

CHAIR'S REPORT – SPRING '07 – DALLAS, TX

1.0 Chair's Report – D. J. Fallon

1.1 PES Technical Council Committees

Technical Council Committees meet at the summer PES General Meeting, so there have been no meetings to report on since the Fall 2006 Transformers Committee Meeting. Next report on Technical Council Committee Meetings will be provided for our next meeting in Minneapolis in October. Several ongoing activities of Technical Council and its Committees are discussed below.

As a general note repeated from the prior report, all our activity leaders (SC and WG Chairs) are reminded that Technical Committees are encouraged to make more effective use of the PES monthly newsletter as a means to provide greater exposure for their activities. Submissions will be considered for publication in virtually any area Committees choose (e.g. pictures, meeting summaries, significant projects completed, awards, etc.). Suggestions for submittals should be forwarded to the Committee officers.

1.2 PES Technical Council Activities

1.2.1 Technical Council Advisory Board

Derek Foster, as a representative of our Committee to the TCAB, provided the following update in January:

The Technical Committee Advisory Board (TCAB) was formed by PES President, John McDonald, with the intention of obtaining input from the Technical Committees regarding their views, needs and plans. The TCAB reports directly to the PES President and currently meets twice a year, prior to the Governing Board Meetings in January and June. The TCAB membership includes representatives of several Technical Committees, including the Transformers Committee.

Some of the issues so far discussed by the TCAB are as follows:

- Technical paper handling, i.e. means by which papers are presented, poster sessions, panel sessions etc.
- Interest in, or support for a second general meeting each year.
- Closer liaison between working groups of different Technical Committees where there are areas of common interest.

If you have any issues you wish to bring to the attention of the TCAB, please contact Derek Foster by email at drfoster@ieee.org.

1.2.2 Policy Development Coordinating Committee (PDCC)

The PDCC developed PES Policy Statement on Energy and Environment has been modified with input from our Committee and others, and has been reviewed and unanimously approved by the IEEE Board of Governors. The Policy Statement, and Background, are repeated here:

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IEEE POWER ENGINEERING SOCIETY

POLICY STATEMENT ON ENERGY & ENVIRONMENT

(Prepared by the IEEE-PES Policy Development Coordinating Committee)

This policy statement is concerned with the increase in the production, delivery and use of electrical energy, and its effect on the environment.

Abundant and economic energy is a key part of modern society. The harnessing of energy, and in particular the use of electrical energy to replace human effort, has led to the high standard of living today in the developed countries. Continued growth in the services that energy can provide will allow for new levels of improved quality of life, particularly in developing countries. Because of these factors, energy is a global and commercial priority.

The IEEE Power Engineering Society encourages governments to promote research, development, commercialization, and utilization of energy as parts of comprehensive, national energy strategies based on:

- Developing economic new sources of supply and innovative technologies
- Developing the delivery infrastructure to meet changes in demand and supply
- Improving energy efficiency and reliability in production, delivery, and customer end use
- Having due concern for the environmental impacts of energy developments.

While energy use will grow, prudent development must seek methods to minimize the negative effects of energy production, delivery and use, and must aim to reduce global dependence on fossil fuels. No single solution fits all situations. A comprehensive energy policy must consider all of the available options in an appropriate manner. The role of the customer in energy choice and usage should be recognized. The value of diversity of energy resources and of technologies must be recognized, and over-dependence on any single fuel or energy source should be avoided where reasonable. The finite nature of environmental and ecological resources must also be recognized. These resources must be managed wisely for current and future generations.

This statement was developed and approved by the Technical Council of the IEEE Power Engineering Society, and represents the considered judgment of a group of IEEE members with expertise in the subject field. IEEE Power Engineering Society is an organizational unit of the Institute of Electrical and Electronics Engineers, Inc.

BACKGROUND

For the foreseeable future, fossil fuels will make up by far the greatest proportion of the global energy supply. Burning fossil fuels produces emissions to the

atmosphere and water bodies that impact the environment and may affect human health. While the evidence connecting the observed rising concentration of carbon dioxide and the apparent increase in global temperatures is regarded by some as not yet conclusive, it is surely prudent to adopt strategies that strive for balance between carbon dioxide production and its consumption.

Furthermore, fossil fuel reserves are finite and likely to be significantly depleted sometime during this century. The present trend of increase in fossil fuel usage is therefore unsustainable. There is a window of opportunity for a managed transition to reducing global dependence on fossil fuels by increasing non-fossil energy sources.

1. Decision Criteria

Energy decisions should include the evaluation of as many of the life cycle costs and benefits as are reasonably obtainable. These include the fixed and variable costs associated with energy sourcing, conversion, delivery and usage as well as the benefits to the economy, environment, and well being of society. In addition, environmental impacts, to the extent possible and practicable, should be evaluated on a full life cycle basis and added to these costs. Fuel evaluation should include consideration of abundance and the costs of extraction, procurement, movement, waste disposal, and site restoration. Included in these evaluations should be the risks associated with security breaches and system failures. It must be recognized that some alternatives will be more economical and practical in certain geographical areas. It must also be recognized that priorities in developing countries will differ from those in the industrialized world.

2. Energy Options

The IEEE Power Engineering Society urges support for programs that encourage the development of the following energy sources. The development should focus on options that are economical, practical and have minimal environmental impact such as:

- biomass energy
- “clean” coal
- geothermal energy
- hydroelectric energy
- nuclear energy
- oil and natural gas
- solar energy
- tidal and wave energy
- wind energy

Environmental impact concerns can be a source of disagreement, yet there can be no doubt that a prudent policy towards carbon emissions is appropriate. The issue can be addressed in many ways. We urge that in growing our energy systems, consideration be given to:

- energy efficiency, of both supply and demand, including use of heat and other by-products

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- energy use reduction and demand-shifting based on incentives
- distributed resources that are closer to the point of energy usage
- energy storage options, to increase the capability of power systems to absorb the output of intermittent sources, such as wind and solar
- carbon capture and storage, whereby the carbon of fossil fuels is not emitted to the atmosphere
- economic tools such as carbon taxes, emission trading, and customer incentives

Energy storage options, such as hydro inter-seasonal storage, hydro pumped storage, compressed air, flywheels, superconducting magnets, super capacitors, and batteries, should be considered where appropriate and environmentally acceptable. Such systems can increase the capability of power systems to absorb the output of renewable (and intermittent) sources, such as wind and solar, and improve the economy of power system operations. Under the umbrella of energy storage options, research and development of the hydrogen economy and infrastructure is also to be encouraged, with the caution that hydrogen alternatives should be carefully analyzed to ensure that the net environmental (and economic) benefits are positive.

Energy efficiency should be recognized as an effective means of minimizing the needs for new energy sources as well as negative impacts on the environment. Energy efficiency includes supply-side (for example, conversion efficiency, delivery system efficiency and combined heat and power) as well as demand-side end use efficiency improvements.

Customer demand response and customer involvement can only be fully achieved through improved information infrastructure, user-friendly appliances, and market-driven tariffs. If customers can be included in the decision-making process of energy consumption, primarily through incentives to reduce or shift usage to a different time period, then these patterns would contribute to conservation and increased efficiency.

3. Power Delivery Systems

Power delivery systems are already technically advanced, but should not be overlooked in the development of energy resources. Many of the sources of energy that will contribute to future supply are not located close to the places where the energy is needed, so that the energy must be moved, often in electrical form, over sometimes very large distances. (Hydro and wind power, for example, cannot be moved by pipelines.) A well maintained energy transport infrastructure that includes both a power delivery system to connect generation resources with loads and comprehensive monitoring and control systems to manage the power system will generally be needed.

4. Research & Development

Increased funding for research and development (R&D) in both the public and private sectors is needed and strongly recommended. R&D should be focused on

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accelerating the advancement of technology and environmental solutions for the priority strategies of increasing energy sources, improving delivery performance and improving energy efficiency. This is particularly important for those options that have high commercial potential to improve fundamental energy economics and reduce dependence on fossil fuels.

Renewable energy technologies still need R&D efforts not only for fundamental research, but increasingly for development and implementation issues.

Nuclear energy represents a significant portion of current global energy supply and is one of the most economical energy sources today. In order to improve this source of non-carbon emitting base-load generation, continued research should be committed toward passively safe advanced reactor designs and the long-term management of used nuclear fuel.

Fossil fuel reserves is another research area that is vitally important to energy strategy and the planning of a comprehensive and credible assessment of the remaining global reserves that are commercially viable is critical.

The Chair will review to see if an internet link is available to access IEEE and PES Policy Statements, and will update accordingly.

1.2.3 PES Meeting Schedules

The schedule for upcoming PES General Meetings is as follows:

- 2007: June 24-28 in Tampa, Florida.
- 2008: July 20-24 in Pittsburgh, Pennsylvania
- 2009: July 26-30 in Calgary, Alberta, Canada

PES Conference & Exposition (CE) schedules:

- 2008: Transmission & Distribution (TDCE), April 22-24 in Chicago, Illinois
- 2009: Power Systems (PSCE), March 15-18 in Seattle, Washington

PES Joint Technical Committee Meeting (JTCM) schedules:

- January 7-10, 2008 in San Antonio, Texas (<http://www.pestechical.org/>)

The JTCM schedule has been set up by PES as a winter venue for 3 days of meetings, allowing Technical Committees to schedule individual meetings as needed. Coordination of schedule with PES as early as possible will help assure that room can be found for requested meetings, and our Committee's activity leaders (SC and WG Chairs) are encouraged to consider making use of these venues if they might allow projects to proceed more effectively between our meetings. To set up participation in these sessions for our Committee, contact should be made with the PES Technical Council (through our Committee officers) and directly with PES meetings coordinator John Paserba (j.paserba@ieee.org).

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Additional information on any of the above meetings can be found on the PES website at (<http://www.ieee.org/portal/site/pes/>)

1.3 Transformers Committee Activities

Updates on activity related to some areas of concern for the Committee, together with notes of Committee interest, follow:

1.3.1 Coordination and Liaison Activities – Progress on PC57.142

Joint discussion and cooperative effort has been ongoing involving Transformers Committee and Switchgear Committee members to move forward on PC57.142 - Guide to Describe the Occurrence and Mitigation of Switching Transients Induced by Transformer, Switching Device, and System Interaction. Work will continue to be guided by the Transformers Committee, as primary sponsor; and in recognition of the crucial and necessary role our colleagues from the Switchgear Committee play in assuring this document meets the needs of our industry, the PAR for this project lists the Switchgear Committee as our joint sponsor. A joint Task Force, with representatives of both Committees, will prepare the document for ballot. A new PAR for this project was submitted in January of this year.

1.3.2 PC57.104 – Draft Guide for the Interpretation of Gases Generated in Oil-Immersed Transformers

Many of you are aware that C57.104-1991 has been officially withdrawn by IEEE based on recommendation by the Transformers Committee at the end of 2005. This was a difficult decision for the Transformer Committee, but it was necessary in order to move forward within the established policy and procedures of the IEEE SA standards development process. As this document is critically needed by our industry, a two step process is planned to restore it – first, to make minor changes to address some of the most pressing issues and to ballot to get the document back into print; and second, to then immediately begin revision to reflect additional advances in current knowledge, and to incorporate relevant material created during the previous effort at revision of the guide. A cover letter has been provided through the IEEE SA Invitation to Ballot process explaining this intended path to restore this Guide to publication.

1.3.3 IEEE/IEC Dual Logo Program

The IEEE/IEC dual logo process seems to have hit a snag, in the Chair's judgment, with recent concerns from several IEC representatives on the submittal of IEEE C57.123 (Guide for Transformer Loss Measurement) for consideration for Dual Logo status. The subject document has references to several other IEEE documents, and there is reluctance to approve as such approval might imply acceptance of the referenced documents also – and these referenced documents have not been subjected to review by IEC. The concern is perhaps valid, and if valid may apply to virtually any IEEE document submitted, including C57.135 (Phase Shifting Transformer Guide), previously accepted by IEC for

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dual logo status. We have not yet determined how to reply to these IEC comments, and may need to discuss with IEEE to determine how to proceed.

1.3.4 IEEE SA Financial Reporting Requirements

Since last year, IEEE SA has required all “Standards Developing Groups” to complete annual financial reports submitted in an IEEE SA Template (Form L50-S). Our Meetings Planning SC Chair has maintained financial records for the Committee, and has recently made the effort to modify the financial record spreadsheet he developed to facilitate reporting the Committee budget per the L50-S form. The 2006 financial report will be ready for filing shortly. Based on the ongoing needs for this detail of financial reporting, the Chair feels consideration of a Treasurer’s position for the Committee is appropriate. This topic will be discussed at the Administrative SC Meeting.

1.3.5 Meeting Agenda Change – New Business

A change has been made – on a trial basis - in the Agenda arrangement at Dallas for both the Administrative SC and Main Committee Meeting. New Business has been moved forward in the Agenda. With New Business in the typical end of meeting timeslot, and with the time spent on other Agenda items, New Business does not always receive the attention it needs. The time spent on ongoing projects is indeed important, as the Committee deals with many standards documents and substantive issues related to the development and maintenance of those documents – and at times it seems our plates are already so full (recognizing we’re all volunteers) that the ability to take on new issues seems limited. Despite this challenge, we also need to provide sufficient time to raise new technical issues and to address planning and strategy on how the Committee should work. The intent, during this trial, will not necessarily be to debate and discuss each new issue fully within the meeting context, but to at least raise issues, discuss significant points, and suggest course of action.

1.3.6 Association Management (AM) System

All Committee members and active participants, and all individuals interested in Transformers Committee activities, are reminded that virtually all communications on Committee meetings and activities are handled through the Committee website (<http://www.transformerscommittee.org/>) and through electronic media. Contact information is maintained through our Association Management (AM) system, and administration of membership and meeting attendance records is facilitated by the AM System. All Subcommittee and Working Group Chairs are encouraged to use the AM system for assigning membership within their groups and for communication with their group members. All Committee members, active participants, and interested individuals are reminded also that you are responsible personally for maintaining the accuracy of your contact information, through the AM system, for Committee activities and communication. Updating your contact information in handwriting on a meeting roster does not result in updating your Committee contact information. Keeping your contact information maintained in the AM system assures that the Chair of any Subcommittee or Working Group you are involved with will be able to communicate with you. Details on enrolling and maintaining your contact information in the AM system can be found on

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the Committee website.

The AM system also allows you to check the Committee record of your membership status in individual Working Groups, Subcommittees, and the Main Committee. This can be done by checking your Personal Profile, and then clicking on Subgroup Details. If the Committee record does not match your record, please review with the appropriate WG or SC Chair.

1.3.7 Committee Membership

All are welcome to participate in the work of the Transformers Committee. Membership in the Committee provides recognition of your peers and indication to your co-workers and management of your active role in Committee work. If you are presently not a Main Committee Member, and you have been actively participating in our work for at least one full year – and can secure the acknowledgement of at least 3 Activity Chairs (WG's, but must include at least one SC Chair) affirming that participation, the Committee will look forward to welcoming you as a member. Membership requirements and application forms can be found in the Organization and Procedures Manual posted on the Committee website.

1.3.8 Announcements / Acknowledgments

The Committee notes with sadness that our good friend and colleague Frank Gryszkiewicz succumbed to his long illness and passed away on February 19, 2007. Frank had been an active participant in Committee activities at least since the early 80's, and he served for many years from the 90's as our Insulating Fluids Subcommittee Chair. Many of our members and participants knew Frank as a friend and a very capable and knowledgeable Committee Member, and we all benefited from our association with him. The Committee has expressed condolences to Frank's family on behalf of all our participants. We will remember Frank, and all of our departed colleagues who preceded us in Committee activities.

On a less somber note, Committee Member Ron Stahara has received word from IEEE that his membership classification has been raised to Life Senior Member, effective January 1, 2007. We send our congratulations to Ron. If you are aware of others from within our ranks achieving this distinction, or other IEEE recognition, please advise one of our officers so we can share the good news with all.

Your Committee leadership (past and present) is very proud of all that our Committee accomplishes in service to our industry, and recognizes that without the teamwork and effort of each of our Members and Participants - working as volunteers – none of those accomplishments would be possible. Tom and Ed join with me in sending our thanks to each of you. Keep up the good work!

Respectfully submitted,
Donald J. Fallon
Chair, IEEE/PES Transformers Committee