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Application of High-Temperature, Low-Sag (HTLS) Conductors
Dale Douglass, PDC

Thursday, November 10, 2011
Seminar Schedule

9:00AM Introductions & Discussion

Instructor background & experience

Student interest and experiences in HTLS conductor

9:15AM Power System Analysis – Where are HTLS conductors useful?

- *Why most transmission line loads are low?*
- *What causes emergency loads?*

9:45AM Limitations of Conventional ACSR

- *Annealing of aluminum*
- *Sag at maximum temp*
- *Connector aging*

10:15AM Break

10:30AM HTLS materials – Aluminum and Core

- *Annealed aluminum*
- *Zirconium Aluminum alloy*
- *Mischmetal Steel core*
- *Composite carbon*
- *Aluminum Composite*

11:15AM Commercial HTLS conductor designs

- *TACSR/ZTACSR*
- *ACSS/ACSS/TW*
- *ACCR*
- *ACCC*
- *Making your own ACSS*

12:00PM Lunch

1:00PM Qualification Testing of HTLS

- *ASTM & IEC Specs*
- *CIGRE TB 426*
- *Running Field Trials*

1:30PM Installation concerns

- *Shear stress limits of ACCC & ACCR*
- *Installation of ACSS*
- *Connections*

2:00PM Electrical losses

- *Normal line loads*
- *Resistance calculations*

2:15PM Break

2:30PM Practical evaluation of Conductor Alternatives

- *IEEE Test Case for HTLS Comparison*
- *CIGRE Evaluation of Alternatives*
- *Practical utility applications of HTLS*

4:00PM Future developments

4:30PM End of Seminar