ITEM

11. Call to Order

12. Adoption of Agenda

13. Announcements

14. Report on Closed Session

15. Discussion Items

16. Items for Receipt

17. Items for Action

18. Dates of Future Meetings

19. Contingency Time

20. Adjournment
LIST OF APPENDICES

I  Agenda Overview
II  BOG Re-Org Communications Task Force
III  Investment Update
IV  Follow-on from Retreat Discussion
V  BOG Coordination and Reporting Task Force (CRTF)
VI  COR Annual Report
VII  CPP Annual Report
VIII  COH Annual Report
IX  COG Report
X  Sector Management Committee Report
XI  Proposed Appointments
XII  By-Law B4.1 for First Reading
XIII  By-Law B4.2 for First Reading
XIV  By-Law B5.2.4.2 for First Reading
XV  By-Law B5.3 for First Reading
XVI  By-Law B6.1.2 for First Reading
XVII  By-Law B6.2 for First Reading
XVIII  By-Law B8.1 for First Reading
XIX  Society Policy P-15.6
XX  Approval of FY15 Auditor
XXI  ASME Position Paper on STEM
XXII  2015-2016 Public Policy Agenda
XXIII  Proposed Adaptive Structures and Material Systems Award
11. **Call to Order:**

On September 19, 2014, a meeting of the Board of Governors of the American Society of Mechanical Engineers was held in New York, NY. A quorum being present, the meeting was called to order by the President at 9:00 AM Eastern Time. Attendance was as follows:

**Board of Governors**
- President: J. Robert Sims
- Immediate Past President: Madiha Kotb
- President-Nominee: Julio C. Guerrero

**Other Officers**
- Senior Vice Presidents: Robert E. Grimes, Technical Events and Content
  - Cynthia M. Stong, Student and Early Career Development
  - William J. Wepfer, Public Affairs and Outreach
  - Laura E. Hitchcock, Standards and Certification
- Secretary and Treasurer: Warren R. DeVries
- Executive Director: Thomas G. Loughlin
- Deputy Executive Director: June Ling (also Second Assistant Treasurer)
- Assistant Treasurer: William Garofalo

**Board of Governors Nominees**
- Caecilia Gotama
- Sriram Somasundaram

**Corporate Counsel**
- John Sare

**Other Guests**
- James Coaker: Chair, Committee on Finance and Investment
- William Lowery: Lowery Asset Consulting
- Karen Ohland: Chair of the Group Engagement and Transition Team
- Ashish Sinha: ECLIPSE Intern
12. **Adoption of the Agenda:** The Board

   VOTED: to adopt the agenda as circulated on September 15, 2014.

13. **Announcements:**

   The President welcomed all to the meeting.

14. **Report on Closed Session**

   At the September 18, 2014 Closed Session, the 2014-15 Board:

   - After presentations and discussion, the Board voted to:
     - Approve the appointment of Timothy Wei as the 2015-2018 SVP, Public Affairs and Outreach
     - Approve the stated FY14 incentive compensation performance results for the enterprise
     - Approve the Audit Committee’s recommendations “to accept and approve ASME’s FY 2014 financial statements as presented by KPMG.”
     - Approve four COFI motions concerning the FY15 use of segregated funds
     - Approve a lease within the parameters described within the letter of intent of lease agreement regarding a NJ facility
The Board received information reports:
  - On FY15 Q1 Operational Highlights
  - On staff Organizational Design Concepts/Update, and
  - From the Corporate Counsel

15. **Discussion Items:** The Board

   **VOTED:** to move into open session, as if in the Committee of the Whole.

The Board heard reports concerning and discussed the following items:

Agenda Overview by Thomas Loughlin (Agenda Appendix 2.3 and Minutes Appendix I); Sector Management Committee Report by Julio Guerrero (Agenda Appendix 4.1.5 and Minutes Appendix X); BOG Re-Org Communications Task Force by Stacey Swisher Harnetty (Minutes Appendix II); Investment Update by William Lowery (Agenda Appendix 2.7 and Minutes Appendix III); and Follow-on from Retreat Discussion (Agenda Appendix 2.8 and Minutes Appendix IV).

The Board also heard the report on the BOG Coordination and Reporting Task Force presented by Bernard Hrubala (Agenda Appendix 2.3 and Minutes Appendix V). President Sims noted that the work of the task force has been completed and discharged the task force.

Following the close of the Discussion Items, the Board

   **VOTED:** to move into formal session.

16. **Items for Receipt:** The Board

   **VOTED:** to receive the following items: (1) COR Annual Report (Agenda Appendix 4.1.1 and Minutes Appendix VI); (2) CPP Annual Report (Agenda Appendix 4.1.2 and Minutes Appendix VII); (3) COH Annual Report (Agenda Appendix 4.1.3 and Minutes Appendix VIII); (4) COG Report (Agenda Appendix 4.1.4 and Minutes Appendix IX); and (5) SMC Report (Agenda Appendix 4.1.5 and Minutes Appendix X).

17. **Items for Action:** The Board

   **VOTED:** to approve the following items: (1) Minutes from the Meeting on June 8, 2014; (2) Minutes from the Meeting on June 11, 2014; (3) Proposed Appointments (Agenda Appendix 4.2.4 and Minutes Appendix XI); (4) Revisions to By-Law B4.1 (Agenda Appendix 4.2.5.1 and Minutes Appendix XII); (5) Revisions to By-Law B4.2 (Agenda Appendix 4.2.5.2 and Minutes Appendix XIII); (6) Revisions to By-Law B5.2.4.2 (Agenda Appendix 4.2.5.3 and Minutes Appendix XIV); (7) Revisions to By-Law B5.3 (Agenda Appendix 4.2.5.4 and Minutes Appendix XV); (8) Revisions to By-Law B6.1.2 (Agenda Appendix 4.2.5.5 and Minutes Appendix XVI); (9) Revisions to By-Law B6.2 (Agenda Appendix 4.2.5.6 and Minutes Appendix XVII); (10) Revisions to By-Law B8.1 (Agenda Appendix 4.2.5.7 and Minutes Appendix XVIII); (11) Revisions to
Society Policy P-15.6 (Agenda Appendix 4.2.6.1 and Minutes Appendix XIX); (12) FY15 Auditor (Agenda Appendix 4.2.7 and Minutes Appendix XX); (13) ASME Position Paper on STEM (Agenda Appendix 4.2.8 and Minutes Appendix XXI); (14) 2015-2016 Public Policy Agenda (Agenda Appendix 4.2.9 and Minutes Appendix XXII); and (15) New Adaptive Structures and Material Systems Award (Agenda Appendix 4.2.10 and Minutes Appendix XXIII).

18. **Dates of Future Meetings.** The Board approved meeting dates and times as follows:

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<thead>
<tr>
<th>DATE</th>
<th>DAY</th>
<th>TIME</th>
<th>LOCATION</th>
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<tr>
<td>November 15, 2014 (a)</td>
<td>Saturday</td>
<td>8:30 AM – 4:30 PM</td>
<td>Montreal, Canada</td>
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<tr>
<td>February 12, 2015 (a)</td>
<td>Thursday</td>
<td>12:00 PM – 2:00 PM</td>
<td>Web conference</td>
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<tr>
<td>April 16, 2015 (a)</td>
<td>Thursday</td>
<td>12:00 PM – 5:00 PM</td>
<td>New York, NY</td>
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<td>June 7, 2015 (a)</td>
<td>Sunday</td>
<td>10:00 AM – 4:00 PM</td>
<td>Jacksonville, FL</td>
</tr>
<tr>
<td>June 10, 2015 (b)</td>
<td>Wednesday</td>
<td>10:00 AM – 3:00 PM</td>
<td>Jacksonville, FL</td>
</tr>
<tr>
<td>September 10, 2015 (b)</td>
<td>Thursday</td>
<td>1:00 PM – 5:00 PM</td>
<td>New York, NY</td>
</tr>
<tr>
<td>September 11, 2015 (b)</td>
<td>Friday</td>
<td>8:00 AM – 1:00 PM</td>
<td>New York, NY</td>
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</table>

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

19. **Contingency Time:** The following items were covered during contingency time: (1) The choice of items for the open and closed sessions for the BOG; (2) The involvement of students at ASME conferences; and (3) The role of the Student and Early Career Sector.

20. **Adjournment:** The meeting was adjourned on Friday, September 19, 2014 at 11:35 AM Eastern Time.

________________________
Warren R. DeVries
Secretary
Date Submitted: September 15, 2014
BOG Meeting Date: September 19, 2014

To: Board of Governors
From: (Sector/Unit/Task Force/Other) Tom Loughlin
Presented by: Tom Loughlin
Agenda Title: Agenda Overview

Agenda Item Executive Summary: (Do not exceed the space provided)
Overview of the BOG September 19, 2014 agenda.

Proposed motion for BOG Action: (if appropriate)

Attachments:
PowerPoint Presentation
ASME VISION

To be the essential resource for mechanical engineers and other technical professionals throughout the world for solutions that benefit humankind.
Mission: ASME’s mission is to serve diverse global communities by advancing, disseminating and applying engineering knowledge for improving the quality of life; and communicating the excitement of engineering.

Core Values:
In performing its mission, ASME adheres to these core values:
• Embrace integrity and ethical conduct
• Embrace diversity and respect the dignity and culture of all people
• Nurture and treasure the environment and our natural and man-made resources
• Facilitate the development, dissemination and application of engineering knowledge
• Promote the benefits of continuing education and of engineering education
• Respect and document engineering history while continually embracing change
• Promote the technical and societal contribution of engineers

9/19 Open Session Agenda Review:

Discussion Items:
1. SMC Report...Julio Guerrero (Item 2.4)
3. BOG Re-Org Communications Task Force ... Stacey Swisher Harnetty (Item 2.5)
3. BOG Coordination and Reporting Task Force (CRTF)...Bernie Hrubala (Item 2.6)
4. Investment Update ... William Lowery (Item 2.7)
5. Follow-on from Retreat Discussion ... J. Robert Sims & Tom Loughlin (Item 2.8)

Action Items:
As listed in agenda.
Re-Organization Communication Task Force Update to BOG

September 19, 2014

Communications and Training

- ONE ASME discussed in plenary sessions of Power, Turbo Expo & SMASIS
- Continuing presentations at summer Divisional Executive Committee meetings at ASME conferences
- Division Training held July 2014 with over 100 volunteer leaders in attendance
- Full day trainings to be held Houston 9/27 and Istanbul 10/11
- ASME News article on ONE ASME training published
Communications and Training

- **At a Glance** fact sheet and newsletter template created for distribution to all groups
- **Engineering a Brighter Future** and *Segregated Accounts and Activity Approval for ASME Groups* brochures published for distribution to all groups

Technical Events & Content (TEC) Sector

- Continuing outreach to potential volunteer leaders to fill Segment gaps
- Initial TEC Sector Council Meeting: August 2014 Highlights included:
  - Review of TEC Operations Guide and Segment Guide
  - Review of “Rules of Engagement for Conference Initiation, Planning and Execution” RECIPE (EPEG 2.0), which will be distributed to Divisions
  - Preparations initiated for TEC Strategic Planning meeting
Technical Events & Content (TEC) Sector

- TEC Strategic Planning Retreat held with all four segments, Park City, UT Sept 11-14
- 40 Attendees; Nearly all segments fully represented. Highlights:
  - Previous wins shared (volunteer/staff partnering to meet market needs)
  - Energy-market intelligence from ASME Marketing Department and Brussels office shared
  - Conference planning primer, current product portfolio reviewed
  - Traditional strategic plan development begun by groups
  - Formulation of paths forward for each Segment begun

Group Pathways & Support (GPS) System

- Group Engagement Transition Team (led by Karen Ohland) met, outlined & assigned coming activities through next 6 months
- Dedicated E-mail Account created: gps@asme.org
- New GPS Group Page on ASME.org launched; features include Activity Feeds, News & Updates, Forums, Resources for Groups

ASME Group Pathways & Support (GPS) System

GPS is a new staff function that is designed to serve as a clearinghouse, by educating and guiding members about opportunities to engage while providing assistance for new or unfamiliar processes in all sectors, including:

- Public Affairs & Outreach (PA&O)
- Student & Early Career Development (SECD)
- Other ASME Products and Programs
- Standards & Certification (S&C)
- Technical Events and Content (TEC)
Group Pathways & Support (GPS) System

- Online tool creation in process:
  Will allow Groups to view/track Group spending activity
- Online “GPS Requisition Tool” in development
- FY14 Merit Based Funding (MBF) program process:
  Implementation begun. (Last year for this activity).

Increasing Staff Competencies

- Overall staffing plan submitted & approved:
  - TEC Marketing Manager now hired
  - Meetings Manager for IGTI conferences now hired
  - End-stage of hire process for TEC Conferences Director with experience running large technical and commercial, international conferences and exhibitions
  - Interview stage of hire process for >4 new, seasoned meeting planner professionals
Engagement with Other Sectors

• Continuing to hold meetings with staff and volunteers from Sectors and business units to get their perspective on:
  • “Rules of Engagement” for Groups with respect to activities under their purview
  • Process for approving those Group activities
  • Met with Foundation Executive Director to discuss logistical handling of fundraising, scholarships and awards
Date Submitted: September 12, 2014
BOG Meeting Date: September 19, 2014

To: Board of Governors
From: (Sector/Unit/Task Force/Other) Committee on Finance and Investment
Presented by: William Lowery
Agenda Title: Investment Update

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

Update on ASME’s investment portfolio.

Proposed motion for BOG Action: (if appropriate)

Attachments:

PowerPoint Presentation
Lowery Asset Consulting – The Firm

- Privately held institutional investment consulting firm based in downtown Chicago
- Registered Investment Advisor (SEC)
- National clientele: Not for profits, high net worth, pensions, foundations, endowments, et. al
- 100% Arms length consultant: consulting is our only business
- Experience dating back to 1970's
- Advises on approximately $7.0 billion
LAC advises ASME on the following areas:

- Investment policy
- Performance evaluation
- Investment manager search and due diligence
- Portfolio rebalancing / Asset allocation adjustments
- Market Outlook
Lowery Manager Search Methodology

Initial Database Screening
- Over 7,000 mutual funds
- 3,500 separate account managers
- 3,000 Hedge Funds

Manager Meetings
- Hundreds Annually

Quantitative Screening
- Return relative to a benchmark
- Returns relative to peer groups
- Risk measures: Alpha, Information Ratio, Up/Down capture, Sharpe Ratio, etc.

Qualitative Evaluation
- Assets under management
- Ownership structure
- Industry reputation
- Market cap analysis
- Portfolio duration & structure analysis
- Growth in assets under management
- Investment thesis viability
- Compensation structure of professionals
- Star system vs. team approach
- Expenses, Turnover & trading costs

Due Diligence and Follow-up
- Client reference checks
- Depth of research staff
- System of internal controls
- Compliance and operational systems
- Composite construction methodology
WILLIAM G. LOWERY
CEO/MEMBER

Mr. Lowery is Chief Executive Officer of Lowery Asset Consulting, LLC. His primary responsibilities include manager research and due diligence, tactical and strategic asset allocation research, providing consulting services to institutional and family trust clients, and is a member of the firm’s investment committee. He is well known in the institutional consultant community with over twenty-six years of experience in research and consulting. His work with distressed debt, hedge funds and short-sellers dates back to 1990, one of the longer experience records in the industry. Not only has he interviewed and studied well over 14,000 investment firms in his twenty-six year career; he remains active in the critical process today. He has been quoted in major publications such as Business Week, Chicago Tribune, Pensions and Investments, The Wall Street Journal, Fortune, and IBD. He is a graduate and academic scholarship winner at the University of Missouri and attended DePaul University for graduate studies.
### ASME Portfolios – Performance as of 6/30/2014

#### ASME*

<table>
<thead>
<tr>
<th>Manager/Benchmark/Peer</th>
<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Portfolio</strong></td>
<td>09/2004 (9.8 yr)</td>
<td>127,910,865</td>
<td>4.14</td>
<td>6.11</td>
<td>17.08</td>
<td>17.08</td>
<td>9.47</td>
<td>12.47</td>
<td>7.25</td>
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<tr>
<td>Dynamic Benchmark**</td>
<td></td>
<td></td>
<td>4.08</td>
<td>5.85</td>
<td>15.94</td>
<td>15.94</td>
<td>8.84</td>
<td>10.75</td>
<td>7.11</td>
<td>7.11</td>
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</table>

**Foundation – Reporting began December 2013 for Foundation**

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<th>Manager/Benchmark/Peer</th>
<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
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</thead>
<tbody>
<tr>
<td><strong>Total Portfolio</strong></td>
<td>12/2013 (0.6 yr)</td>
<td>25,456,214</td>
<td>4.15</td>
<td>6.32</td>
<td>6.32</td>
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<td>4.02</td>
<td>5.77</td>
<td>5.77</td>
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<td></td>
<td></td>
<td></td>
<td>6.84</td>
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**Pension – 49% of portfolio invested in LDI strategy that has compounded at 10.40% over the last 3 years**

<table>
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<tr>
<th>Manager/Benchmark/Peer</th>
<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
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<td><strong>Total Portfolio</strong></td>
<td>07/2004 (10.0 yr)</td>
<td>51,699,629</td>
<td>4.84</td>
<td>8.95</td>
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<td>17.35</td>
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<td>11.03</td>
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<td>8.57</td>
<td>9.92</td>
<td>6.36</td>
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*ASME – General, Designated, Restricted Investments and Auxiliary Investments
**Dynamic benchmarks represent passive indices utilizing the same asset allocation
ASME PORTFOLIOS — ALLOCATIONS ASME AND FOUNDATION 06/30/2014

ASME

- Large Value: 9%
- Large Blend: 28%
- Small Blend: 5%
- Tactical Equity: 1%
- Hard Assets: 4%
- International: 16%
- Core Bond: 38%
- TIPS: 3%

Foundation

- Large Value: 8%
- Large Blend: 28%
- TIPS: 1%
- Tactical Equity: 1%
- Hard Assets: 4%
- International: 15%
- Small Blend: 5%

Red indicates bonds
Blue indicates equities
ASME Portfolios – Allocations Pension 06/30/2014

Red indicates bonds
Blue indicates equities
DELIVERY OF SERVICES

- Monthly and quarterly reports
- Quarterly communications
- More frequent discussions when necessary
- All calls incorporate assessment of current market risks, opportunities, and conditions in adjusting the overall asset allocation
OUTLOOK

- Worldwide low rates support bond and equity markets
- Cheaper valuations support non–US markets
- Energy is favored amongst real assets
- US economic growth supports equity and corporate bond markets
- European monetary actions should provide economic stimulus by devaluing the Euro which will support exports and global securities (stock and bond) markets
- Inflation relatively subdued in the foreseeable future
American Society of Mechanical Engineers

Period Ending 06/30/2014

Past performance is not indicative of future results. Please see important information at the end of this report.
EXECUTIVE SUMMARY - MANAGER & ALLOCATION FOCUS

American Society of Mechanical Engineers

03/31/2014 to 06/30/2014

Asset Allocation

<table>
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<tr>
<th>Asset Class</th>
<th>Weight</th>
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<tr>
<td>Equities</td>
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<td>Fixed Income</td>
<td>36.18</td>
<td>46,277,756</td>
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<tr>
<td>Alternative</td>
<td>1.71</td>
<td>2,189,636</td>
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Portfolio Constituents

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<tr>
<td>Neuberger Berman</td>
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<td>Vanguard Institutional Index</td>
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<td>LKCM Small Cap Equity Instl</td>
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<td>Dodge &amp; Cox International Stock</td>
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<td>Manning &amp; Napier Overseas</td>
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<td>T. Rowe Price New Era</td>
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<td>Loomis Sayles</td>
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<td>PIMCO Total Return I</td>
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<td>Leuthold Core Investment</td>
<td>1.71</td>
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Total Asset Allocation

100.00  127,910,865

Minutes Appendix III

Page 14 of 29

Past performance is not indicative of future results. Please see important information at the end of this report.
## MANAGER PERFORMANCE BY STRATEGY WITH PEER RANK FY

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<thead>
<tr>
<th>Manager/Benchmark/Peer</th>
<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
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### Equity - Large Cap Value

<table>
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<th>MV/WT%</th>
<th>QTD</th>
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<td>Russell 1000 Value</td>
<td></td>
<td>9.5%</td>
<td>5.10</td>
<td>8.27</td>
<td>23.81</td>
<td>23.81</td>
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<tr>
<td>Rank in Large Value</td>
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<td>41</td>
<td>41</td>
<td>27</td>
<td>85</td>
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</table>

### Equity - Large Cap Core

<table>
<thead>
<tr>
<th>Manager/Benchmark/Peer</th>
<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanguard Institutional Index</td>
<td>09/2004 (9.8 yr)</td>
<td>35,855,877</td>
<td>5.23</td>
<td>7.11</td>
<td>24.56</td>
<td>24.56</td>
<td>18.82</td>
<td>7.79</td>
<td>7.79</td>
<td></td>
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<tr>
<td>S&amp;P 500</td>
<td></td>
<td>28.0%</td>
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<td>24.60</td>
<td>24.60</td>
<td>18.84</td>
<td>7.77</td>
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<tr>
<td>Rank in Large Blend</td>
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<td>24</td>
<td>28</td>
<td>40</td>
<td>40</td>
<td>22</td>
<td>23</td>
<td>32</td>
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<td></td>
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<tr>
<td>Strategy Total</td>
<td>35,855,877</td>
<td>5.23</td>
<td>7.11</td>
<td>24.56</td>
<td>24.56</td>
<td>16.56</td>
<td>18.82</td>
<td>7.79</td>
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### Equity - Small Cap Core

<table>
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<tr>
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<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td>LKCM Small Cap Equity Instl</td>
<td>03/2006 (8.3 yr)</td>
<td>6,433,722</td>
<td>0.61</td>
<td>-0.74</td>
<td>19.75</td>
<td>19.75</td>
<td>10.03</td>
<td>20.12</td>
<td>7.73</td>
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<td>Russell 2000</td>
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<td>2.04</td>
<td>3.18</td>
<td>23.63</td>
<td>23.63</td>
<td>14.57</td>
<td>20.21</td>
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<td>91</td>
<td>99</td>
<td>84</td>
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<td>95</td>
<td>47</td>
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<tr>
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<td>0.61</td>
<td>-0.74</td>
<td>19.75</td>
<td>19.75</td>
<td>10.03</td>
<td>20.12</td>
<td>7.73</td>
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### Equity - International

<table>
<thead>
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<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
</tr>
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<tbody>
<tr>
<td>Dodge &amp; Cox International Stock</td>
<td>12/2006 (7.5 yr)</td>
<td>11,219,294</td>
<td>5.00</td>
<td>7.90</td>
<td>29.31</td>
<td>29.31</td>
<td>14.89</td>
<td>5.75</td>
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<tr>
<td>MSCI ACWI ex USA</td>
<td></td>
<td>8.8%</td>
<td>5.02</td>
<td>5.56</td>
<td>21.75</td>
<td>21.75</td>
<td>5.73</td>
<td>11.11</td>
<td>4.07</td>
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<tr>
<td>Rank in International Large Blend</td>
<td></td>
<td>18</td>
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<td>1</td>
<td>1</td>
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<td>1</td>
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<tr>
<td>Manning &amp; Napier Overseas</td>
<td>09/2010 (3.8 yr)</td>
<td>9,146,269</td>
<td>3.24</td>
<td>5.44</td>
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<td>20.79</td>
<td>5.67</td>
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<td>11.73</td>
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<tr>
<td>MSCI ACWI ex USA</td>
<td></td>
<td>7.2%</td>
<td>5.02</td>
<td>5.56</td>
<td>21.75</td>
<td>21.75</td>
<td>5.73</td>
<td>11.28</td>
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<td></td>
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<tr>
<td>Rank in International Large Blend</td>
<td></td>
<td>67</td>
<td>20</td>
<td>53</td>
<td>53</td>
<td>71</td>
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<td>6.78</td>
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<td>25.65</td>
<td>8.44</td>
<td>15.11</td>
<td>5.88</td>
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</table>

*Past performance is not indicative of future results. Please see important information at the end of this report.*
# Manager Performance by Strategy with Peer Rank FY

**American Society of Mechanical Engineers**

08/31/2004 to 06/30/2014

## Equity - Natural Resources

<table>
<thead>
<tr>
<th>Manager/Benchmark/Peer</th>
<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>T. Rowe Price New Era</strong></td>
<td>09/2004 (9.8 yr)</td>
<td>1,023,935</td>
<td>11.49</td>
<td>14.90</td>
<td>31.86</td>
<td>31.86</td>
<td>4.72</td>
<td>12.50</td>
<td>10.50</td>
<td>10.50</td>
</tr>
<tr>
<td>S&amp;P North American Natural Resources</td>
<td></td>
<td>0.8%</td>
<td>13.37</td>
<td>16.43</td>
<td>33.16</td>
<td>33.16</td>
<td>6.74</td>
<td>14.76</td>
<td>12.01</td>
<td>12.01</td>
</tr>
<tr>
<td>Rank in Natural Resources</td>
<td></td>
<td>16</td>
<td>20</td>
<td>22</td>
<td>22</td>
<td>25</td>
<td>36</td>
<td>59</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vanguard Specialized Energy Fund</strong></td>
<td>09/2004 (9.8 yr)</td>
<td>3,554,081</td>
<td>11.40</td>
<td>14.19</td>
<td>30.70</td>
<td>30.70</td>
<td>7.40</td>
<td>13.28</td>
<td>13.18</td>
<td>13.18</td>
</tr>
<tr>
<td>Dow World Oil &amp; Gas</td>
<td></td>
<td>2.8%</td>
<td>12.05</td>
<td>13.48</td>
<td>29.73</td>
<td>29.73</td>
<td>6.54</td>
<td>11.79</td>
<td>11.11</td>
<td>11.11</td>
</tr>
<tr>
<td>Rank in Natural Resources</td>
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<td>17</td>
<td>23</td>
<td>28</td>
<td>28</td>
<td>17</td>
<td>25</td>
<td>9</td>
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<tr>
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<td></td>
<td>4,578,016</td>
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<td>14.34</td>
<td>30.96</td>
<td>30.96</td>
<td>6.37</td>
<td>13.00</td>
<td>11.60</td>
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</table>

## Fixed Income - Intermediate Term

<table>
<thead>
<tr>
<th>Manager/Benchmark/Peer</th>
<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Loomis Sayles</strong></td>
<td>09/2004 (9.8 yr)</td>
<td>25,784,946</td>
<td>2.85</td>
<td>5.91</td>
<td>8.18</td>
<td>8.18</td>
<td>6.40</td>
<td>8.82</td>
<td>5.77</td>
<td>5.77</td>
</tr>
<tr>
<td>Barclays Aggregate Bond</td>
<td></td>
<td>20.2%</td>
<td>2.04</td>
<td>3.92</td>
<td>4.37</td>
<td>4.37</td>
<td>3.66</td>
<td>4.86</td>
<td>4.94</td>
<td>4.94</td>
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<tr>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PIMCO Total Return I</strong></td>
<td>09/2004 (9.8 yr)</td>
<td>16,972,105</td>
<td>2.37</td>
<td>3.70</td>
<td>4.88</td>
<td>4.88</td>
<td>4.32</td>
<td>6.38</td>
<td>6.37</td>
<td>6.37</td>
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<tr>
<td>Barclays Aggregate Bond</td>
<td></td>
<td>13.3%</td>
<td>2.04</td>
<td>3.92</td>
<td>4.37</td>
<td>4.37</td>
<td>3.66</td>
<td>4.86</td>
<td>4.94</td>
<td>4.94</td>
</tr>
<tr>
<td>Rank in Intermediate-Term Bond</td>
<td></td>
<td>24</td>
<td>71</td>
<td>51</td>
<td>51</td>
<td>43</td>
<td>41</td>
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<td>Strategy Total</td>
<td></td>
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<td>5.02</td>
<td>6.84</td>
<td>6.84</td>
<td>5.54</td>
<td>7.80</td>
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</table>

## Fixed Income - TIPS

<table>
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<tr>
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<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vanguard Short-Term TIPS</strong></td>
<td>09/2013 (0.8 yr)</td>
<td>3,520,705</td>
<td>1.54</td>
<td>1.70</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>0.71</td>
</tr>
<tr>
<td>Barclays US TIPS</td>
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<td>2.8%</td>
<td>3.81</td>
<td>5.83</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>6.29</td>
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<tr>
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<td>95</td>
<td>95</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Strategy Total</td>
<td></td>
<td>3,520,705</td>
<td>1.54</td>
<td>1.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.71</td>
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</table>

## Alternative - Tactical

<table>
<thead>
<tr>
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<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Long-Short</td>
<td></td>
<td>1.7%</td>
<td>2.05</td>
<td>2.92</td>
<td>11.50</td>
<td>11.50</td>
<td>5.36</td>
<td>5.70</td>
<td>5.70</td>
<td>2.34</td>
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<td>45</td>
<td>31</td>
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</table>

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## Contribution Analysis

### Summary

<table>
<thead>
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<th>Portfolio Return</th>
<th>4.08</th>
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<tbody>
<tr>
<td>Sum of Contributions</td>
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### By Manager

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<thead>
<tr>
<th>Fund Name</th>
<th>Avg. Weight</th>
<th>Contribution</th>
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<tr>
<td>Vanguard Institutional Index</td>
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<td>1.43</td>
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<tr>
<td>Neuberger Berman</td>
<td>9.35</td>
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</tr>
<tr>
<td>Loomis Sayles</td>
<td>20.38</td>
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<tr>
<td>Dodge &amp; Cox International Stock</td>
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<td>0.43</td>
</tr>
<tr>
<td>PIMCO Total Return I</td>
<td>13.51</td>
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</tr>
<tr>
<td>Vanguard Specialized Energy Fund</td>
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<tr>
<td>Manning &amp; Napier Overseas</td>
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<td>0.23</td>
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<tr>
<td>T. Rowe Price New Era</td>
<td>0.77</td>
<td>0.08</td>
</tr>
<tr>
<td>Leuthold Core Investment</td>
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<td>Vanguard Short-Term TIPS</td>
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<td>0.04</td>
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<td>0.02</td>
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<td><strong>Total</strong></td>
<td><strong>100.00</strong></td>
<td><strong>4.08</strong></td>
</tr>
</tbody>
</table>

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American Society of Mechanical Engineers - Foundation
Period Ending 06/30/2014

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**EXECUTIVE SUMMARY - MANAGER & ALLOCATION FOCUS**

**Asset Allocation**

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Weight</th>
<th>Market Value</th>
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<tr>
<td>Equities</td>
<td>60.76</td>
<td>15,468,153</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>37.41</td>
<td>9,522,961</td>
</tr>
<tr>
<td>Alternative</td>
<td>1.83</td>
<td>465,099</td>
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</table>

**Portfolio Constituents**

<table>
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<tr>
<th>Constituent</th>
<th>Weight</th>
<th>Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuberger Berman</td>
<td>8.36</td>
<td>2,127,487</td>
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<tr>
<td>Vanguard Institutional Index</td>
<td>28.03</td>
<td>7,135,692</td>
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<td>LKCM Small Cap Equity Instl</td>
<td>5.25</td>
<td>1,337,672</td>
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<td>2,162,338</td>
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<td>Manning &amp; Napier Overseas</td>
<td>6.81</td>
<td>1,732,631</td>
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<td>Vanguard Specialized Energy Fund</td>
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<td>754,840</td>
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<td>Natixis Loomis Sayles Core Plus Bond</td>
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<td>5,497,991</td>
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<td>Vanguard Short-Term TIPS</td>
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<tr>
<td>Leuthold Core Investment</td>
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<td>465,099</td>
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**Asset Class Weight**

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<tr>
<th>Asset Class</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Equities</td>
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<td>Fixed Income</td>
<td>37.41</td>
</tr>
<tr>
<td>Alternative</td>
<td>1.83</td>
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**Portfolio Weight**

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<th>Weight</th>
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<tr>
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<td>Fixed Income</td>
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<tr>
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<td>1.8%</td>
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**Asset Class Market Value**

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<tr>
<td>Alternative</td>
<td>465,099</td>
</tr>
</tbody>
</table>

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## MANAGER PERFORMANCE BY STRATEGY WITH PEER RANK FY

**American Society of Mechanical Engineers - Foundation**

### 11/30/2013 to 06/30/2014

<table>
<thead>
<tr>
<th>Manager/Benchmark/Peer</th>
<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Portfolio</strong></td>
<td>12/2013 (0.6 yr)</td>
<td>25,456,214</td>
<td>4.15</td>
<td>6.32</td>
<td>6.32</td>
<td>9.00</td>
<td></td>
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<td></td>
<td>9.00</td>
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<tr>
<td>Dynamic Benchmark</td>
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### Equity - Large Cap Value

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<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neuberger Berman</strong></td>
<td>12/2013 (0.5 yr)</td>
<td>2,127,487</td>
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<td>9.12</td>
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### Equity - Large Cap Core

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<th>YTD</th>
<th>FYTD</th>
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<th>10 Yr</th>
<th>Inception</th>
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<tbody>
<tr>
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<td>7,135,692</td>
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### Equity - Small Cap Core

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<th>YTD</th>
<th>FYTD</th>
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<th>10 Yr</th>
<th>Inception</th>
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<tr>
<td><strong>LKCM Small Cap Equity Instl</strong></td>
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<td>1,337,672</td>
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Past performance is not indicative of future results. Please see important information at the end of this report.
### Manager Performance by Strategy with Peer Rank FY

**American Society of Mechanical Engineers - Foundation**

11/30/2013 to 06/30/2014

<table>
<thead>
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<th>Manager/Benchmark/Peer</th>
<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
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<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
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<tr>
<td><strong>Fixed Income - TIPS</strong></td>
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<td>1.70</td>
<td>1.54</td>
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<td>1.70</td>
<td>1.70</td>
<td>1.63</td>
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<tr>
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<td>7.21</td>
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<td>7.21</td>
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<tr>
<td>Avg. Long-Short</td>
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<td>4.18</td>
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## Summary

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<td>Sum of Contributions</td>
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<td>Portfolio Activity</td>
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## By Manager

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<tr>
<td>Vanguard Institutional Index</td>
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<td>Neuberger Berman</td>
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<td>Dodge &amp; Cox International Stock</td>
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<td>PIMCO Total Return I</td>
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<td>Vanguard Specialized Energy Fund</td>
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<td>T. Rowe Price New Era</td>
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<td>Leuthold Core Investment</td>
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<tr>
<td>Vanguard Short-Term TIPS</td>
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<tr>
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<td><strong>Total</strong></td>
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American Society of Mechanical Engineers - Pension
Period Ending 06/30/2014
**EXECUTIVE SUMMARY - MANAGER & ALLOCATION FOCUS**

**American Society of Mechanical Engineers - Pension**

**03/31/2014 to 06/30/2014**

### Asset Allocation

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### Portfolio Constituents

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**Total** 100.00 51,699,629
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<th>Inception Period</th>
<th>MV/WT%</th>
<th>QTD</th>
<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>Inception</th>
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<td>8.95</td>
<td>17.35</td>
<td>17.35</td>
<td>9.00</td>
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</table>

**Equity - Large Cap Core**

| TIAA Equity            | 07/2004 (10.0 yr) | 9,030,030 | 4.61 | 5.89 | 23.93 | 23.93 | 12.71 | 16.61 | 7.53 | 7.53 |
| CREF Equity Benchmark  |                  | 17.5%    | 4.98 | 6.80 | 24.71 | 24.71 | 14.76 | 17.99 | 8.19 | 8.19 |
| Strategy Total         |                  | 9,030,030 | 4.61 | 5.89 | 23.93 | 23.93 | 12.71 | 16.61 | 7.53 | 7.53 |

**Equity - International**

| Dodge & Cox International | 10/2005 (8.7 yr) | 2,748,425 | 5.00 | 7.90 | 29.31 | 29.31 | 10.41 | 14.89 | 7.30 |
| MSCI ACWI ex USA         |                  | 5.3%     | 5.02 | 5.56 | 21.75 | 21.75 | 5.73  | 11.11 | 5.67 |
| Rank in International Large Blend | | 18 | 1 | 1 | 1 | 1 | |
| Manning & Napier Overseas | 01/2010 (4.4 yr) | 2,196,226 | 3.24 | 5.44 | 20.79 | 20.79 | 5.67  | 7.55 |
| MSCI ACWI ex USA         |                  | 4.2%     | 5.02 | 5.56 | 21.75 | 21.75 | 5.73  | 7.14 |
| Rank in International Large Blend | | 67 | 20 | 53 | 53 | 71 | |
| Strategy Total           |                  | 4,944,651 | 4.21 | 6.79 | 25.38 | 25.38 | 8.20  | 13.22 | 6.41 |

**Equity - Natural Resources**

<p>| T. Rowe Price New Era   | 07/2004 (10.0 yr) | 1,763,396 | 11.49 | 14.90 | 31.86 | 31.86 | 4.72  | 12.50 | 10.50 | 10.50 |
| S&amp;P North American Natural Resources | | 3.4% | 13.37 | 16.43 | 33.16 | 33.16 | 6.74  | 14.76 | 12.01 | 12.01 |
| Rank in Natural Resources |                  | 16 | 20 | 22 | 22 | 25 | 36 | 59 | |
| Dow World Oil &amp; Gas     |                  | 5.0%     | 12.05 | 13.48 | 29.73 | 29.73 | 6.54  | 11.79 | 11.11 | 11.11 |
| Rank in Natural Resources |                  | 17 | 23 | 28 | 28 | 17 | 26 | 9 | |
| Strategy Total          |                  | 4,335,906 | 11.44 | 14.48 | 31.18 | 31.18 | 5.35  | 12.77 | 11.77 | 11.77 |</p>
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<th>YTD</th>
<th>FYTD</th>
<th>1 Yr</th>
<th>3 Yr</th>
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# Contribution Analysis

## Summary

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<td>Dodge &amp; Cox International</td>
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## By Strategy

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<td>Fixed Income - High Yield</td>
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<td>Fixed Income - Core</td>
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<td>Cash</td>
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<td><strong>Total</strong></td>
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ASME Board of Governors
Agenda Item
Cover Memo

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 Board of Governors Retreat

Kiawah Island, SC
**2014 RETREAT AGENDA**

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Non-Profit Governance in 2014 - Speaker/Facilitator: John Stout</th>
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<tr>
<td><strong>Session 2</strong></td>
<td>Concurrent Sessions:</td>
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<tr>
<td>Governance Implications (BOG)</td>
<td>Role &amp; Function in the New ASME (SMC)</td>
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<tr>
<td><strong>Session 3</strong></td>
<td>Engineering Education: Status &amp; Trends in Undergraduate and Continuing Education - Speaker: Bill Wepfer</td>
</tr>
<tr>
<td><strong>Session 4</strong></td>
<td>Advanced Manufacturing - Speaker: Tom Kurfess</td>
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<tr>
<td><strong>Session 5</strong></td>
<td>Energy – New Frontiers - Speaker: Kevin Hurst</td>
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<tr>
<td><strong>Session 6</strong></td>
<td>Panel Discussion – Exploring the Impact on ASME’s Mission - Moderator: Tom Loughlin; Panelists: Bill Wepfer, Tom Kurfess, Kevin Hurst, Laura Hitchcock &amp; Bill Berger</td>
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<tr>
<td><strong>Session 7</strong></td>
<td>Open Discussion - Discussion Facilitator: Bob Sims</td>
</tr>
<tr>
<td><strong>Session 8</strong></td>
<td>Future Generative Topics - Discussion Facilitator: Rich Laudenat</td>
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**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.
This presidential appointed task force, CRTF, will present its report on facilitating the coordination of tasks related to the FY15 enterprise goals and targets performed by the Committee on Finance and Investment (COFI), the Sector Management Committee (SMC), and the Executive Director Evaluation and Staff Compensation Committee (EDESC). The CRTF will recommend to the ASME President that the work of this presidential appointed task force be viewed as completed, and that the President discharge CRTF accordingly.

Proposed motion for BOG Action: (if appropriate) N/A

Attachments: PowerPoint Presentation
BOG Coordination and Reporting Task Force (CRTF)

Bernard Hrubala

Contents

- Charge of the Coordination and Reporting TF
- Background on its formation
- Long and short term planning activities
- CRTF Plan for FY15 (per its charge)
- CRTF Observations and Recommendation
BOG Coordination and Reporting Task Force (CRTF)

- CRTF appointed 1/1/14 with an assigned completion date of 6/1/15 or sooner.
- Members:
  Bernie Hrubala/June Ling (co-chairs), Warren DeVries, William Garofalo, Robert Grimes, and Laurel Raso. Staff Support: Gemma Tansey
- Charge:
  The CRTF is charged with drafting a reporting and communication plan that will facilitate the coordination of tasks related to FY15 enterprise goals and targets performed by the Committee on Finance and Investment (COFI), the Sector Management Committee (SMC), and the Executive Director Evaluation and Staff Compensation Committee (EDESC). (“Committees”)
- Delivery of the report no later than 6/1/15

Background

- At the time of CRTF appointment - January 2014, the BOG had adopted goals for future growth of the Society known as “Pathway 2025” and was seeking to coordinate the timing and reporting among COFI, SMC, and EDESC in order to more efficiently implement enterprise goals.
- Since January of this year, there have been significant endeavors which impacted the formulation of FY15 enterprise goals and targets, including:
  - a major reorg of Knowledge & Community and Institutes which led to the formation of Technical Events & Content (TEC) and Group Pathways and Support (GPS); setting of near term Pathway strategic directions used in the FY15-17 budget process; improved financial reporting; enhanced business planning and investment in new initiatives (energy, advanced manufacturing, digital projects); clarity of “Pathway 2025” as a trajectory with multiple sub-strategies; the articulation and implementation of a content eco-system model to achieve common focus and synergy across the organization; and the beginnings of a longer term content strategy and engagement strategy.
- The following CRTF report reflects the outcomes from these endeavors and the resulting coordination among BOG and its Committees.
First - A look at long and short term planning activities

For Coordination of Tasks Related to FY15 Enterprise Goals and Targets Performed by COFI, SMC, and EDESC

Long and Short Term Planning Chart

**Board of Governors**
- BOG conducts ongoing long term planning based on strategic, fiduciary, and generative discussions.
- Sets near term (currently 3 year horizon) strategic directions and goals.
- Approves specific strategic and financial targets for next fiscal year.
- Tracks current year performance and acts if needed.

**Committee on Finance and Investment**
- Executive Director Evaluation and Staff Compensation Committee
- Sector Management Committee

Responsibilities: Not all inclusive – those related to CRTF charge and purpose
Long and Short Term Planning Chart

<table>
<thead>
<tr>
<th>Board of Governors</th>
<th>Committee on Finance and Investment</th>
<th>Executive Director Evaluation and Staff Compensation Committee</th>
<th>Sector Management Committee</th>
</tr>
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<tbody>
<tr>
<td>BOG conducts ongoing long term planning based on strategic, fiduciary, and generative discussions.</td>
<td>Recommends to BOG overall 3 year financial targets consistent with BOG strategic directions and goals.</td>
<td>Recommends to BOG next fiscal year’s operational budget.</td>
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<tr>
<td>Sets nearer term (currently 3 year horizon) strategic directions and goals.</td>
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<tr>
<td>Approves specific strategic and financial targets for next fiscal year.</td>
<td>Recommends to BOG next fiscal year’s operational budget.</td>
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</tr>
<tr>
<td>Tracks current year performance and acts if needed.</td>
<td>Monitors current year financial performance and renders reports and forecasts.</td>
<td>Recommends to BOG next year’s goals of the ED aligned with BOG’s short and long term goals.</td>
<td>Evaluates ED current year performance in achieving BOG approved ED goals.</td>
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Responsibilities: Not all inclusive – those related to CRTF charge and purpose
### Long and Short Term Planning Chart

#### Board of Governors

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<td>Sets near term (currently 3 year horizon) strategic directions and goals.</td>
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<tr>
<td>Next FY</td>
<td>Approves specific strategic and financial targets for next fiscal year.</td>
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<tr>
<td>Current FY</td>
<td>Tracks current year performance and acts if needed.</td>
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#### Committee on Finance and Investment

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<th>Recommends to BOG overall 3 year financial targets consistent with BOG strategic directions and goals.</th>
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<td>Recommends to BOG next fiscal year’s operational budget.</td>
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<td>Current FY</td>
<td>Monitors current year financial performance and renders reports and forecasts.</td>
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#### Executive Director Evaluation and Staff Compensation Committee

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<th>Recommends to BOG next year’s goals of the ED aligned with BOG’s short and long term goals.</th>
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<td>Current FY</td>
<td>Evaluates ED current year performance in achieving BOG approved ED goals.</td>
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#### Sector Management Committee

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<thead>
<tr>
<th>Next FY</th>
<th>Aligns their respective sectors with the direction of the BOG and collaborates on cross sector and enterprise-wide endeavors.</th>
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</thead>
</table>

**Responsibilities:** Not all inclusive – those related to CRTF charge and purpose
## CRTF Plan

For Coordination of Tasks Related to FY15 Enterprise Goals and Targets Performed by COFI, SMC, and EDESC

### CRTF Coordination Plan for FY15 Enterprise Goals & Targets

<table>
<thead>
<tr>
<th>FY14 Q4</th>
<th>FY15 Q1</th>
<th>FY15 Q2</th>
<th>FY15 Q3</th>
<th>FY15 Q4</th>
<th>FY16 Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOG continuously dialogues on major trends and issues impacting long term and near term planning. Identifies and communicates significant changes/shifts in strategic priorities/directions.</td>
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<tr>
<td>BOG approved: • FY15 enterprise goals and targets • FY15 budget • ED goals</td>
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<tr>
<td>COFI renders FY15 financial performance reports and forecasts — including alerts as needed. ED renders quarterly enterprise and ED goal performance reports to EDESC and BOG.</td>
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<tr>
<td>COFI provides FY15 Q1 results</td>
<td>COFI provides FY15 YTD results and projected forecasts</td>
<td>COFI provides FY15 final quarter reporting</td>
<td>COFI provides FYE15 financial statements and observations.</td>
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<tr>
<td>BOG communicates to EDESC, COFI, &amp; SMC any significant shifts/modifications to enterprise strategic priorities/directions. (Current time frame is 3 year)</td>
<td>COFI recommends to BOG financial targets for next 2-3 years and builds a budget for FY16</td>
<td>COFI and SMC collaborate on sector specific budgets and funding of cross sector and enterprise-wide initiatives</td>
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<tr>
<td>EDESC recommends to BOG FY16 enterprise and ED goals/targets aligned with BOG long term and near term planning.</td>
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<tr>
<td>BOG acts on: • FY16 enterprise goals and targets • FY16 budget • FY16 ED goals</td>
<td></td>
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</tbody>
</table>
CRTF Observations and Recommendation

- Coordination among BOG committees may change as the organization continues to transition in achieving long term objectives
- The charge of the CRTF is time limited – i.e. FY15
- The process which took shape during the course of FY14 will be utilized/refined for this year
- This report template may be revised and used in future years, as appropriate, for BOG clarity on its committees’ roles, interactions and cycles

- CRTF recommends to the ASME President that the work of this presidential appointed TF be viewed as completed; and that the President discharge CRTF accordingly.
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
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.
Date Submitted: September 3, 2014
BOG Meeting Date: September 19, 2014

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

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

The report updates the BOG on SMC activity and is for information only. There is no action required.

Proposed motion for BOG Action: (if appropriate)

Attachments:

Word Document
I. SMC Operations

- Julio Guerrero, President Nominee, assumed the position of SMC Chair on June 11.
- The SMC met on August 7th to redefine their role and discuss possible recommendations and resources needed. Discussion focused on the best ways to promote the volunteer/staff partnership for successful outcomes. Key areas for volunteer contributions include market research/subject matter expertise and establishment of One ASME Pathways of Engagement to the market place. Next Steps include the SMC defining clear processes as they relate to areas of responsibility, and understanding how the SMC might work with the Program Leadership Team (PLT) and further define how the SMC will engage with the new Group Pathways and Support (GPS) system.

II. Sector Highlights

Standards & Certification – Laura Hitchcock, Bill Berger

Quarterly Highlights

- The Council on Standards and Certification met on June 10, 2014 in conjunction with the ASME Annual Meeting; highlights of that meeting and other S&C activities for this reporting period are as follows:
- The establishment of a new standards development committee on Operating Power Plant and Availability and Performance was approved, under the following charter: Establish standards and guidelines that provide for the optimization of power plants to enhance availability and performance, which includes design for operation and design for maintenance.
- Updates on activities related to the Incorporation by Reference issue were provided. ASME submitted comments on the latest revisions to the Office of Budget and Management Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities, generally supportive of the most recent revisions. The latest OMB notice includes the statement that OMB believes the public interest would not be well served by requiring standards incorporated by reference to be made available free of charge. S&C is also monitoring potential copyright reform within the House Judiciary Committee’s Subcommittee on Courts, Intellectual Property, and the Internet.
- The Council received a presentation from Mr. Gordon Gillerman, Acting Director of the Standards Coordination Office for the National Institute of Standards and Technology (NIST), which focused on an overview of NIST activities, NIST’s strategic priorities, and potential collaboration between NIST and ASME. A couple of areas identified for possible collaboration between the two organizations were advanced manufacturing and incorporating codes and standards into educational curricula.
The S&C Energy and Environmental Standards Advisory Board (EESAB) presented its annual gap analysis to Council, along with recommendations for potential new activities in this space. EESAB prioritized its top 9 recommendations, which have been submitted to Council membership to further prioritize those items into a top 4 for further consideration and potential action.

ASME’s Performance Test Code Committee recently agreed to support the development of a test code on Energy Storage. Among the issues that will be considered are Energy Performance, Energy Storage Loss, Ramp Rate, Roundtrip Energy Efficiency, Energy Release Response Time, and Stored Energy Capacity. ASME is currently soliciting subject matter experts and materially affected stakeholders to help support this effort.

On August 27, ASME and ASTM International will host a forum to discuss the role of standards and conformity assessment in global trade and competitiveness with members of the Mexican Industry Council for International Trade, Investment, and Technology.

Upcoming Activities/What’s on the Horizon?

Nothing to report at this time.

Technical Events and Content (TEC) Bobby Grimes, Michael Ireland

ECS (Energy Conversion & Storage) Segment

Quarterly Highlights

- The 59th ASME Turbo Expo, held in Dusseldorf, Germany June 16-20, 2014 with over 3000 attendees. It was the largest Turbo Expo to date with 1241 final papers. 77 posters were presented for the inaugural Student Poster Session. There were also 9 pre-conference workshops with over 50 attendees. The very popular Women in Turbomachinery Networking Event had a record 130 women in attendance and the Early Career Engineer/Student Mixer allowed over 300 young professionals the opportunity to network.
- The 2014 Energy Sustainability + Fuel Cell Conference was held June 30-July 2 in Boston, MA. More than 400 attendees participated in 2 workshops and 4 tours.
- The ICONE Conference was held July 7-11, 2014 in Prague, Czech Republic with more than 800 attendees.
- The 2014 Power Conference was held July 28-July 31, 2014 in Baltimore, Maryland. There were 4 workshops and 36 exhibits. Attendance was 370.

Upcoming Activities/What’s on the Horizon?

- The Internal Combustion Engine Fall Conference will be held October 19-22, 2014 in Columbus, Indiana with expected attendance of 200.
- The Gas Turbine India Conference will be held in New Delhi at the India Habitat Centre December 15-17, 2014.
- The 2015 Power and Energy conferences will be combined into one event in San Diego, CA at the Convention Center and Omni Hotel.
ESP (Energy Sources & Processing) Segment

Quarterly Highlights

- The 33rd Annual International Conference on Ocean, Offshore and Arctic Engineering (OMAE) took place in San Francisco, CA from June 8 – 13, with 914 technical papers presented over 12 Symposia topics. 1256 registrants attended the conference, including 42 students supported by the OOAE division with the Outreach for Engineers program.

Upcoming Activities/What’s on the Horizon?

- The 10th International Pipeline Conference will be held in Calgary in September 2014.

ESS (Engineering Sciences) Segment

Quarterly Highlights

- Fluids/ICNMM Conference was held August 3–7 in Chicago, attendance was ~700.
- Content Development:
  - NEMB 2015 Technical Program Chair Daniel Irimia explains the impact of microfluidics on healthcare. (https://www.asme.org/engineering-topics/media/nanotechnology/video-intro-to-microfluidics)
  - NEMB 2015 co-chair Guy Genin talks to ASME.org about bioengineering. (https://www.asme.org/career-education/media/career-development/video-bioengineering)
  - Six videos from the Micro and Nano Poster Forum 2013 posted on ASME.org.

Upcoming Activities/What’s on the Horizon?

- Smart Materials, Adaptive Structures, and Intelligent Systems (SMASIS) will be held September 8–10, 2014, in Newport, RI.
- The International Mechanical Engineering and Congress Exposition (IMECE) will be held November 2014 in Montreal.
- The Nano Engineering for Medicine and Biology (NEMB) Congress will be held April 19–22, 2015 in Minneapolis, MN.
- Plans for MCMAT 2015 in Seattle are underway.

DMM (Design, Materials, and Manufacturing) Segment

Quarterly Highlights

- ASME Conference on Information Storage and Processing Systems (ISPS) was held June 23–24 in Santa Clara, CA.
- ASME Manufacturing Science and Engineering Conference (MSEC) was held June 9–13 in Detroit, MI.
- Four videos on Additive Manufacturing were posted on ASME.org.
Upcoming Activities/What’s on the Horizon?

- ASME Advanced Design and Manufacturing Impact Forum (ADMIF) and International Design and Engineering Technical Conferences and Computers and Information in Engineering Conference (IDETC) will be held August 17–20 in Buffalo, NY, with:
  - Over 1400 attendees
  - Over 40 exhibitors
  - Career fair
  - Student competition
- Special industry led sessions on Nano-Manufacturing, Aerospace, and Medical Devices. ASME Dynamic Systems and Control Conference (DSCC) will be held October 22–24 in San Antonio, TX.

Programs

Public Affairs & Outreach – Bill Wepfer, Shekhar Chandrashekhar

Engineering for Global Development/E4C

Quarterly Highlights

- DEMAND, ASME Global Development Review – The second print issue of DEMAND, distributed with ME Magazine in May to members in US and Canada. Free digital app readership increasing and a variety of authors are submitting cases studies for future issues.
- Engineering for Change Solutions Library 2.0 – Development of Solutions Library 2.0 (SL2.0) alpha site started; open to early-adopter SME community in late June. SL2.0 is a decision-aid tool for designers, implementers and manufacturers of products for resource constrained communities decision-aid tool for designers, implementers and manufacturers of products for resource constrained communities.
- Engineering for Change - The New York Society of Association Executives has chosen Engineering for Change as the winner of the 2014 Outstanding Technology Leadership Award, given each year to New York Area-based organizations or individuals who demonstrate purposeful use of technology to help humanity. Previous winners include the American Foundation for the Blind, Computers for Youth and the American Red Cross.

Upcoming Activities/What’s on the Horizon?

- Engineering Social Innovation - Whitepaper authored jointly with the Aspen Institute of Development Entrepreneurs (ANDE) before regional roundtables focused on hardware based social innovation in Brazil, Kenya and India (July).
- IMECE 2014 - Programming efforts for the EGD-themed Congress, including an EGD keynote and research forum, are underway.
K12/Diversity & Inclusion

Quarterly Highlights

- **2014 ASME IShow** - Nine teams competed at the 8th Annual ASME IShow. A prize pool totaling $50K was awarded to Univ of Mass, Lowell/1st place – Nonspec (low-cost prosthetics); Rice University/2nd place – Team Biliquant (low-cost bilirubin test); and University of Hawaii/3rd place – SmarTummy (abdominal medical training device). Team applications increase nearly 40% driven largely by social media campaign.

- **ASME INSPIRE** - Based on early feedback, overall engagement with EverFi, and the program’s overall fit regarding ASME strategic intent in the K12 STEM education arena, the ASME Foundation has contracted with EverFi to scale ASME INSPIRE nationally starting in academic 2014/15. Over the next three years, the program will grow across the US, starting initially with 300 schools with a goal of adoption by 1,000 in academic 2016/17.

- **Scholarships** - A total of 37 ASME Scholarships were awarded this year, equaling $146,500. Seven female ME students received scholarships, including the top award, the Kenneth Andrew Roe Scholar Award.

Engineering Education

Quarterly Highlights

- Supporting the ASME Education Vision 2030 action items that (1) improve the quality of undergraduate design/build experience and (2) increase the number of women and minorities in ME programs, a collaborative 3-year proposal has been submitted to the National Science Foundation with the Women in Engineering Pro-Active Network (WEPAN), Purdue University and the University of Washington for faculty development workshops and virtual learning communities that would help create more inclusive (for all students) teaching/mentoring approaches in ME courses and design labs.

- The ASME Committee on Honors approved a proposal to present the Edwin F. Church Medal at the annual ME Education Leadership Summit. Beginning in 2015 the Church will join the Ben C. Sparks Medal as a major presentations at the Summit.

Upcoming Activities/What’s on the Horizon?

- A focus meeting with invited Community College Deans of Engineering & Technology, Continuing Education and other leaders is being planned to discuss the impact and opportunity of advanced manufacturing on standards for associate degree, certificate and certification programs.

- During the upcoming months, selected speakers and presentations from the 2014 Leadership Summit will be featured in scheduled and on-demand webinars, extending the impact of the ASME Summit to a much broader global audience.

- **July 9-12, ASME Committees on Engineering & Technology Accreditation & ABET Commission meetings, Arlington, VA**
August 13-16, UPADI (Union of Pan-American Engineering Societies) Conference, Santa Cruz, Bolivia. ASME produces the engineering education track at the conference.

**Government Relations**

**Quarterly Highlights**

- Congressional Briefing: ASME convened a briefing on June 17, 2014 in partnership with the National Science Foundation (NSF) and DISCOVER Magazine. “Made to Order: Customization in Internet-Enabled Manufacturing,” featured speakers Thomas Gardner, CTO, Scitor Corp and ASME IAB Member; Kathi Kube, Managing Editor, DISCOVER Magazine; Grace Wang, NSF; Dr. Steven Schmid, University of Notre Dame; and Neil Gershenfeld, MIT.

- WISE Program: 2014 Washington Internships for Students of Engineering (WISE) program ran from June 2- August 1, 2014. ASME sponsored two interns: James Gwinn and Rebecca Ciez. Ciez’s support came from Engineering for Global Development.

- Women’s Policy Inc. STEM Fair - On July 24th, Women’s Policy Inc. (WPI) held its second STEM Fair on Capitol Hill, an event to showcase a diverse group of public and private sector STEM programs to encourage girls and women to pursue STEM education and careers. WPI has a longstanding relationship with the bicameral, bipartisan Congressional Caucus for Women’s Issues. The ASME Foundation sponsored the event, and was one of 20 exhibitors. The ASME Foundation’s booth focused on ASME’s two new K-12 STEM initiatives: INSPIRE and Future Engineers.

**Upcoming Activities/What’s on the Horizon?**

- On September 1, Government Relations will conclude providing the Society of Women Engineers (SWE) with public policy services. SWE will now partner with the Association for Women in Science (AWIS).

**Industry Advisory Board (IAB)**

**Quarterly Highlights**

- Board meeting – Developing a Technology Strategy for Advanced Manufacturing was held April 16, 2014 at the St. Regis Hotel in Washington, DC. The meeting opened on the evening of April 15th with a reception/dinner hosted at the Smithsonian National Zoo. IAB recommendations were prepared and circulated to the Board on June 12, 2014. A written response from ASME is being formulated and will be disseminated to the Board in September, 2014.

- Webinar – The Maker Movement and America’s Economic Future, was presented on May 14th by Tom Kalil, Deputy Director for Policy for the White House Office of Science and Technology Policy and Senior Advisor for Science, Technology and Innovation for the National Economic Council, to more than 50 listeners.

**Upcoming Activities/What’s on the Horizon?**
• The IAB’s next meeting, The Maker Movement and America’s Economic Future, will be held on October 22, 2014 in Arlington, VA. The meeting will begin on the evening of October 21 with a reception/dinner at Mount Vernon in Alexandria, VA. An optional tour of TechShop’s newest do-it-yourself design and fabrication space in the DC area is being offered on October 21.

• Upcoming Webinar – The Maker Movement, which is the topic of the October IAB meeting, hosted by ASME.org, will be presented on September 18.

Student & Early Career Development (SECD) - Cynthia Stong, Noha El-Ghobashy

Quarterly Highlights - Programmatic / Operational activities

Student Programs

• Africa Student Professional Development Conference (SPDC) at the British University in Egypt concluded with participation of 200 students.
• Work in progress on preparation for HPVC Latin America in Oct 22-25, 2014 in Mexico City, Mexico.
• Initial planning is underway for HPVC East / West which will take place in April, 2015.
• Innovative Design Simulation Challenge finals have taken place at IDETC/CIE on Aug 17, 2014 in Buffalo, NY
• Round 1 submission review for Innovative Additive Manufacturing 3D Challenge has been completed and finalists selection is in progress to compete in the finals at IMECE 2014 in November in Montreal, Canada
• Announcement about 2015 SPDCs has been sent to the ME Department Heads to solicit an interest in hosting the SPDCs
• HPVC India rules and prequalification criteria are being finalized for the competition in January 2015

Career Development

• In July ME Today featured the following articles/videos:
  o Defining a Bioengineering Career Path for ME’s
  o Next Generation of Engineers: Meredith Campbell
  o Leading Career Enhancement
  o Liquid Metal Printing - New art of printing electronics on Paper, Plastics or even Cotton.
  o Taking Risks for Career Advancement.
    The content is being posted on asme.org and promoted on Social Media weekly.

• EC Web Content team had finalized 2 remaining videos on Advanced Manufacturing topic to be published in August / September on .ORG and You Tube.
• Social Meetup / Mini-Talks team is working on selecting presenters to share their career experiences in a global workforce.
• A cross-sector taskforce to assess the impact and performance of the Old Guard Grant Funds for Early Career Technical Conference (ECTC)/Early Career Forum (ECF) was
formed. The taskforce will align ECTC and ECF programs with the strategic objectives of One ASME and pilot an appropriate infrastructure, funding process and pathways of engagement for ECTC/ECF as part of a cross-sector activity.

**Leadership & Recognition**

- 1-day retreat for the Board on Leadership & Recognition (BLR) took place in Milwaukee in July. The board members brainstormed and planned on the relevant content and delivery channels to respond to the needs of students and early career engineers in leadership development space.
- Work is underway for the fall 2014 round of Student Leader Training program for student section volunteer leaders. The program will incorporate web based learning modules on ASME programs and processes, and a face-to-face leadership workshop for high potential student volunteer trainers.
- Work is underway to migrate student and ECE award nomination process to the BLR.
- Two articles highlighting Diversity Action Grant (DAG) projects were published in ME Today:
  - DAG: ME Shop Skills for Girls Program Inadvertently Teaches Leadership Skills
  - DAG: Reverse Engineering and Redesigning Everyday Products Leads to Surprising Recommendations.

**Upcoming Activities/What’s on the Horizon? – Programmatic / Operational Activities**

- SPDC in Peru in September 2014
- Innovative Design Simulation Challenge student webinar in Oct 2014
- Student Leader Training webinars in Sept-Oct 2014
- Social Meetup / MiniTalks at IMECE 2014 in November in Montreal, Canada
- Student Leader Conference at IMECE 2014 in November in Montreal, Canada (tentatively)
- IAM3D finals at IMECE 2014 in November in Montreal, Canada
- SDC finals at IMECE 2014 in November in Montreal, Canada
- OG Oral Presentation finals at IMECE 2014 in November in Montreal, Canada
- More articles highlighting DAG projects will be published in ME Today in Sept-Oct 2014

**III. Volunteer Orientation and Leadership Training (VOLT) Academy – Justin Young, Dave Soukup, Clare Bruff**

**Quarterly Highlights**

- A VOLT Leadership Workshop was held at the Annual Meeting in Portland, Oregon. The workshop topic was “Navigating Uncertainty and Creating Powerful Solutions for Your Teams.” 40 people attended the two workshops. The workshops received an average rating of 3.37 out of 4.0.
- The ECLIPSE Intern Reception was held at the Annual Meeting on Saturday, June 7. The outgoing interns and their coaches were recognized with certificates. The incoming interns
received their ASME badges. A dinner event was held for the outgoing and incoming interns.

- The Board of Governors Nominee Briefing was held at the Annual Meeting on June 11, 2014. Terry Shoup facilitated. The briefing received an overall average rating of 4.0 out of 4.0.
- A Board of Governors Nominee Orientation Webinar was held on July 29, 2014. All three BOG Nominee/Elects participated. The webinar received an overall average rating of 4.0 out of 4.0.

**Upcoming Activities/What’s on the Horizon?**

- The VOLT Retreat is scheduled for September 26-28 in Houston. This will bring together the VOLT Executive Committee to plan future VOLT activities.
- Officer-Elect Orientation is scheduled for November 14, 2014 in Montreal. Reggie Vachon will facilitate this event.
- A VOLT leadership development workshop will be offered twice at the 2014 Congress. Details of this workshop are still being finalized.
- The ECLIPSE program is on track for identifying the 2015-16 ECLIPSE intern cohort.
- Getting to Know ASME is an e-learning series being developed by the VOLT Academy. VOLT plans to pilot three modules in 2014.
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: 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:

Word Document
<table>
<thead>
<tr>
<th>External Unit</th>
<th>Nominee</th>
<th>Appointment Position/Title</th>
<th>Appointment Term/Category</th>
<th>Appointment Type</th>
<th>History</th>
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<tbody>
<tr>
<td>Max Jakob Memorial Award</td>
<td>George Homsy</td>
<td>Representative</td>
<td>7/1/2014 – 6/30/2017</td>
<td>Appointment</td>
<td>Current: Professor at UC Santa Barbara</td>
</tr>
<tr>
<td>Max Jakob Memorial Award</td>
<td>Vijay Dhir</td>
<td>Representative</td>
<td>7/1/2014 – 6/30/2017</td>
<td>Reappointment</td>
<td>Current: Max Jakob Award Committee Member</td>
</tr>
<tr>
<td>Max Jakob Memorial Award</td>
<td>Yogesh Jaluria</td>
<td>Representative</td>
<td>7/1/2014 – 6/30/2017</td>
<td>Appointment</td>
<td>Past: Heat Transfer Division Chair</td>
</tr>
<tr>
<td>Max Jakob Memorial Award</td>
<td>Michael Yovanovich</td>
<td>Representative</td>
<td>7/1/2014 – 6/30/2015</td>
<td>Reappointment</td>
<td>Current: Max Jakob Award Committee</td>
</tr>
</tbody>
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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
B4.1 GOVERNMENT

B4.1.9 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.

B4.1.10 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.
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 B4.2, First Reading

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

This revision clarifies the stagger of the terms of the Nominating Committee members.

Proposed motion for BOG Action: (if appropriate)

Revise B4.2 as attached

Attachments:

Word Document
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. 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.
To: Board of Governors
From: (Sector/Unit/Task Force/Other) Committee on Organization and Rules
Presented by: Larry Luna
Agenda Title: By-Law B5.2.4.2 Revision, First Reading

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

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: (Sector/Unit/Task Force/Other) 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 it is responsible for 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.
B5.3.2.34 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.

B5.3.3.2 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.

B5.3.2.7 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.

B5.3.3.3 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
The 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.
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 MEETINGS OF THE SOCIETY

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.
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.
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 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 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: 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)
          (editorial changes 8/88)
          March 17, 1995
          June 12, 1996
          (editorial changes 11/97)
          June 9, 1999
          June 12, 2005
          (Unit Reassignment Due to Reorganization 6/2012)
ASME Board of Governors
Agenda Item
Cover Memo

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

Date Submitted: August 14, 2014
BOG Meeting Date: September 19, 2014
To: Board of Governors
From: Public Affairs & Outreach Council
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\(^1\). 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 21\(^{\text{st}}\) 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 21\(^{\text{st}}\) 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 21\(^{\text{st}}\) 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.

\(^1\) PISA 2012 Results in Focus. Organisation for Economic Co-operation and Development, 2012.
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.

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.
ASME Board of Governors  
Agenda Item  
Cover Memo

Date Submitted:    August 14, 2014  
BOG Meeting Date:   September 19, 2014

To:      Board of Governors  
From: (Sector/Unit/Task Force/Other) Public Affairs & Outreach Council  
Presented by: William Wepfer, Senior Vice President, PAO  
Kalan Guiley, VP, Government Relations  
Agenda Title:    ASME’s 2015-2016 Public Policy Agenda

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

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
2015-2016
PUBLIC POLICY
AGENDA

ISSUE PRIORITIES OF ASME
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
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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.
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

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.
ASME ISSUE PRIORITIES

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
leveraging 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”
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
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
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
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
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:
<table>
<thead>
<tr>
<th>Candidate Rank</th>
<th>Points</th>
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<tbody>
<tr>
<td>#1</td>
<td>11</td>
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<tr>
<td>#2</td>
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<td>#3</td>
<td>4</td>
</tr>
<tr>
<td>#4</td>
<td>2</td>
</tr>
<tr>
<td>#5</td>
<td>1</td>
</tr>
</tbody>
</table>

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.