

PSPI Committee Meeting

Notes by Greg Welch

Denver, June 9, 2004

The June 2004 meeting of the Power System and Planning and Implementation Committee was called to order at 2 PM by the chairman, ML Chan. Mr. Chan acted as the moderator and meeting chair.

In attendance were the following individuals:

ML Chan, Wenyuan Li, Laurent Steffan, Lina Bertling, Hahn Tram, Richard Brown, Gerard Cliteur, Carlos Dortolina, Gerald Sheble, Lee Willis, You Seok Son, Richard Wakefield, Paola Bresesti, and Ed Mayer.

- 1) The meeting began with the self-introductions of members and guests. An updated committee membership list is attached.
- 2) The organization of the committee and a discussion of the relationship to other PES committees was provided by ML Chan. An organization chart for the committee is attached.
- 3) A Business Model for the committee was described by MLC:
 - a) Produce products to attract & retain members – long-term products especially (e.g., surveys and papers by working groups) and short-term ones such as paper and panel sessions on “hot” topics that the industry is really concerned about.
 - b) Question raised by Lee Willis: Should we have a working group to clarify relationship between planning & asset management. This is consistent with our Committee’s charter – to focus on planning AND implementation of power systems.
 - c) Paola Bresesti suggested that committee sponsor a series of panels on focused topics that will culminate in white papers
 - d) ML asked for acceptance of the suggestion to create Asset Management Working Group, motion in favor by Hahn Tram, second by Richard E. Brown. No opposition. Motion passed by acclamation.
- 4) Presentation by Dr Li of BC Hydro of his recently published transaction paper, "Determining Rational Redundancy of 500 kV Reactors in Transmission Systems Using A Probability Based Economic Analysis Approach". A short discussion followed.
- 5) ML Chan discussed the following issues from the Technical Council Meeting:
 - a) Committees have been directed to integrate: wind and broadband plc (as an enabler for enhancing planning & asset management in our case) into papers and panel sessions;
 - b) Co-branding of IEC & IEEE standards has already begun.
 - c) Technical Council is looking for ways to attract younger engineers to meetings
The attendees of PSPIC meeting discussed the topic: How to attract utility personnel. Those in attendance agreed that there is a need for a grassroots effort by committee officers & working group chairs to encourage utility participation. It was also suggested that WG chairs solicit utilities to provide input into the agenda, problems they want to see addressed, etc.

- 6) Greg Welch and Hahn Tram volunteered to create a set of requirements for our Committee web site to be linked to the IEEE-PES web site. ML Chan will convey the requirements to Veronika Rabl for implementation by August 1, 2004. Only 4 out of about 17 Technical Committees have not linked to the IEEE web site.
- 7) ML Chan led a discussion of how to maintain momentum on committee related efforts. Those in attendance agreed that the PSPI Committee will meet at the annual General Meeting, the T&D Show, and the Power Systems Conference and Expo (the latter two held in alternate years). In addition, ML will set up conference calls and web meetings as necessary to maintain momentum. Working Group chairs are encouraged to follow the same format of conference calls and web meetings if necessary to maintain progress in developing panels, WG Combo meetings, and other “products” such as surveys, technical papers, surveys and articles for *Power and Energy Magazine*.
- 8) (Duplication of (7)) Each Working Group will hold its own meeting in each of the conferences (GM, PSCE, and T&D Show).
- 9) To help identify the critical issues that utility planners face today and in the near future so that our Working Groups would know what to plan for when we develop “products” for the industry, all Committee members have agreed to complete the following by July 10, 2004, so that at the end we will be able to develop Critical Planning Problem Sessions (CPPS) as a continuing series for different conferences:
 - a) Each Committee member shall approach five entities (e.g., utilities, regulatory agencies), overseas or domestic, to identify critical planning challenges they face.
 - b) Each Committee member shall also use this opportunity to recruit membership for Working Groups.
 - c) Each Committee member shall submit what he or she finds to our Committee Chair, ML Chan, by the deadline, for distribution to all Committee officers to aid in developing “products” for conferences.
- 10) Development of Working Group programs for GM2005 (Led by ML Chan). It was agreed that all WG meetings will be held as Combo meetings.
 - a) Energy Supply WG - Energy Supply: Planning Needs, a panel session moderated by Gerry Sheble (Thanks.). The session will include the following topics:
 - i) Resource Adequacy is currently the #1 concern for almost all existing open energy markets. As driven by the marginal cost but with a bidding price cap, the energy price signal alone may not be sufficient to keep existing resources for reliability or encourage any new capacity investment for the long run. Now come the ICAP (Installed Capacity) and LICAP (Locational ICAP) markets. Can they provide both capacity adequacy for the consumers and revenue adequacy for the generators? What about some other alternatives such as Forward Reserve Markets, Capacity Payment, Two-Part Tariff, and/or Call Options?
 - ii) Market simulation programs that would include: (a) traditional bid/cost based market/production simulation models which can normally produce LMP and handle both security constrained unit commitment and economic dispatch, and (b) experimental economics based market behavior simulation models with smart or human experimental agents. Both programs can provide the market participants (generators or their agents) a real world market experience (LMP,

FTR, Losses, Bidding Behavior, Market Equilibrium etc.) without paying too high learning cost.

- iii) Load and fuel price forecasting, options and risk management from the energy supply side.
 - iv) Virtual Regional Dispatch (VRD). To address the “seams” issue across different RTO/ISO regions, the question is “how to optimize (or coordinate) the inter-tie flows or schedules under imperfect information so that not only regionally but also globally all participating RTO/ISO regions as a whole can still be better off in terms of total production cost?”
 - v) How to conduct an integrated resource planning in a decentralized market environment for energy supply? (Transmission investment could be moved to Transmission WG).
- b) Transmission WG – Planning for Transmission Capacities in Face of Conflicting Interests, a panel session that addresses the planning criteria used (e.g., maximizing social welfare, sustainability, environmental well being) to meet the perspectives of different stakeholders. The session will be moderated by Paola Bresesti, with the aid of Dick Wakefield.
- c) Asset Management WG – Having approved the forming of this WG earlier, the Committee voted to select a Chair for the WG. Richard E. Brown made a motion to have Gerard Cliteur act as the Chair of the Asset Management WG. The motion was seconded by Lee Willis. The motion was passed by acclamation. The WG will set up a panel on equipment aging, equipment failure rate, and maintenance planning for GM2005.
- d) Distribution WG – The following issues were brought out to be of interest to the industry. Therefore, a panel session called “the ugly side of Distribution planning” will be set up for the GM2005.
- i) Project prioritization
 - ii) Role of risk
 - iii) Role of asset management
 - iv) Budgeting, planning and their feedback from operations to improve upon planning and budgeting
 - v) Use of automation technologies (e.g., substation automation, distribution automation)
- The WG has also identified a long term product - Benchmarking of Distribution Utility Business Metrics. The WG Chair, R. E. Brown, will head up this effort.
- e) Customer Service WG – Greg Welch made a motion to have Hahn Tram chair the Customer Service WG. The motion was seconded by Richard E. Brown. The motion passed by acclamation. It was suggested that the Customer Services WG plan for a panel session on Demand Response Programs.
- 11) A move to adjourn was made by ML Chan. There were numerous parties that offered seconds to the motion. The motion passed by acclamation and the meeting was adjourned at 5:15 PM. The committee will meet again at the 2004 Power Systems Conference and Exposition in New York in October, 2004

- 12) Epilogue: Subsequent to the Committee Meeting, the Chair, ML Chan, proposed that WGs develop the following programs for the 2005 T&D Show, which will be held in October, 2005.
- a) Energy Supply WG – Consider developing a panel session (scheduled for GM2005) to discuss the Resource Adequacy Issues including (1) pros and cons of the ICAP and LICAP market designs (2) Any other (better) alternatives (3) Challenges and open concerns including regulatory, demand side and technical difficulties. For the 2005 T&D Show, it seems a panel session on Market Simulation Programs would be a better fit.
 - b) Transmission WG – Develop a panel session that will address the diverse issues of transmission planning, including impact of equipment aging, “major event” planning, infrastructure security, locational uncertainties due to IPPs and new generation resources, impact of wind power to power system dynamics, risk, incremental losses and transmission service tariff.
 - c) Distribution WG – Consider doing a modified version of the panel session scheduled for GM2005 – “Ugly Side of Distribution Planning”.
 - d) Asset Management WG – Set up a panel session, discussing the issues of condition-based maintenance and its data requirements, or equipment failure rate modeling for various devices.
 - e) Customer Services WG – Set up a panel session to address issues in the use of BPLC