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5 January 2006

Dear Hydroelectric Power Subcommittee Member:

RE: 2005 Summer Hydroelectric Power Subcommittee Meeting
– Austin, Texas

The Subcommittee and all of its active Work Groups met 17-19 July 2005 in conjunction with Waterpower XIV in Austin, Texas, USA. The meeting minutes, attendance roster, and working group reports are attached.

The next meeting of the Hydroelectric Power Subcommittee and its active working groups will be held 26-28 February 2006 in Las Vegas, Nevada, USA. Please block-in the date; details shall be forthcoming.

I look forward to seeing you there.

Best regards,

Randall C Groves, PE, Chairman
Hydroelectric Power Subcommittee



MEETING MINUTES

Hydroelectric Power Subcommittee

19 July 2005

**The Hilton Austin Hotel
Austin, Texas**

Chair Report – Randy Groves

- The meeting was opened with seven members and five guests present. The attendance roster and the meeting agenda are attached.
- The two IEEE patent policy slides had been reviewed at the beginning of each work group session, and the disclosure advice was provided to all members who were present. Copies of the two slides and the instructions are attached. An opportunity was provided for members to identify or disclose patents believed to be essential for the use of our standards, guides, and recommended practices under development or revision. No patents or patent applications were identified relating to the current work of the Hydroelectric Power Subcommittee or any of its working groups.
- The membership roster was circulated to all members present for review and updates. A copy of the updated membership roster is attached.
- The subcommittee had previously decided to hold its summer meetings in conjunction with Waterpower conferences in odd-numbered years. The subcommittee presently plans to continue meeting at the PES General Meeting in the summer of each even-numbered year. To maintain our development schedules, the subcommittee will continue to have one additional meeting each year for as long as deemed necessary.

Technical Session Report

- The subcommittee will not be sponsoring a technical session this year. Following discussion it was decided that we would schedule a panel session on The History of Hydroelectric Standards at the 2006 PES General Meeting with a follow-up session at Waterpower in 2007. A session chairman will be selected when we meet in Las Vegas in February 2006.

Work Group Reports

- Recommended Practice for Preparation of Equipment Specifications for Speed Governing Systems – Dave Apps

Work Group P125 met 17 July 2005. Work Group Report is attached.

- Recommended Practice for Unique Identification in Hydroelectric Facilities – Randy Groves

Work Group P807 met 17 July 2005. Work Group Report is attached.

- Guide for Control of Hydroelectric Power Plants – John Yale

Work Group P1010 had no business to conduct at this meeting. The revision is presently in recirculation ballot.

- Guide for Control of Small Hydroelectric Power Plants – Doug Seely

Work Group P1020 met 18 July 2005. Work Group Report is attached.

- Guide for the Rehabilitation of Hydroelectric Power Plants – Steve Brockschink

Work Group P1147 met 18 July 2005. Work Group Report is attached.

- Guide for the Application of Turbine Governing Systems for Hydroelectric Generating Units– Dave Kornegay

Work Group P1207 had no business to conduct at this meeting. IEEE Std 1207-2004 was published 2 November 2004.

- Guide for the Commissioning of Electrical Systems in Hydroelectric Power Plants – Doug Seely

Work Group P1248 had no business to conduct at this meeting. IEEE Std 1248-1998 was balloted for reaffirmation in November 2004 and was re-balloted in March 2005.

- Guide for Computer-Based Control for Hydroelectric Power Plant Automation – Doug Seely

Work Group P1249 met 18 July 2005. Work Group Report is attached.

Liaison Reports

- ASME PTC 29

The ASME Power Test Code on governors for hydraulic turbines continues to be worked through the ASME balloting process. The ballot has been approved and the standard is awaiting publication.

- Awards

No papers have been nominated for awards. The Awards WG is continually looking for prize paper awards nominees even if it is too late for this year. IEEE Std 1207-2004 has been nominated for the EDPG Outstanding Standard or Guide award.

- CIGRE – No Report
- EDPG Standards – Steve Brockschink

1095 requires action by the end of the year. We need to decide whether the standard should be revised, reaffirmed, or withdrawn.

- IEC – Randy Groves

IEC TC 4, Hydraulic Turbines Committee has reaffirmed the existing Category D Liaison with the Hydroelectric Power Subcommittee. Randy Groves will continue to serve as the Category D Liaison with TC 4.

- General Power Meeting 2006

The subcommittee and active work groups will meet at the PES General Meeting in Montreal.

- Waterpower XV

The Hydroelectric Power Subcommittee plans to meet at Waterpower XV in the summer of 2007.

Old Business

- Pursuit of developing a compendium of Hydro Standards for publication is being revisited. This had previously been tabled because IEEE Headquarters postponed publication of any standards collections due to rising costs. Since that time, it was noted, that new collections for transformers and switchgear are being promoted. The Chairman will develop a PAR for a hydro compendium.

New Business

- Plant Asset Management and Maintenance Practices. This will be discussed when the subcommittee meets in Las Vegas.

Next Meeting

The next Hydroelectric Power Subcommittee meeting will be 28 February 2006 in Las Vegas, Nevada, USA.

Being no further business, the meeting adjourned.

Randall C Groves, PE
Chairman, Hydroelectric Power Subcommittee

**IEEE Power Engineering Society
Energy Development Power Generation Committee
Hydroelectric Power Subcommittee**

2005 Waterpower XIV Attendance Roster

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David L Kornegay, PE North American Hydro 1323B Everest Avenue Schofield WI 54476	Telephone (715) 359-0209 x19 Facsimile: (715) 359-1049 david.kornegay@nahydro.com IEEE Number: 07962731	<input checked="" type="checkbox"/> SA Member? <input checked="" type="checkbox"/> Attend 19 Jul 05
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**IEEE Power Engineering Society
Energy Development Power Generation Committee
Hydroelectric Power Subcommittee**

2005 Waterpower XIV Attendance Roster

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MEETING AGENDA
HYDROELECTRIC POWER SUBCOMMITTEE

19 July 2005
8:00 AM – 12:00 Noon
The Hilton Austin Hotel

- | | |
|---|----------------------|
| I. Introductions, Comments, and Chair Report | Randy Groves |
| II. Technical Session Report | All |
| III. Working Group Reports | |
| Hydro Governors Recommended Practice (P125) | Dave Apps |
| Hydro Power Plant Identifiers (P807) | Randy Groves |
| Modern Control Guide (Std 1010) | John Yale |
| Small Hydro Control Guide (P1020) | Doug Seely (interim) |
| Rehabilitation of Hydroelectric Power Plant Guide (P1147) | Steve Brockschink |
| Governor Applications (Std 1207) | Dave Kornegay |
| Commissioning Guide (Std 1248) | Doug Seely |
| Computer Based Control for Hydroelectric Power Plant
Automation Guide (P1249), Including the Incorporation
Of P1438 materials | Doug Seely |
| IV. Liaison Reports | |
| ASME PTC – 29 Rev. | Lou Wozniak |
| Awards | Phil Spotts |
| CIGRE | Jim Edmonds |
| ED&PGC Standards | Steve Brockschink |
| IEC | Randy Groves |
| V. Hydro Subcommittee Meeting 2006 | |
| Open item: Las Vegas once again? | Randy Groves |
| Working Group and Subcommittee Meetings | All |
| VI. PES General Meeting 2006 - Montreal | |
| Working Group and Subcommittee Meetings | All |
| VII. New Business | |
| 2007 and Beyond Meeting Schedule | All |
| New Standards Activities | All |
| Plant Asset Management / Maintenance Practices | Jim Gurney |
| New Subcommittee Members | All |
| New EDPG Committee Members | Randy Groves |
| Website Utilization and Discussion | All |
| Open Forum | All |
| VIII. Closing Comments and Adjournment | Randy Groves |

Instructions for the WG Chair

- **At Each Meeting, the Working Group Chair shall:**
- **Show slides #1 and #2 of this presentation**
- **Advise the WG membership that:**
 - The IEEE's Patent Policy is consistent with the ANSI patent policy and is described in Clause 6 of the *IEEE SA Standards Board Bylaws*;
 - Early disclosure of patents which may be essential for the use of standards under development is encouraged;
 - Disclosures made of such patents may not be exhaustive of all patents that may be essential for the use of standards under development, and that neither the IEEE, the WG nor the WG Chairman ensure the accuracy or completeness of any disclosure or whether any disclosure is of a patent that in fact may be essential for the use of standards under development.
- **Instruct the WG Secretary to record in the minutes of the relevant WG meeting:**
 - that the foregoing advice was provided and the two slides were shown;
 - that an opportunity was provided for WG members to identify or disclose patents that the WG member believes may be essential for the use of that standard;
 - any responses that were given, specifically the patents and patent applications that were identified (if any) and by whom.



IEEE-SA Standards Board Bylaws on Patents in Standards

6. Patents

IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard. This assurance shall be provided without coercion and prior to approval of the standard (or reaffirmation when a patent becomes known after initial approval of the standard). This assurance shall be a letter that is in the form of either

- a) A general disclaimer to the effect that the patentee will not enforce any of its present or future patent(s) whose use would be required to implement the proposed IEEE standard against any person or entity using the patent(s) to comply with the standard or
- b) A statement that a license will be made available without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination

This assurance shall apply, at a minimum, from the date of the standard's approval to the date of the standard's withdrawal and is irrevocable during that period.



Inappropriate Topics for IEEE WG Meetings

- Don't discuss licensing terms or conditions
- Don't discuss product pricing, territorial restrictions or market share
- Don't discuss ongoing litigation or threatened litigation
- Don't be silent if inappropriate topics are discussed... do formally object.

If you have questions, contact the IEEE Patent Committee Administrator at patcom@ieee.org or visit <http://standards.ieee.org/board/pat/index.html>

**IEEE Power Engineering Society
Energy Development and Power Generation Committee
Hydroelectric Power Subcommittee**

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**IEEE Power Engineering Society
Energy Development and Power Generation Committee
Hydroelectric Power Subcommittee**

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Seattle WA 98108	IEEE Number:	<input type="checkbox"/>	Attend 27 Jan 04

Daryl Maxwell	Telephone: (204) 474-4173	<input type="checkbox"/>	SA Member?
Manitoba Hydro	Facsimile: (204) 453-5359	<input type="checkbox"/>	Attend 19 Jul 05
820 Taylor Avenue (4th Floor)	dmaxwell@hydro.mb.ca	<input type="checkbox"/>	Attend 22 Feb 05
		<input type="checkbox"/>	Attend 9 Jun 04
Winnipeg MB R3C 2P4 Canada	IEEE Number: 08010159	<input type="checkbox"/>	Attend 27 Jan 04

Tommy K McEntyre	Telephone: (423) 751-6774	<input type="checkbox"/>	SA Member?
Tennessee Valley Authority	Facsimile: (423) 751-3965	<input type="checkbox"/>	Attend 19 Jul 05
1101 Market Street, LPIF-C	tkmcentyre@tva.gov	<input type="checkbox"/>	Attend 22 Feb 05
		<input type="checkbox"/>	Attend 9 Jun 04
Chattanooga TN 37402	IEEE Number: 41502830	<input type="checkbox"/>	Attend 27 Jan 04

**IEEE Power Engineering Society
Energy Development and Power Generation Committee
Hydroelectric Power Subcommittee**

Membership Roster

Donald G McLaren	Telephone:	<input type="checkbox"/>	SA Member?
	Facsimile:	<input type="checkbox"/>	Attend 19 Jul 05
		<input type="checkbox"/>	Attend 22 Feb 05
		<input type="checkbox"/>	Attend 9 Jun 04
	IEEE Number:	<input type="checkbox"/>	Attend 27 Jan 04

Arezki Merkhouf GE Canada 107 Park Street North Peterborough ON K9J 7B5 Canada	Telephone: (705) 748-7156 Facsimile: (705) 748-7719 arezki.merkhouf@ps.ge.com IEEE Number:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	SA Member? Attend 19 Jul 05 Attend 22 Feb 05 Attend 9 Jun 04 Attend 27 Jan 04
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Paul Micale Heritage Hydro, LLC 11640 Hixson Pike Soddy Daisy TN 37379	Telephone: (423) 309-1881 Facsimile: (423) 332-4142 p.micale@ieee.org IEEE Number: 07618507	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	SA Member? Attend 19 Jul 05 Attend 22 Feb 05 Attend 9 Jun 04 Attend 27 Jan 04
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Edward P Miska, Jr, PE Hydroelectric Design Center, COE 333 SW First Avenue, 8th Floor Portland OR 97204	Telephone: (503) 808-4294 Facsimile: (503) 808-4277 e.miska@ieee.org IEEE Number: 07146640	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	SA Member? Attend 19 Jul 05 Attend 22 Feb 05 Attend 9 Jun 04 Attend 27 Jan 04
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William R Moon	Telephone: Facsimile: IEEE Number:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	SA Member? Attend 19 Jul 05 Attend 22 Feb 05 Attend 9 Jun 04 Attend 27 Jan 04
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Glenn Mottershead VS Hydro 2185 North Sheridan Way Mississauga ON L5K 1A4 Canada	Telephone: (905) 855-0242 x263 Facsimile: (905) 855-0249 glenn.mottershead@vs-hydro.com IEEE Number:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	SA Member? Attend 19 Jul 05 Attend 22 Feb 05 Attend 9 Jun 04 Attend 27 Jan 04
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Hans Naeff ALSTOM Power, Inc 7921 SouthPark Plaza, Suite 208 Littleton CO 80120-4506	Telephone: (303) 730-4060 Facsimile: (303) 730-4112 hans.naeff@power.alstom.com IEEE Number: 02519858	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	SA Member? Attend 19 Jul 05 Attend 22 Feb 05 Attend 9 Jun 04 Attend 27 Jan 04
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**IEEE Power Engineering Society
Energy Development and Power Generation Committee
Hydroelectric Power Subcommittee**

Membership Roster

Gary D Osburn	Telephone: _____ Facsimile: _____ IEEE Number: _____	<input type="checkbox"/> SA Member? <input type="checkbox"/> Attend 19 Jul 05 <input type="checkbox"/> Attend 22 Feb 05 <input type="checkbox"/> Attend 9 Jun 04 <input type="checkbox"/> Attend 27 Jan 04
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David J Parker General Power Engineering Association 1400-H Commerce Boulevard Sarasota FL 34243	Telephone: (813) 351-3927 Facsimile: (813) 351-4229 davidp@gpea.com genpower.dp@gte.net IEEE Number: _____	<input type="checkbox"/> SA Member? <input type="checkbox"/> Attend 19 Jul 05 <input type="checkbox"/> Attend 22 Feb 05 <input type="checkbox"/> Attend 9 Jun 04 <input type="checkbox"/> Attend 27 Jan 04
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Les Pereira	Telephone: _____ Facsimile: _____ les@ncpa.com IEEE Number: _____	<input type="checkbox"/> SA Member? <input type="checkbox"/> Attend 19 Jul 05 <input type="checkbox"/> Attend 22 Feb 05 <input type="checkbox"/> Attend 9 Jun 04 <input type="checkbox"/> Attend 27 Jan 04
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Bernard Poulin, Eng Hydro-Quebec 75 Rene-Levesque Boulevard West 11th Floor Montreal QC H2Z 1A4 Canada	Telephone: (514) 289-2211 x2413 Facsimile: (514) 289-4081 poulin.bernard@hydro.qc.ca IEEE Number: 41399901	<input checked="" type="checkbox"/> SA Member? <input checked="" type="checkbox"/> Attend 19 Jul 05 <input type="checkbox"/> Attend 22 Feb 05 <input checked="" type="checkbox"/> Attend 9 Jun 04 <input checked="" type="checkbox"/> Attend 27 Jan 04
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John J Quinn, PE 2101 Franklin Drive Glenview IL 60025	Telephone: (847) 296-5261 Facsimile: _____ jnquin@aol.com IEEE Number: _____	<input type="checkbox"/> SA Member? <input type="checkbox"/> Attend 19 Jul 05 <input type="checkbox"/> Attend 22 Feb 05 <input type="checkbox"/> Attend 9 Jun 04 <input type="checkbox"/> Attend 27 Jan 04
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Wayne Rand	Telephone: (770) 777-4983 Facsimile: _____ wayne.rand@ieee.org wrand1@mindspring.com IEEE Number: _____	<input type="checkbox"/> SA Member? <input type="checkbox"/> Attend 19 Jul 05 <input type="checkbox"/> Attend 22 Feb 05 <input type="checkbox"/> Attend 9 Jun 04 <input type="checkbox"/> Attend 27 Jan 04
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Laurence N Rodland, PE Consultant	Telephone: _____ Facsimile: _____ rodland@charter.net IEEE Number: 05540158	<input checked="" type="checkbox"/> SA Member? <input type="checkbox"/> Attend 19 Jul 05 <input type="checkbox"/> Attend 22 Feb 05 <input type="checkbox"/> Attend 9 Jun 04 <input type="checkbox"/> Attend 27 Jan 04
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**IEEE Power Engineering Society
Energy Development and Power Generation Committee
Hydroelectric Power Subcommittee**

Membership Roster

Douglas B Seely, PE	Telephone: (503) 297-1631	<input checked="" type="checkbox"/>	SA Member?
Pacific Engineering Corporation	Facsimile: (503) 297-5429	<input checked="" type="checkbox"/>	Attend 19 Jul 05
9400 SW Barnes Road, Suite 550	dseely@stantec.com	<input checked="" type="checkbox"/>	Attend 22 Feb 05
	dbseely@msn.com	<input checked="" type="checkbox"/>	Attend 9 Jun 04
Portland OR 97225	IEEE Number: 05687488	<input checked="" type="checkbox"/>	Attend 27 Jan 04

Chris Shultz	Telephone: (253) 502-8318	<input checked="" type="checkbox"/>	SA Member?
Tacoma Power	Facsimile: (253) 502-8136	<input type="checkbox"/>	Attend 19 Jul 05
3628 South 35th Street	cshultz@cityoftacoma.org	<input checked="" type="checkbox"/>	Attend 22 Feb 05
		<input type="checkbox"/>	Attend 9 Jun 04
Tacoma WA 98409	IEEE Number: 40084680	<input checked="" type="checkbox"/>	Attend 27 Jan 04

Philip A Spotts	Telephone: (423) 757-8055	<input checked="" type="checkbox"/>	SA Member?
Parsons	Facsimile:	<input type="checkbox"/>	Attend 19 Jul 05
633 Chestnut Street, Suite 400	philip.a.spotts@worleyparsons.com	<input checked="" type="checkbox"/>	Attend 22 Feb 05
		<input checked="" type="checkbox"/>	Attend 9 Jun 04
Chattanooga TN 37450-0400	IEEE Number: 04164505	<input type="checkbox"/>	Attend 27 Jan 04

Winfried Stach	Telephone:	<input checked="" type="checkbox"/>	SA Member?
	Facsimile:	<input type="checkbox"/>	Attend 19 Jul 05
	winfriedstach@yahoo.com	<input checked="" type="checkbox"/>	Attend 22 Feb 05
		<input type="checkbox"/>	Attend 9 Jun 04
	IEEE Number: 40145999	<input checked="" type="checkbox"/>	Attend 27 Jan 04

J Taylor	Telephone:	<input type="checkbox"/>	SA Member?
	Facsimile:	<input type="checkbox"/>	Attend 19 Jul 05
		<input type="checkbox"/>	Attend 22 Feb 05
		<input type="checkbox"/>	Attend 9 Jun 04
	IEEE Number:	<input type="checkbox"/>	Attend 27 Jan 04

William W Terry	Telephone: (423) 751-2979	<input checked="" type="checkbox"/>	SA Member?
Tennessee Valley Authority	Facsimile: (423) 751-6350	<input type="checkbox"/>	Attend 19 Jul 05
1101 Market Street, LP-3P	wwterry@tva.gov	<input type="checkbox"/>	Attend 22 Feb 05
		<input type="checkbox"/>	Attend 9 Jun 04
Chattanooga TN 37402	IEEE Number: 07088990	<input type="checkbox"/>	Attend 27 Jan 04

Louis Wozniak, PhD, PE	Telephone: (217) 333-3413	<input type="checkbox"/>	SA Member?
University of Illinois	Facsimile: (217) 244-7705	<input type="checkbox"/>	Attend 19 Jul 05
104 South Mathews	l-wozniak@uiuc.edu	<input type="checkbox"/>	Attend 22 Feb 05
		<input type="checkbox"/>	Attend 9 Jun 04
Urbana IL 61801	IEEE Number: 08386435	<input type="checkbox"/>	Attend 27 Jan 04

**IEEE Power Engineering Society
Energy Development and Power Generation Committee
Hydroelectric Power Subcommittee**

Membership Roster

John B Yale, PE	Telephone: (509) 661-4051	<input checked="" type="checkbox"/>	SA Member?
MWH Global c/o Chelan County PUD	Facsimile: (509) 664-7186	<input type="checkbox"/>	Attend 19 Jul 05
Rock Island Rehab Project	john.yale@chelanpud.org	<input checked="" type="checkbox"/>	Attend 22 Feb 05
PO Box 1231		<input checked="" type="checkbox"/>	Attend 9 Jun 04
Wenatchee WA 98807-1231	IEEE Number: 07954902	<input checked="" type="checkbox"/>	Attend 27 Jan 04

Khalil N Zadeh, PhD, PE	Telephone: (714) 667-1965	<input type="checkbox"/>	SA Member?
Zadeh Meyer Engineering, Inc	Facsimile: (714) 667-1106	<input type="checkbox"/>	Attend 19 Jul 05
1000 West La Veta Avenue, Suite 411	nzadeh@aol.com	<input type="checkbox"/>	Attend 22 Feb 05
		<input type="checkbox"/>	Attend 9 Jun 04
Orange CA 92868	IEEE Number:	<input type="checkbox"/>	Attend 27 Jan 04

Brent Zarlenga	Telephone: (704) 943-4343	<input type="checkbox"/>	SA Member?
VA Tech Hydro	Facsimile: (704) 943-0200	<input type="checkbox"/>	Attend 19 Jul 05
10715 David Taylor Drive	bzarlenga@vatechhydro.com	<input type="checkbox"/>	Attend 22 Feb 05
		<input type="checkbox"/>	Attend 9 Jun 04
Charlotte NC 28262	IEEE Number: 08359663	<input checked="" type="checkbox"/>	Attend 27 Jan 04

**IEEE Energy Development and Power Generation Committee
Hydroelectric Power Subcommittee
Working Group P125**

**Draft Recommended Practice for Preparation of Equipment Specifications for
Speed Governing of Hydraulic Turbines Intended to drive Electric Generators**

**Minutes of Working Group Meeting, Austin
17 July 2005**

Chair: Dave Apps

1. A total of 8 members and 4 guests attended with representation as follows:
 - 6 utilities
 - 4 consultants
 - 2 manufacturers

2. Dave Apps reported that the PAR extension was granted until Dec. 2007

3. The bibliographic submissions from Hans Naeff (May 31, 2005 email to D. Apps) and Randy Groves (June 15, 2005 email to D. Apps) were discussed. It was agreed that the French, British, German, Dutch and Romanian references would not be included but the IEC references would be included. IEC 61362 will be added. Randy to provide a complete list of references to D. Apps

4. A significant amount of time was dedicated to discussing the sections on pumps, tank sizing. It was agreed that for all 3 types of turbines (Francis, Impulse, Kaplan) that the servo volumes criteria from shutdown pressure to oil cutoff level would be as follows:
 - Air over oil – 1.5 servo volumes
 - Transfer barrier – 2.0 servo volumes

5. Assignments:
 - 3.0 Definitions – J. Yale
 - 5.2.1 – 5.2.14 – J. Yale to revise as functions, not hardware
 - 5.14 – S. Brockschink to add alarm table
 - 6.0 and 8.0 – G. Girgis to harmonize and revise speed and power stability indices
 - Bibliography – R. Groves to update

**IEEE Power Engineering Society
Energy Development & Power Generation Committee
Hydroelectric Power Subcommittee**

**P807 Working Group: Recommended Practice for Unique Identification in
Hydroelectric Facilities**

Report on the Working Group Meeting held Sunday 17 July 2005
The Hilton Austin Hotel, Austin, Texas, USA

This meeting of the working group convened with 9 members in attendance, reference the attached attendees list.

IEEE Patent Policy

Patent policy was reviewed with respect to this project. The following slides were distributed to all members and discussed in accordance with current IEEE patent policy:

Slide 1: IEEE-SA Standards Board Bylaws on Patents in Standards

Slide 2: Inappropriate Topics for IEEE WG Meetings

An opportunity was provided for Work Group members to identify or disclose patents believed to be essential for the use of the recommended practice presently being developed. No patents or patent applications are identified at this time.

PAR:

On 31 October 2002 the Standards Board approved the PAR until December 2006. The approved scope and purpose statements were reviewed as follows:

Scope: This recommended practice provides a unique identification system for hydro facilities that segregates and incorporates plant, unit, system, and component identifiers as a minimum.

Purpose: At present there is no standard practice for hydro facility identification. This recommended practice can be used as a unique identification system to delineate failure reporting, maintenance management, and design. The unique identification system is structured to allow expansion of the identifiers in a standard format to the level of detail that may be required.

Organization:

A table of contents was drafted to facilitate writing assignments by clause:

1. Overview (To be assigned)
 2. References (To be assigned)
 3. Definitions (To be assigned)
 4. Structure Description (John Yale)
 5. Identifiers (Bernard Poulin, Randy Groves)
 6. Implementation (Phil Spotts)
- Annex A (Informative) Table of Identifiers (To be assigned)
Annex B (Informative) Application Examples (To be assigned)
Annex C (Informative) Bibliography (Randy Groves)

The work group discussed identifier structures and ideas for formatting the clauses and annexes.

The above Table of Contents is contained in the "Front Matter" file in the Drafts folder of the private directory.

It was noted that documents listed as normative references in Clause 2 must be cited within the normative text in accordance with the 2005 Style Manual.

The Chairman has requested an electronic copy of IEEE Std 805-1984 (R2000). File will be forwarded to Chuck Lennon for addition to the P807 private directory.

Writing Assignments:

John Yale will outline a structure for listing the identifiers. It was noted that all systems in use should fit into either a single structure or a group of structures.

Bernard Poulin and Randy Groves will work with source documents and prepare a first cut of an identifiers list.

Phil Spotts has adapted Clause 6, Implementation, from our source, IEEE Std 804-1984 (R2000). The Chairman will merge that into the next draft.

Coordination:

Station Design – 803 and 804 may be withdrawn, rather than reaffirmed or revised, because of lack of use. 806 has already been withdrawn. Coordination will be revisited at the next meeting.

Old Action Items:

The Chairman will check with IEEE/SA on copyright issues with posting ANSI/ISA S5.1 on WG website.

Doug Seely will search for other explanatory publications related to the KKS system.

Winfried Stach advised that the KKS system should be public domain and will identify a contact individual for confirmation.

New Action Items:

Wayne Timm will provide comments on identification of enclosures and instrument racks.

Russ Fostiak will write the first draft of subclause 6.1.4, Instruments and Actuators.

Wayne Timm will forward to the Chairman a scanned version of IEEE Std 806

Schedule:

All writing assignments should be submitted to the Chairman by 1 November 2005 to facilitate preparations for the next meeting in Las Vegas, Nevada.

Respectfully submitted,

Randall C Groves, PE, Chairman
P807 Working Group

**IEEE Power Engineering Society
Energy Development & Power Generation Committee
Hydroelectric Power Subcommittee**

**P1020 Work Group
IEEE Guide for Control of Small (100 kVA to 5 MVA)
Hydroelectric Power Plants**

Austin, Texas – 17 July 2005

**Meeting Minutes
Meeting #3**

The Work Group held its summer 2005 meeting Monday July 17, 2005 at the Waterpower XIV Conference in San Antonio Texas. The following were in attendance (An updated membership list is attached):

Dave Apps	Russ Fostiak	Dave Kornegay
Bruce Benson	George Girgis	Ramon Lopez-Rivera
Steve Brockschink	Richard Hammer	Bernard Poulin
Max Emrick (for Chris Shultz)	Lane Hutton	Doug Seely
	Randy Groves	Wayne Timm

Doug Seely chaired the meeting acting as interim Chair.

Doug reviewed the history of the Guide, the reasons why the Guide is being revised and the PAR scope and purpose. Doug noted that the PAR has an expiration date of December 2008. The IEEE guidance on patent policy and the guidance on inappropriate meeting topics were circulated.

Doug noted that he had contacted several members of the Work Group whose companies have universal controller products for small hydro applications and inquiring if they wished to be involved in revising the Guide. No interest was expressed. Doug will follow up with contacts with suppliers having booths at Waterpower.

The initial draft (Draft 1) of the revised Guide was reviewed. The following changes were noted:

- The subclause on Project Evaluation was retained but moved to an informative Annex.
- Information regarding turbine types was retained but moved to an informative Annex.
- The existing Definitions Clause has been incorporated in a Glossary Annex. Formal definitions that need to be included the Definitions Clause should be called to Doug's attention.

Based on a group review, the following additions (including action party) should be made to the next draft of the Guide:

- Max Emrick suggested that more material (beyond what is contained in the Project Evaluation Annex) be included in regard to project development. Max will see if he can locate some good reference sources.
- Dave Apps will write an outline of protection detail (material contained in Clause 7) to guide the revision of this Clause.
- IEEE Guide 1547 should be included in the Normative References Clause.

**IEEE Power Engineering Society
Energy Development & Power Generation Committee
Hydroelectric Power Subcommittee**

**P1020 Work Group
IEEE Guide for Control of Small (100 kVA to 5 MVA)
Hydroelectric Power Plants**

Austin, Texas – 17 July 2005

- Steve Brockschink will draft a discussion of the plant owner's perspective on protection versus that of the utility to which the plant is interconnected.
- All of the material contained in Clause 9 (Operation) will be moved to the appropriate subsections of Clause 4.
- The existing Introduction will be rewritten to discuss the revised user "audience" for the Guide i.e. the current plant owner who is updating his first generation small hydro plant control system as opposed to a non technical plant developer who was perceived to be the user audience in the early 1980's when the Guide was initially prepared.
- A list of participants in developing the original guide should be included in the Introduction.

Doug Seely will incorporate the above changes into a second draft of the revised Guide and distribute a revised draft in the early fall of this year. Comments will be solicited on the draft and a third draft incorporating review comments will be circulated prior to the next scheduled meeting.

The next work group meeting will be at the next HESC Winter Meeting tentatively scheduled for Las Vegas, NV the second or third week of February 2006.

P1147 Working Group Meeting Minutes
July 18, 2005
Hydroelectric Power Subcommittee Technical Meeting
Austin, TX

The meeting convened with 15 in attendance. Those attending are listed below:

D. Apps	L. Hutton
B. Benson	D. Kornegay
S. Brockschink	R. Lopez-Rivera
M. Emrick	C. Mercier
R. Fostiak	B. Poulin
G. Girgis	D. Seely
R. Groves	W. Timm
R. Hammer	

The Chair reported that the recirculation ballot of draft 8 has been completed successfully with a 93% return and 96% affirmative vote. During the ballot process the chair resolved some of the comments via email. The chair also was able to have one negative ballot changed to "approve with comments". Other comments, remain for the work group to resolve collectively.

The work group spent the rest of the time addressing all remaining comments. All comments that were incorporated into the draft were editorial in nature. Other comments that were technical in nature were not either not agreed to by the work group or deferred until the next time the standard is reaffirmed.

The remaining work to be accomplished is for the chair to incorporate all the agreed to comments into draft 9 and submit it and supporting documentation to RevCom for approval. This should be done by August 12, 2005 to make it available for the September RevCom meeting. The chair will post the material on the website.

Steven R. Brockschink
Chair, WG P1147

**IEEE Power Engineering Society
Energy Development & Power Generation Committee
Hydroelectric Power Subcommittee**

**P1249 Work Group
IEEE Guide for Computer Based Control for
Hydroelectric Power Plant Automation**

Austin, TX – July 18, 2005

**Meeting Minutes
Meeting #9**

The Work Group held its summer 2005 meeting Monday July 18, 2005 at the Waterpower XIV Conference in Austin, TX. The following were in attendance (An updated membership list is attached):

Dave Apps
Bruce Benson
Steve Brockschink
Max Emrick (for Chris Shultz)

Russ Fostiak
George Girgis
Richard Hammer
Lane Hutton
Randy Groves

Dave Kornegay
Ramon Lopez-Rivera
Bernard Poulin
Doug Seely
Wayne Timm

Doug Seely chaired the meeting.

Copies of IEEE guidance on patent policy and guidance on inappropriate meeting topics were circulated.

Doug reported that a PAR extension request had been sought for revising 1249 since the original PAR expires in December 2005. The Standards Board will take action on the request at their September meeting.

Doug also reported that he had initiated contact with Dr. Thomas Harbort, VA Tech SAT (Austria), Chair, Work Group 14 of IEC/TC 4, the work group within TC 4 entrusted with "overall control of unit, station and off-site control in hydro systems" and the group the P1249 Work Group should be liaising with on IEC matters. No response had been received from Dr. Harbort as of the meeting. Doug will follow up with Dr. Harbort.

The proposal by Jim Gurney to incorporate some material contained in the withdrawn PAR P1438, "Plant Condition Monitoring Guide" into the P1248 Guide was discussed. The Work Group decided that elements contained in Jim's proposal should be incorporated in an informative annex of the Guide. Material related to economic justification should not be included. Doug will work with Jim on the details.

Copies of the revised guide containing reorganization efforts of John Yale and Winfried Stach were distributed and reviewed. It was suggested that the case studies be moved to an informative annex. All of the case study authors have yet to update or furnish new case study material for incorporation into the revised guide. Doug will contact these individuals to determine if they're still willing to provide the needed material.

**IEEE Power Engineering Society
Energy Development & Power Generation Committee
Hydroelectric Power Subcommittee**

**P1249 Work Group
IEEE Guide for Computer Based Control for
Hydroelectric Power Plant Automation**

Austin, TX – July 18, 2005

The balance of the meeting was spent in editing the guide draft. This was facilitated by three breakout groups, one led by Doug Seely (Clauses 1-3), another led by Steve Brockschink (Clauses 4-6), and the third led by Dave Apps (Clauses 7-12).

Doug Seely will incorporate the changes discussed by the Work Group and the editing changes developed by the breakout groups into a second draft of the revised Guide and distribute the revised draft in the early fall of this year. Comments will be solicited on the second draft and a third draft incorporating review comments will be circulated prior to the next scheduled meeting.

The next work group meeting will be at the next HESC Winter Meeting tentatively scheduled for Las Vegas, NV the second or third week of February 2006.