (any subject), engineering, or science education. However, the percentages vary widely between individual districts.6

In addition, for graduates with STEM degrees, the lure of higher salaries in the private sector depletes the potential supply of qualified K-12 science, mathematics, and technology/engineering teachers. And for those degreed in STEM that may have an interest in teaching but are not certified, they might face additional time and/or cost investment for educational certification, depending on state requirements, which might further discourage STEM graduates from pursuing teaching careers.

Policymakers can enhance the recruitment, training, and retention of qualified STEM teachers by creating programs which:

- Attract new university graduates with degrees in STEM fields to teaching careers through student loan forgiveness, bonuses, tax incentives, and financial support for teacher certification;
- Develop and implement alternative certification and transition-to-teaching programs for engineers and other technical professionals;
- Allow for differential pay scales to help attract and retain qualified STEM educators;
- Improve in-service professional development focusing on STEM curricula;
- Institute mentoring programs for STEM personnel in schools;
- Educate pre-service and in-service teachers on proven student-learning methodology in teacher professional development programs;
- Include/increase STEM coursework in pre-service/university teacher training; and,
- Produce, evaluate, and disseminate the best practices in STEM programs and online curricula, so that they are easily accessible to educators.

**Encourage women and underrepresented groups to pursue STEM coursework and careers.**

Currently, the U.S. has an untapped pool of potential STEM professionals, particularly women and underrepresented minorities. By leveraging the diversity of these individuals’ perspectives and bolstering their participation in the STEM workforce, more innovative and diverse ideas would be generated, which would fuel the innovation necessary for our future global competitiveness.

We urge federal, state, and local policymakers to strengthen and re-examine oversight of existing legislation and programs aimed specifically at broadening participation by underrepresented groups in STEM fields, including those which:

- Enable all students to have access to a rigorous STEM curriculum, hands-on laboratory experiences, and informal learning that increases academic performance and interest in STEM careers, which can also provide opportunities for families and future economic stability;
- Increase public awareness of STEM careers, including supporting efforts to foster outreach to all students, teachers, parents, and K-12 guidance counselors;
- Consciously work against biases (conscious or unconscious) and work toward making sure the STEM workforce reflects U.S. citizenry;
- Offer incentives and mentoring for women and underrepresented groups to pursue STEM coursework and careers, including teaching careers, and continue to provide professional achievement opportunities post-graduation and throughout their careers.

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Increase federally funded research focused on STEM teaching and learning, especially grants to schools that are focused on implementation, adoption, and widespread expansion of proven teaching methods.

The educational research community has developed many excellent pilot studies and programs based on what teaching methods work best in K-12 STEM education classrooms. However, many times, there are insufficient funds to be able to widely disseminate these evidence-based teaching methods into local schools. Policymakers should increase federally funded research focused on STEM teaching and learning, especially those programs which:

- Provide resources to help schools implement and adopt proven STEM teaching methods, i.e. allows schools time to undergo the curriculum changes and teacher training needed to adopt these programs into their schools; and,
- Increase the evaluation components of research focused on STEM teaching and learning.

**Foster partnerships among educational institutions, industry, and non-profit organizations.**

ASME and other organizations currently partner with non-profit organizations and educational entities (e.g., the FIRST Robotics Competition, the Girl Scouts and the Boy Scouts) to further K-12 STEM learning. Many corporations also sponsor educational projects at their local community schools. Leveraging these resources, policymakers should support the development of partnerships among educational institutions, industry, and non-profit organizations which:

- Facilitate the ability for STEM professionals to work with teachers and students, while also improving the image of STEM careers;
- Foster adopt-a-school programs;
- Promote relevant summer externships for teachers in STEM positions at local corporations, government laboratories, and universities;
- Develop recognition awards for private sector STEM involvement; and,
- Create and fund the publication and dissemination of materials for public outreach, including parental and guidance counselor education, on the potential impact of a quality K-12 STEM education on the future workforce.
The ASME Public Policy Agenda is developed every two years, prior to a new session of Congress, to help guide ASME Government Relations activities. The proposed Agenda for 2015-2016 reflects the results of an extensive member survey conducted by the Board on Government Relations. The policy objectives for each issue included in the Agenda are based on existing ASME positions.

The Agenda will be released in November 2014 and provided to the Administration and Members of the new 114th Congress.

Proposed motion for BOG Action: (if appropriate)
To approve the ASME Public Policy Agenda for 2015-2016

Attachments:
Proposed ASME Public Policy Agenda for 2015-2016
Dear Colleague:

The ASME Public Policy Agenda lists the issue priorities of the Society for calendar years 2015-2016.

One of the public service goals of ASME and its 130,000+ members is to provide advice to government officials at all levels on engineering and technology matters and policies affecting the public interest, and to develop a climate of understanding and credibility that fosters a continuing dialogue.

This document plays a part in fulfilling that goal, as it provides an overview of ASME’s public policy priorities and offers channels of communication for more detailed discussion.

I hope that you will find this Public Policy Agenda useful, and that you will call upon the expertise of ASME and its members whenever you need assistance with these issues.

Please contact Kathryn Holmes, Director, ASME Government Relations (holmesk@asme.org; 202.785-7390) if we can be of any assistance.

Sincerely,

Kalan Guiley
Vice President
Board on Government Relations
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASME Overview</td>
<td>2</td>
</tr>
<tr>
<td>ASME and Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>How ASME’s Public Policy Priorities Were Determined</td>
<td>5</td>
</tr>
</tbody>
</table>

## ASME ISSUE PRIORITIES

- **Energy**                                                                 | 6    |
- **Manufacturing/Innovation and Competitiveness**               | 9    |
- **Science, Technology, Engineering and Mathematics Education/Workforce Development** | 13   |
- **Research and Development**                                   | 16   |
- **Environment**                                               | 19   |
- **Standards**                                                  | 21   |
- **Technical Resources in ASME**                                | 24   |
Founded in 1880 as the American Society of Mechanical Engineers, today’s ASME is a worldwide, multi-disciplinary engineering and allied sciences society with more than 130,000+ members. ASME is dedicated to ensuring that engineers are on the cutting edge of technology, are safety conscious, and are committed to improving the technical well-being of the world. The core values of ASME are rooted in its mission to “serve diverse global communities by advancing, disseminating and applying engineering knowledge for improving the quality of life; and communicating the excitement of engineering.” ASME serves its members, industry, and government by encouraging the development of new technologies and by finding solutions to problems in an increasingly global technological society.

The Society sponsors more than 30 conferences each year, and is one of the world’s largest technical publishers, with more than 2,000 titles in print at any given time, including books, proceedings, and technical papers. ASME has more than 200 local sections and subsections worldwide. The Society also has over 340 student sections at colleges and universities throughout the world.

Manufacturers around the world use ASME’s internationally recognized technical standards-setting program. Since 1884, when the first performance test codes were developed, ASME has pioneered over 600 technical standards improving the safety and efficiency of boilers, elevators, cranes, nuclear energy, pipelines, and many other areas. ASME standards are used in over 100 countries.

In addition, ASME has an extensive continuing education program for engineers, and provides career information at the pre-college level.
ASME AND PUBLIC POLICY

The mission of ASME emphasizes the engineer’s responsibility to the public interest. Engineers contribute to the policy making process by providing government decision makers with technical information needed to make the most informed decisions on technical and technology-related issues. ASME’s Government Relations activities prepare and enable the Society’s members to provide all levels of government with this essential guidance. Under the direction of the Board on Government Relations, ASME conducts programs to facilitate participation in the public policy process through presentation of non-partisan analysis, study or research, informal briefings for government personnel, formal comments on proposed legislation and regulations, and testimony before government bodies.

Individual members of the Society also have the opportunity to compete for ASME Federal Government Fellowships, which enrich their own personal development while providing their technical expertise to the federal government. Each year, members are selected to serve for one year as a professional staff member of a U.S. Senator or Representative, of a Congressional Committee, or with a federal agency. There are also opportunities to serve as an ASME Foundation Swanson Fellow at the Office of Science and Technology Policy in the Executive Office of the White House. In addition to conducting research, federal fellows may draft bills, respond to information requests from legislators, and give presentations to legislative groups.

Congressional District town hall-style meetings provide ASME members a unique opportunity to interact directly with their Members of Congress to discuss public policy issues relevant to engineering, science and technology. At receptions following the formal programs, ASME members can meet one-on-one with their Congressional representatives.
ASME’s Congressional Noontime Briefings inform Congressional staff about the engineering, science, and technology aspects of current public policy issues and increase awareness among Congressional staff of ASME as a credible source of technical information. The briefings examine a broad set of topics with a distinguished speaker or panel of speakers presenting to attendees. Speakers include representatives from industry, academia, and government.

ASME leads a multidisciplinary society Engineering Public Policy Symposium each year, which brings together over 100 leaders from 43 engineering societies for a one-day meeting with federal lawmakers, academia and industry leaders, and other renowned experts. Attendees gain firsthand knowledge of the administration’s R&D priorities and of the potential impact of the President's fiscal year budget request on the science, engineering, and technology community.

The Inter-Sector Committee on Federal Research and Development (ISCFRD) provides an opportunity for ASME members to meet with Congressional staff and federal agency officials to review the President’s annual budget request, as it relates to engineering research and development (R&D) at the federal agencies. ISCFRD volunteers provide Congress and the Administration with technical assistance, assessments, and guidance by drafting position statements from ASME’s industry and academic membership on the efficacy of federal policies and how budget priorities align with engineering research considerations.

The Washington Internships for Students of Engineering (WISE) program offers a unique opportunity to third or fourth year engineering students to spend the summer in Washington, D.C. Through meetings and discussions with prominent engineers and government officials, the students examine public policy issues of concern to ASME and the overall engineering community, and prepare research papers for publication.
Further information about ASME’s Government Relations activities, and copies of position statements referenced on the Agenda are available at: [http://www.go.asme.org/GovRelations](http://www.go.asme.org/GovRelations)

**HOW ASME’S PUBLIC POLICY PRIORITIES WERE DETERMINED**

In the spring of 2014, over 30,000 ASME members, including Society leaders and a randomly selected sample of members, were surveyed to determine the top six public policy issues of concern to the engineering community. Our priority issues for 2015-2016 were identified and prioritized by our members and will drive our activities and programs for the next two years.

The Public Policy Agenda of ASME reflects many of the policy concerns of various Society groups and leaders. It does not preclude adjustments during the next two years as public policy circumstances warrant. However, ASME expects to give the issues in this agenda special attention during the 114th Congress, which convenes in January 2015.
ENERGY

Reliable and affordable sources of energy are essential for America’s economic and national security. Continued price volatility, dependence upon politically unstable regimes for oil and gas, and global climate change concerns have brought the critical nature of energy into the public eye and underscore the need for a comprehensive energy strategy to ensure a dependable supply of energy for the United States. Major energy and environmental challenges, however, call on engineers and policymakers to take decisive steps towards more efficient and innovative energy technologies with the understanding that it will be necessary to reconcile the need for energy security with those of energy sustainability and environmental stewardship. In response to these needs, ASME offers the following recommendations to support a technologically based and economically sound national energy policy that will ensure a secure, reliable and environmentally friendly supply of energy for America.

GUIDING PRINCIPLES

1. For the economic health and security of the nation, the United States must be assured an adequate, readily available supply of energy.

2. All efficiency, conservation and energy development efforts must be based on sound science, engineering and economic principles.

3. The nation must maintain a balanced energy supply mix, which currently includes coal, petroleum, nuclear, natural gas, biomass, municipal solid waste, solar, wind and hydroelectric power, and accelerate the development of advanced energy technologies for transportation, heating and cooling, and utility-scale power production.

4. To ensure the recommendation, development, and use of the most efficient energy production
technologies, the national energy policy must adopt standardized, technically rigorous methods for calculating net energy contributions, life cycle costs, production processes, and environmental impacts of all energy sources.

5. The nation must encourage energy conservation and modernization of older, less efficient equipment, particularly in energy intensive applications, to increase the efficient use of energy resources.

6. The national energy policy must decrease the nation's dependence on petroleum by increasing supplies of non-petroleum-derived fuels, continuing to raise standards for automotive fuel efficiencies, and encouraging development and implementation of new transportation technologies.

7. The U.S. must establish a leadership position in international energy policy that addresses energy security, environmental issues, and global climate change.

8. Federal and state governments should encourage and expedite socially and technically responsible licensing and permitting processes that result in the development, installation and continued operation of energy technologies from a broad portfolio of energy resources.

9. The national energy policy must encourage and enable U.S. industries to capture and maintain leadership positions in key energy technologies to maintain robust and diversified domestic energy equipment industries and avoid future dependence on foreign suppliers of critical energy equipment.

10. The national energy policy must prioritize basic energy related research and educational programs across a broad spectrum of energy related sciences and technologies.

11. U.S. energy security relies on maintaining a highly trained and capable domestic workforce to design, build, operate and maintain the U.S. energy infrastructure.
In order to achieve these goals, ASME’s general position paper entitled “Securing America’s Energy Future” offers technical recommendations in nine different areas: energy efficiency and technology development; coal; natural gas; nuclear; renewable energy; transportation fuels; energy infrastructure; energy workforce; and the next generation of energy technologies. “Securing America’s Energy Future” is available to view at: http://files.asme.org/asmeorg/NewsPublicPolicy/GovRelations/PositionStatements/27130.pdf

RELATED POSITION STATEMENTS:

#14-22  ASME General Position Paper entitled “Securing America’s Energy Future”
#14-06  Testimony on the Department of Energy FY 2015 Budget Request
#12-24  Energy-Water-Nexus
#12-23  Energy-Water-Nexus: Will Water Determine our Energy Future?
#12-17  International Engineering Societies Call on Governments to Support the United Nations Sustainable Energy for All Initiative
#12-15  The Need for Additional U.S. Coal Fired Power Plants
#11-33  Waste-to-Energy and Materials Recovery
#11-31  ASME General Position Paper on the Blue Ribbon Commission on America’s Energy Future
MANUFACTURING/ INNOVATION AND COMPETITIVENESS

MANUFACTURING

Building a strong, modern, globally competitive manufacturing sector is critical to expanding America’s economic prowess in the 21st century. If America is to remain a global manufacturing leader, investments in science and engineering research and workforce development must remain at the forefront of the national public policy agenda.

Almost two-thirds of advanced stage research and development (R&D) is performed by U.S. manufacturers, making this sector critical to the commercialization of new technologies. In addition to supporting technological innovation and providing high-paying jobs, the manufacturing sector also provides a powerful multiplier effect on other parts of the economy, generating additional jobs in industries such as research, retail, shipping, services, and more. Furthermore, because of the need to maintain domestic capacity for the manufacture of key products – and the need to maintain a highly skilled and creative domestic workforce to support those products – manufacturing also plays a critical role in America’s national security apparatus. This makes manufacturing the foundation for both a strong, globally competitive and innovative economy and a strong national defense.

Other countries have already recognized the importance of manufacturing in spurring the creation of new products and industries – particularly in energy technology sector – and have taken steps to ensure a healthy science and engineering workforce and a competitive market for attracting investment. Within the U.S., federal programs have resulted in a number of innovations that have spawned new technologies and industries essential to manufacturing leadership and have contributed to improved capabilities and cost savings for national priorities. Many of these programs are operated in partnership with the private sector, attracting and
leverage additional outside funding to catalyze innovation and job creation. To remain competitive in the global market, U.S. manufacturers will require qualified workers, an efficient and competitive fiscal and regulatory environment, open markets, and strong partnerships to ensure a healthy innovation pipeline.

**POLICY OBJECTIVES:**

- Catalyze and sustain R&D partnerships among government, industry, and universities.
- Expand and make permanent the R&D tax credit and strengthen tax incentives for workforce development and continuing education, including those at the graduate level, for both employers and employees.
- Support scholarships to students and workers pursuing manufacturing-related engineering degrees and technical certificates.
- Support efforts to drive research through the transition from initial technology concepts to commercialization.
- Prioritize long-term federal research projects and support a balanced portfolio of engineering and scientific research among the physical and life sciences.
- Ensure a healthy pipeline of science and engineering talent for the U.S. manufacturing workforce.

**RELATED POSITION STATEMENTS:**

- **#14-01** Revitalize American Manufacturing and Innovation Act of 2013 Support Letter
- **#13-04** ASME, APLU, AAU Joint NNMI Amendment Thank you Letter
- **#11-23** ASME General Position Paper: “Strengthening the Manufacturing Sector”
INNOVATION & COMPETITIVENESS

Economic prosperity and growth in the global age is at root a story of technological innovation. Various economic analyses ascribe up to 80% of economic growth in the industrial era to technological advancements. Innovation allows us to make continual improvements in our quality of life and maximize the productivity of our citizens. It also enhances our ability to identify and collect scarce resources and use them efficiently, and to limit our adverse impact on the earth and its environment. Appropriately directed, technological advancements can also be delivered to the benefit of the global community, and can be a driver for national security.

The emergence of the United States in the 20th century as the preeminent world economic power has been largely attributed to the country’s stable political system, vast natural and human resources, manufacturing and engineering prowess, and creative capability. Underlying all of this has been an unceasing capacity for innovation. In earlier times this innovation made possible remarkable productivity gains in agriculture and manufacturing. Beginning in the 19th century, the development and dissemination of science-based best practices in agriculture allowed the nation’s growing food needs to be met by ever-smaller numbers of farm workers.

Today this innovation manifests itself in our ability to engineer new technologies in areas such as life sciences, energy, environmental sciences, and information technology, which define our quality of life and will be crucial to economic growth and prosperity in an increasingly innovative and competitive global economy. For example, R&D expenditures in China have grown at an average annual rate of 20 percent over the last decade, and China now ranks second among all nations in overall R&D expenditures, behind only the United States. As other nations invest heavily in developing an innovation ecosystem for the 21st century, the U.S. must work even harder to support institutions dedicated to the generation of new technology, knowledge, and ideas.
POLICY OBJECTIVES:

- Ensure substantial public investment in scientific research that recognizes the interdisciplinary nature of innovation.
- Establish policies that encourage private investment in R&D, including basic research.
- Enact measures to encourage partnerships between R&D performers and users.
- Promote a system of standards and conformity assessment procedures that facilitates the transfer and commercialization of innovative technical advances.
- Create initiatives to broaden the science, technology, engineering, and mathematics (STEM) pipeline at the university level; and strengthen STEM education in primary and secondary schools.
- Support life-long education initiatives to provide employees and employers with the tools necessary to compete in the global economy.

RELATED POSITION STATEMENTS:

#14-21 ASME National Science Foundation (NSF) Task Force Fiscal Year 2015 Budget Letter
#14-20 ASME National Institutes of Health (NIH) Task Force Fiscal Year 2015 Budget Letter
#14-04 Task Force on American Innovation Letter on the Frontiers in Innovation, Research, Science and Technology (FIRST) Act
#13-21 Task Force on American Innovation Letter on Addressing the Innovation Deficit
K-12 science, technology, engineering, and mathematics (STEM) education plays a critical role in enabling the U.S. to remain the economic and technological leader of the global marketplace in the 21st century. In short, the United States must align its K-12 core curriculum to the expectations of a modern workforce. Strong K-12 STEM education is not just for those students wishing to pursue technical degrees in higher education, but all students. The Administration and Congress play a key role in helping to focus and strengthen the STEM education programs in its purview.

The introduction of engineering education to the K-12 classroom has the potential to improve student learning and achievement in science and mathematics, increase awareness about what engineers do and of engineering as a potential career, as well as boost students’ overall technological literacy. Yet, only a small number of programs in the federal STEM portfolio include engineering concepts. Integrate engineering practices in the federal STEM education programs to promote critical thinking, provide new levels of relevancy to motivate students to learn science content, make engineering and engineering careers more accessible to all students, and prepare the next generation to solve global problems facing humanity.

The U.S. economy relies on the productivity, creativity, and entrepreneurship of all U.S. citizens, so it is imperative that the STEM workforce reflect the diversity of the nation. In 2011, women were awarded 18.9 percent of engineering degrees, while African Americans and Hispanics represented only 4 percent and 9 percent respectively. While these numbers do represent significant gains from the 1980s, there is still much work that needs to be done. With the predicted changes in future U.S. workforce demographics, increasing the participation of women and underrepresented groups in the U.S. STEM workforce is a 21st century national imperative.
POLICY OBJECTIVES:

- Integrate engineering practices in the federal STEM education programs to promote critical thinking, provide new levels of relevance to motivate students to learn science content, make engineering and engineering careers more accessible to all students, and prepare the next generation to solve global problems facing humanity.

- Support inclusion of the engineering design process in K-12 education, including establishing performance expectations for students in addressing open-ended problems to facilitate innovation practice and emphasize that design decisions should be knowledge-based.

- Strengthen and re-examine oversight of existing legislation and programs aimed specifically at broadening participation by under-represented groups in STEM fields.

- Increase public awareness of STEM careers, including supporting efforts to foster outreach to all students, teachers, parents, and K-12 guidance counselors.

- Provide access to a rigorous STEM curriculum, hands-on laboratory experiences, and informal learning that increases academic performance and interest in STEM careers.

- Offer incentives and mentoring for women and under-represented groups to pursue STEM coursework and careers, including teaching careers, and continue to provide professional achievement opportunities post-graduation and throughout their careers.

- Provide all members of society the opportunity to fully participate in the STEM pipeline and workforce by addressing current obstacles to the participation of women and underrepresented groups in the STEM workforce, as well as acknowledging past accomplishments.
RELATED POSITION STATEMENTS:


#14-11  Letter of Support for the “Building Understanding, Investment, Learning, and Direction (BUILD) Career and Technical Education Act”

#14-10  Letter of Support for “Supporting Afterschool STEM Act”

#14-09  Letter of Support for “Innovative STEM Networks Act”

#14-08  STEM Education Coalition Letter to Dr. John Holdren, White House Office of Science and Technology Policy, re: Administration’s STEM Strategy

#13-20  ASME Testimony to the National Action Council of Minorities in Engineering (NACME) Special Session: Advancing URMs in Education and Careers

#13-01  ASME Board on Education Comments on the Second Public Draft of NG

Research and Development (R&D) are recognized as the key drivers of economic growth and the lifeblood of national innovation and competitiveness. The U.S. is on the cutting edge of global competition because of past investments in research and development and economists estimate that up to half of the U.S. economic growth in the last five decades is due to advances in technology.
However, other nations’ capacity to perform world-class research and development has dramatically shifted in the last ten years, particularly in Asia. Exacerbating this global trend, growth in U.S. research and development has been driven by private sector sources over the last 5 years, while the federal research portfolio has remained relatively flat. While private interests provide over 70 percent of total U.S. R&D funding, the majority of private sector research is focused on the “development” side of research, while the federal government is largely responsible for the “research” side, as in basic research. This is because basic research is, by its nature, risky, i.e., there is no guarantee of short or even long-term return on the initial investment. Yet, no other federal investment generates a greater long-term return to the economy and society than basic research.

While almost 60 percent of all federal research is devoted to defense related activities, the remaining 40 percent of ‘civilian’ R&D is devoted largely to health research, which stands at over 50 percent of the non-defense federal research budget. As a result, some 80 percent of Federal R&D investments are devoted to either defense (primarily weapons systems development and testing) or health. While defense and health research remain vitally important to the nation, it is essential that investment in the leading edge technologies that underpin the U.S. economy be increased, and that a balanced investment portfolio be created and sustained.

Investments in research and development are essential to advancing innovation and for producing an engineering workforce that will be prepared to meet the challenges of the 21st century. In addition, federal research helps educate and train the next generation of scientists and engineers, which is critical to help meet the growing demand for skilled workers in the new economy.
POLICY OBJECTIVES:

- Commit to long-term investments in engineering and scientific research.

- Support a balanced portfolio of engineering and scientific research among the physical and life sciences.

- Sustain and strengthen the nation’s traditional commitment to long-term basic research that has the potential to be transformational in order to maintain the flow of new ideas that fuel the economy, provide security and enhance the quality of life.

- Support investments in research and development to advance the state of knowledge on international science and engineering workforce dynamics.

- Support efforts to double investments at the National Science Foundation (NSF), the Department of Energy’s (DOE) Office of Science and the National Institutes of Standards and Technology (NIST) that support basic research in engineering and have a potentially high impact on economic competitiveness.

- Support investments in science, engineering and technology programs at the Department of Defense at about three percent of the total DOD budget.

- Promote a well-structured and vigorously funded national, multi-agency investment across the entire spectrum of key aerospace technologies and systems in both the commercial and military sectors.

- Support strong investments in environmental R&D, which are essential for the ongoing development of science-based decision making in areas such as human health; ecosystem health; and climate, chiefly particulate matter, ozone, greenhouse gases, and water quality.
Catalyze and sustain R&D partnerships among federal governments, industry and universities.

- Leverage private sector investments in engineering research and other areas critical to economic growth.
- Permanently extend the research and development tax credit.

RELATED POSITION STATEMENTS:

#14-21 ASME National Science Foundation (NSF) Task Force Fiscal Year 2015 Budget Letter

#14-20 ASME National Institutes of Health (NIH) Task Force Fiscal Year 2015 Budget Letter

#14-17 Task Force on American Innovation Letter on the Fiscal Year 2015 Commerce-Justice-Science (CJS) House Budget

#14-15 Coalition for National Science Funding Statement on the Fiscal Year 2015 CJS Budget

#14-13 Coalition for National Security Research Letter on DOD Fiscal Year 2015 Appropriations

#14-05 ASME Department of Defense (DOD) Task Force Letter on the Fiscal Year 2015 Budget Request

#14-04 Task Force on American Innovation Letter on the Frontiers in Innovation, Research, Science and Technology (FIRST) Act

#13-21 Task Force on American Innovation Letter on Addressing the Innovation Deficit
Engineers have a long-standing professional interest in applying Science & Technology (S&T) to improve the environment and human health. Mechanical engineers increasingly collaborate with other professionals to develop innovative and cost-effective environmental technologies and systems.

The EPA plays an essential role in the nation’s efforts to protect human health and safeguard the environment, and EPA’s S&T research and development (R&D) activities are instrumental in improving environmental protection in a sound, sustainable, and cost-effective manner. R&D efforts are needed to improve environmental health and ecology, environmental monitoring, environmental technology development and implementation. Additionally, pollution prevention is also necessary in order to address the emerging concerns of climate change, as well as the environmental issues of homeland security and infrastructure protection.

The research portion of the Federal budget also provides the largest share of support for U.S. graduate students in fundamental science and engineering disciplines, through both fellowships and research grants to universities. In areas such as environmental science and national defense, a broad view across agencies, rather than a programmatic view, is necessary to ensure sufficient graduates and continuing quality in graduate programs.

The U.S. must invest in both the research and education that will empower engineers to solve looming environmental challenges such as air pollution, climate change, and water shortages.

POLICY OBJECTIVES:

- Build a strong science and technology base, both within EPA and through partnerships with industry and other federal and state government agencies.
— Support research and development within the Environmental Protection Agency (EPA) for emissions reduction technologies and alternative vehicle technologies.

— Support research and development on water quality and monitoring technologies.

— Support education of future environmental engineering professionals, and building of interdisciplinary teams through the support of extramurally funded research.

RELATED POSITION STATEMENTS:

#14-19  Comments on the Fiscal Year 2015 Budget Request for the Environmental Protection Agency

#14-18  Environmental Impact of Waste to Energy Facility Fabric Filter Bag Incineration

#12-12  What's Involved in Carbon Capture and Sequestration
STANDARDS

ASME has over 130 years of experience in developing voluntary consensus standards that are used in over 100 countries around the world. ASME uses a process to develop standards that is accredited by the American National Standards Institute (ANSI) and is consistent with principles established by the World Trade Organization’s Committee on Technical Barriers to Trade.

A standard is a document that establishes uniform criteria, methods, processes, and practices. It provides rules and guidance to designers, manufacturers, inspectors, and users of equipment and products. Standards serve as a form of communication between producers of a product and the user, providing a common language to define quality and safety criteria. Standards also substantially reduce the burdens of government by providing a basis for regulation that is both technically sound and commercially relevant.

Voluntary consensus standards are developed by committees of individuals with technical expertise in a specific field. ASME consensus standards are built upon a five principle foundation:

1. Openness
2. Transparency
3. Balance of interest
4. Due Process
5. Consensus

By funding standards development through the sale of standards, ASME is able to keep the barriers to participation low and to retain independence and freedom from potential influence by any industry or group.

The Copyright Act protects standards along with all works of authorship. While the Act was recently modified,
Congress made no exception for standards. When the government references copyrighted standards into regulations, the same considerations that underlie copyright protection for non-government-referenced standards apply.

ASME and other standards development organizations marshal the vast expertise, diverse perspectives, and technical resources that are available outside of the government in order to develop health, safety and environmental standards that are made available for government use at virtually no tax-payer cost. In addition, government use of standards decreases the burden of regulation and the costs of enforcement by conforming regulatory requirements to voluntary, user accepted standards that are already widely looked to for best practices and private self-regulation.

The federal government, through the Office of Management and Budget (OMB) Circular A-119, recognizes the benefits of private standards development and has made it a policy to require Federal agencies to incorporate privately developed standards for regulatory activities “except where inconsistent with law or otherwise impractical.” Instead of creating unique technical standards, government bodies have incorporated into their statutes and regulations numerous standards created in the private sector for independent commercial and public safety reasons. The goal of A-119 is to reduce the government’s regulatory and standards development costs. Importantly, OMB requires the agencies to “observe and protect the rights of the copyright holder and any other similar obligations.”

In 1996, Congress passed Public Law 104-113, The National Technology Transfer and Advancement Act of 1995 (NTTAA). This law establishes standards policy, coordinates the use of private-sector standards by federal agencies, and encourages, where possible, the use of standards developed by private, consensus organizations. With narrow exceptions, the Congressional policy set by the NTTAA is that: “all Federal agencies and departments

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22 - ISSUE PRIORITIES OF ASME
shall use technical standards that are developed or adopted by voluntary consensus standards bodies.” The use of standards in regulations allows, in principle, the government to be more responsive to technological innovation and the needs of industry and those served by industry.

**POLICY OBJECTIVES:**

- Support both long-standing Federal policy and recent official reviews that protect the copyright of standards incorporated by reference and encourage Federal participation in the development, and use, of private sector standards.

- Increase the use of voluntary consensus standards by government agencies as a means of satisfying regulatory requirements, as well as increase participation by government agencies in the standards development process.

- Promote performance-based technical regulations and market-accepted international standards as meeting the intent provisions of the World Trade Organization’s agreement on Technical Barriers to Trade (TBT).

**RELATED POSITION STATEMENTS:**

#12-02 Letter urging Congress to repeal Section 24 of H.R. 2845 (P.L.112-90), the “Pipeline Safety, Regulatory Certainty and Job Creation Act of 2011, pertaining to "Incorporation of Standards by Reference"

#11-03 Standards and Technical Barriers to Trade

ASME position statements are available to view at: [http://www.asme.org/about-asme/advocacy-government-relations/position-statements](http://www.asme.org/about-asme/advocacy-government-relations/position-statements)
Advancing the science and practice of mechanical engineering is the responsibility of ASME’s 36 technical groups. The Society’s technical group members are available as information resources covering all aspects of mechanical engineering, from applied mechanics to solar energy.

TECHNICAL GROUPS

- **Advanced Energy Systems**
  Addresses non-conventional or emerging energy conversion processes, both direct and indirect. Emphasis is placed on conversion from chemical and thermal to electrical or mechanical forms of energy. Recent activities have included consideration of transportation energy requirements, thermal discharge disposition, advanced power cycles, pollution impacts and the demands on technology due to the energy crisis.

- **Aerospace**
  Addresses mechanical engineering of aircraft and manned/unmanned spacecraft design, including adaptive ("smart") structures and materials, propulsion systems life support equipment.

- **Applied Mechanics**
  Involved in the fundamental and applied field of mechanics, including solids, fluids and systems as well as the specialized areas of shock and vibration, transportation and computer applications.

- **Bioengineering**
  Deals with the application of mechanical engineering knowledge, skills and principles to the conception, design, development, analysis and operation of biomechanical systems.
- **Computers and Information in Engineering**
  Covers a broad spectrum of resources relating directly to the use of computers, computing methods, software, and information management in engineering by providing a forum for understanding the application of emerging technologies that impact critical engineering issues of representation, product design and product development, exchange, management and integration of information throughout the entire engineering product and process life-cycle.

- **Design Engineering**
  Covers the art, science, and application of design engineering and to facilitate transfer of design engineering technology between industry, academe and government through programs and publications.

- **Dynamic Systems & Control**
  Provides a national and international forum to evaluate, discuss, analyze, and publish new technical results in the field; stimulate and encourage research and education innovations; enhance manpower in research and engineering education in dynamic systems and control; and lead in setting directions for the field in the future. It encompasses all aspects of the modeling, design, and control of physical systems involving forces, motions, the dynamics and control of mechanical, chemical, biological, and human-related systems, plus transportation, energy, robotics, manufacturing, processing, environmental, computational, and man-machine systems.

- **Electronic and Photonic Packaging**
  The Electronic and Photonic Packaging Group has as its objectives international cooperation, understanding, and promotion of efforts and disciplines in Microelectronics, Photonics, Microwave and Microelectromechanical Systems Packaging Engineering. The Group is concerned with all design
and engineering aspects related to theoretical (analytical and computer-aided) and experimental problems and results associated with the application of methods and approaches of engineering and applied mechanics to the analysis, design, manufacturing, testing and operation of microelectronics, optoelectronics and photonics components, devices, equipment and systems.

- **Environmental Engineering**
  Concerns air, ground and water pollution control technologies, environmental remediation, and waste management.

- **Fluid Power Systems**
  The ASME Fluid Power Systems & Technology Group is concerned with advancing the design and analysis of fluid power components, such as hydraulic and pneumatic actuators, pumps, motors and modulating components, in various systems and applications, including the most recently added areas such as microfluidics. Another core goal is to help provide quick and reliable service to both current members as well as anyone with an interest in this area. Links with other ASME areas as well as industrial, academic, governmental and international groups are another important part of networking to achieve common goals throughout the world in Fluid Power.

- **Fluids Engineering**
  Involved in all areas of fluid mechanics, encompassing both fundamental as well as applications to all types of device, processes and machines involving fluid flow, including pumps, turbines, compressors, pipelines, fluidic systems, biological fluid elements and hydraulic structures.

- **Heat Transfer**
  Deals with the theory and application of heat transfer in equipment and thermodynamic processes in all fields of mechanical engineering and related technologies.
• **IGTI**
Supports the exchange & development of information to improve design, application, manufacture, operation & maintenance, and environmental impact of gas turbines, turbomachinery and related equipment.

• **Information Storage & Processing Systems**
Serves the mechanical engineer engaged in the data storage and information processing systems industries, such as printers, scanners and digital cameras.

• **Internal Combustion Engine**
Promotes the art and science of mechanical engineering of engines, encouraging and fostering research and development for mobile, marine, rail, generation and stationary applications and summarizing and publishing reliable data concerning these pursuits since 1921.

• **Management**
Concerned with the management of the engineering process at all its levels, national and international, and specifically as applied to project and program management; process of technological innovation; motivation; communication; human resources; organization and planning; technology forecasting and assessment; product and market analysis and planning; technology forecasting and assessment; product and market analysis and planning; sales engineering organizations; technology transfer; finance; economic development; management and information systems; application of computer programs and data banks; small business; ecology, conservation and other issues; management development and education; measurement of performance; quality and productivity; employment of engineers and personal growth and management.
• **Manufacturing Engineering**  
  Fosters the transfer of technology related to manufacturing between industry, universities and national research laboratories.

• **Materials**  
  Encourages and fosters research and development, and the publication of significant technical information.

• **Materials and Energy Recovery**  
  Addresses the design, construction and operation of solid waste processing facilities.

• **Materials Handling Engineering**  
  Promotes dissemination and application of technological advancements through mechanical engineering, systems engineering and information technology.

• **MicroElectroMechanical Systems (MEMS)**  
  MEMS are defined as a miniature device or an array of devices combining electrical, mechanical, optical, chemical and/or biological components fabricated via integrated circuit or other similar manufacturing techniques. It is by its very nature a multi-disciplinary field.

• **Noise Control and Acoustics**  
  Concerns noise control and acoustics principles and its applications to noise control engineering.

• **Nondestructive Evaluation**  
  Covers the evaluation of critical system components for material/defect/structure characterization through nondestructive methods, such as ultrasonics, radiography and other techniques.

• **Nuclear Engineering**  
  Focuses on the design, analysis, development, testing, operation and maintenance of reactor systems and components, nuclear fusion, heat transport, nuclear fuels technology and radioactive waste.
Ocean Offshore & Arctic Engineering
Promotes technological progress and international cooperation in all areas of ocean, offshore and arctic engineering, and in the recovery of resources in hazardous, offshore and arctic environments such that safety, environmental and economic successes are achieved.

Petroleum
Founded for mechanical engineers working in the areas of Petroleum, Natural Gas, Petrochemicals, Coal, Oil Shale, to participate in a technical community through conferences and workshops.

Pipeline Systems
Supports a variety of pipeline related technical conferences around the world including IPC, IPG, IOGPC and the Rio Pipeline Conference.

Plant Engineering & Maintenance
Focuses on the design, fabrication, installation, operation and maintenance of manufacturing systems, equipment, processes and facilities to create products of enhanced value.

Power
Dedicated to the advancement of steam and hydro power generation and use. Sponsors professional publications, meetings, classes and discussions, and provides a forum for engineers who are interested in the design development, selection, operation, maintenance, economics, environmental effects, research, and education related to power production equipment and facilities.

Pressure Vessels and Piping
Responds to the interest of members to the rapidly changing and expanding technology of pressure boundary containment.

Process Industries
Focuses on the design of systems and machines for heating, cooling or treating industrial fluids and
gases, including the efficient management and control of the processes themselves.

- **Rail Transportation**  
  Covers engineering of railroad and mass transit systems, locomotives, freight, passenger, and commuter cars.

- **Safety Engineering and Risk Analysis**  
  Supports the advancement, implementation and dissemination of safety, health and risk-related technologies, both within the Society and externally. Specific fields of interest include industry environmental control; machine guarding; mechanical equipment safety; electrical equipment; plant utilities; personal protective equipment; toxic explosive dusts and gases; safety supervision management; process and operations layout design; maintenance; testing; safety codes; safety programs; transportation safety; product safety; fire protection; quantitative risk assessment; risk management; risk optimization; safety procedures; risk-based industrial emissions; risk-based codes; accident analysis and statistical databases; and risk acceptability.

- **Solar Engineering**  
  Established in 1966 from a group of ASME members interested in the application of solar energy to mechanical engineering systems. Solar related technologies broadly cover all renewable energy technologies (wind energy, ocean energy, bioconversion, biofuels) as well as energy conservation.

- **Technology and Society**  
  Covers all aspects of the issues concerning interactions of technology and society. To promote awareness and understanding of the interrelationships between technological innovation and the world community, especially pertaining to technology and its effects on education for and the practice of mechanical engineering.
• **Tribology**
  The field of Tribology includes the analysis of friction, wear, lubrication phenomena and the application of such principles to mechanical design, product development, manufacturing processes and machine operation.

For additional information about ASME's Technical Groups, go to https://www.asme.org/groups
For additional information about ASME, please visit http://www.asme.org

ASME GOVERNMENT RELATIONS CONTACT
Kathryn Holmes
Director, Government Relations
ASME Washington Center
1828 L Street, NW, Suite 810
Washington, DC 20036-5104
Tel: (202) 785-7390
Fax: (202) 429-9417
Email: grdept@asme.org

www.go.asme.org/GovRelations
ASME Board of Governors  
Agenda Item  
Cover Memo

Date Submitted: August 28, 2014  
BOG Meeting Date: September 28, 2014

To: Board of Governors  
From: Committee on Honors  
Presented by: Cristina Amon  
Agenda Title: New Society Award

Agenda Item Executive Summary: *(Do not exceed the space provided)*

The Committee on Honors at their April 25, 2014 meeting approved the elevation of the Aerospace Division Adaptive Structures and Material Systems Prize to a Society-Level Award.

Proposed motion for BOG Action:

To accept the Committee on Honors recommendation to elevate the Adaptive Structures and Material Systems Prize to a Society-Level Award.

Attachments: Proposal
April 4, 2014

To: ASME Committee on Honors

From: Diann Brei, Aerospace Division Chair

Subject: Proposal to elevate the ASME Adaptive Structures and Material Systems Prize to a Society-level Award.

Dear Honors Committee Members,

Please consider the enclosed proposal to elevate the ASME Adaptive Structures and Material Systems Prize to a society-level Award, in accordance with Society Policy P-3.2, revised February 2014. The Adaptive Structures and Material Systems Prize was established as a division-level award in 1993 and is overseen by the Adaptive Structures and Material Systems branch of the Aerospace Division. The award recognizes significant contributions to the sciences and technologies associated with adaptive structures and/or materials systems. This award is intended to honor a lifetime of achievement and sustained impact in the field, and is unique in that it is the only ASME award to honor a senior researcher in the field of adaptive structures and materials systems. This is in contrast to the ASME Gary Anderson Early Achievement Award, which is given only to a junior researcher in the field.

The ASME Adaptive Structures and Material Systems Prize has a long track record of success. The ASMS Branch, currently responsible for coordinating the award, typically receives ten nominations per year and has honored winners of the award since 1993:

1993: Craig Rogers
1994: Ben Wada
1995: Eric Cross
1996: Junji Tani
1997: Edward Crawley
1998: Richard Claus
1999: Robert Newnham
2000: Daniel Inman
2001: Inderjit Chopra
2002: Ephrahim Garcia
2003: Yuji Matsuzaki
2004: Greg Carman
2005: Kenji Uchino
2006: Dimitris Lagoudas
2007: Roger Ohayon
2008: Kon-Well Wang
2009: Amr Baz
2010: Jay Kudva
2011: Christopher Lynch
2012: Norman M. Wereley
2013: Alison B. Flatau
2014: Michael I. Friswell

Thank you for your consideration of this proposal.
Name of award: ASME Adaptive Structures and Material Systems Award

Outline of Award with reasons for the award to be established: The Adaptive Structures and Material Systems Prize was established as a division-level award in 1993 and is overseen by the Adaptive Structures and Material Systems (ASMS) branch of the Aerospace Division. The award recognizes significant contributions to the sciences and technologies associated with adaptive structures and/or materials systems. This award is unique in that it is the only ASME award to honor a senior researcher in the field of adaptive structures and materials systems. The award is typically given to a well-established researcher and serves to recognize the winner’s accomplishments over a highly successful career. At the society level, the award is expected to bring even more prestige and recognition, thus positively impacting the winner’s career.

Achievement to be recognized: The award recognizes significant contributions to the sciences and technologies associated with adaptive structures and/or materials systems. This award is intended to honor a lifetime of achievement and sustained impact in the field and is given only to a senior researcher in the field.

Nominee requirements: The nominee’s work must have made a significant contribution to the field of adaptive structures and material systems.

Limitations (if applicable): The winner is asked to give a plenary lecture at the annual ASME Smart Materials Adaptive Structures and Integrated Systems conference.

Comparison of award to other similar ASME awards: There are no similar ASME awards.

Form of Award: $2,000 cash award, bronze medal and certificate

Frequency of award: Yearly. The award may not be given if there are no suitable nominees.

Nominating Committee: The ASMSP committee consists of ASMSP awardees, who are still active in the field, but using only the most recent five awardees. The term limits for these five ASMSP committee members are 3 years with possible reappointment for a second 3 year term. The ASMSP committee also includes three appointees by the Chair of the Adaptive Structures and Materials Systems branch in consultation with the ASMSP committee chair. These three appointees should be senior researchers in the ASMS field, who are not ASMSP nominees. The three senior appointees can serve a one year renewable term. The current chair of the ASMSP committee selects a successor at the end of the chair’s five year term. This duty typically falls to the most recent ASMSP awardee. However, if this awardee is not willing or unable to serve, then an awardee from among the prior five years’ awardees may serve out his five year term on the ASMSP committee as committee chair, and then select a successor as above.

Review Process: Selection of the awardee is to be based on credentials and three criteria:

- Technical publications
- Advances made
- Technical leadership in the field

This list of nominees is circulated to the ASMSP committee and a vote is taken, organized by the ASMSP committee chair. ASMSP committee members vote by ranking their top 5 choices. These votes are then weighted and tabulated according to the following scoring process:
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<tr>
<th>Candidate Rank</th>
<th>Points</th>
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<tbody>
<tr>
<td>#1</td>
<td>11</td>
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<td>#2</td>
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<td>#3</td>
<td>4</td>
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<tr>
<td>#4</td>
<td>2</td>
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<tr>
<td>#5</td>
<td>1</td>
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ASMSP committee members may vote for up to 5 candidates and may have ties (e.g., if two candidates tie for second, they both receive 7 points).

The only person who ever sees the scoring sheet is the ASMSPC chair.

Nominees remain on the nomination list for 3 years once nominated.

Nominations are received at large from any source and consist of a short bio (no more than one page). The nominations are open to all at any time and consist only of an email to the Adaptive Structures and Material Systems Award (ASMSP) committee chair.

Nominations must be submitted to the Honors staff on ASME award nomination form with all supporting documents.

**Nomination deadline:** Nominations must be received by March 1. The award is presented at the annual ASME Smart Materials Adaptive Structures and Integrated Systems conference in September and announced at the annual SPIE Smart Materials and Structures conference in March. For the award to be announced in March, ASME Committee on Honors must receive the nomination October of the prior year.

**Award Endowment amount:** $75,000. Additional funds will be made available to cover the start-up expenses of a new award which will include medal design, medal striking, ordering at least five (5) new medals for inventory and certificates.

**Administrative responsibility:** The ASME Adaptive Structures and Materials Systems Award is administered by the Adaptive Structures and Materials Systems branch Executive Committee of the Aerospace Division.

The chair of the Adaptive Structures and Materials Systems Award committee is responsible for submitting list of all nominations considered in each award cycle to the ASME Honors and Awards staff.