



THE WILLISTON AWARD IS PRESENTED ANNUALLY BY ASME TO THE STUDENT ENGINEER OR RECENT GRADUATE WHO AUTHORS THE BEST ACCEPTABLE PAPER IN THE AREA OF CIVIC SERVICE

**TOPIC AREA:** How does the Natural Disaster in Japan Affect the Future of Power Generation?

**ASSIGNMENT:** On March 11, 2011, Japan experienced a major earthquake that triggered extremely destructive tsunami waves that led to a number of nuclear accidents in that country. Public reaction to these events have led to calls for increased safety requirements as well as closures of nuclear plants in the US and other countries.

As scientists continue to debate the cause of global warming, many countries have made a policy to reduce its carbon footprint by increasing the amount of renewable (wind, solar, geothermal, tidal, etc.) energy sources, and decreasing carbon-based power generation. One form of power generation that was being considered as a solution to the problem was nuclear power. The increased use of nuclear power generation was being touted as a more reliable means of replacing carbon-based power generation than the use of renewables since renewables are interruptive, and without a power storage solution, are not deemed reliable.

In addition, try as we might to slow power demand, the emergence of electric vehicles and plug-in hybrid vehicles to reduce carbon emissions and to lessen dependence on foreign oil, may increase the demand for electric power in the future above the normal growth trend. It was proposed that the only reliable way to meet this increased demand for electric power and to satisfy carbon emission goals was by increasing the use of nuclear power generation and reducing coal, oil, and gas-fired generation.

*Discuss how recent events in Japan will affect the power generation industry in your country (or another country if your country does not have nuclear power). Will nuclear power generation still play a vital role? If not, what will take its place? Take into consideration risks, costs, potentially new design standards (possibly world-wide standards), and impact on the environment.*

**AWARD:** The first prize winner receives formal recognition by the Society that includes having an abstract of the paper published in *ASME News Online* or *Mechanical Advantage*. In addition, the first prizewinner will receive a bronze medal, an honorarium of \$1000, a Williston certificate, and travel and expense allowance for two days at the 2012 International Mechanical Engineering Congress and Exposition.

- The second prize winner receives a \$500 honorarium and a Williston certificate.
- The third prize winner receives a \$250 honorarium and a Williston certificate.
- All authors of acceptable papers will receive a letter of participation.

**DEADLINE:** Papers must be submitted by February 7, 2012 or they will not be accepted.

## CONTEST RULES

***Papers that do not comply with the contest rules will not be accepted for consideration by the General Awards Committee.***

1. Eligibility: ASME Student Members, or Members who received baccalaureate degrees in mechanical engineering or mechanical engineering technology not more than two years before the contest deadline are eligible. The paper must be based on the work of an individual and not a team.
2. Format: Each entry must be formatted as follows: double-spaced, 8½" x 11" with 1-inch margins all around, or A4 size with equivalent margins. Maximum length of the document, including cover page, abstract (this not to exceed one page), references, footnotes and figures, is 12 pages. The cover page shall indicate the title of the paper, author's full name and signature, address, the name of the school from which he/she has graduated or expects to graduate, and the expected or actual date of graduation; and the full name, signature and address of a sponsor who is responsible for assuring that the paper addresses the topic and complies with the rules of the contest.
3. Sponsor: An ASME Corporate Member (Member, Fellow or Corporate Honorary Member) who has taken an active role in encouraging or guiding participation of a maximum of two authors in the contest shall be listed as sponsor.
4. Deadline:  
Papers that satisfy the contest rules must be submitted by February 7, 2012.  
E-mail: [mckivorf@asme.org](mailto:mckivorf@asme.org)

Submission can be a Microsoft Word .doc document or an Adobe Acrobat .pdf file.

5. Results: All participants will be notified about the contest results by June 30, 2012.

## PAPER JUDGING

Papers dealing with the specified topic and meeting the contest rules will be scored by the ASME General Awards Committee on the basis of 100 points, distributed as follows:

1. ORIGINALITY & RELEVANCE—(40 Points)  
How original and of what significance is the author's main idea? Has the topic been addressed? How well does it compare and contrast with alternate approaches to the problem? What is the potential impact if the idea is implemented?
2. DEVELOPMENT—(30 Points)  
How well does the author develop his/her argument? Is the paper persuasive in terms of its technical basis, logic, and depth of explanation? Does the author build on past knowledge in this area?
3. PRESENTATION—(30 Points)  
How effectively does the author communicate his/her ideas? Is the content well organized and are the ideas presented clearly and concisely? Are grammar, punctuation, spelling, sentence structure and other aspects of the composition correct? Is effective use made of figures, tables and other illustrations?

The highest scoring acceptable paper will be declared the winner.