Materials Discussion

OEMs were present – Thank you

Reviewed last year’s discussion results
• Key topics - Water vapor, ash composition, interface roughness

Fatigue/creep
• Requested 2 years in a row by OEMs.
• Began developing a problem statement – more specifics needed.
• Discussed potential activities – modeling and testing. Need to build off of previous work, not repeat it.
• Inputs from OEMs are needed to modify models to accommodate variation in service cycles.
• Inspection methods of interest.
• OEMs would have to specify which type of creep-fatigue interactions to focus on.
• Benefit - understand the basic science, which can be utilized by OEMs to create applied technology.

General Discussion – Enabling tools and pre-competitive science vs. technological solutions.
• Industry does not wish to share their proprietary information.
• Solution development without boundary conditions and field experience is frustrating.
• OEMs can provide boundary conditions (alloy content, ash composition, service temperature, cycle details etc) which can keep Univ. research always relevant to them.
• OEMs reaffirmed that the university research is very useful.
• On-going feedback is key for guiding approaches.
• DOE can continue to work with OEMs to shakedown broad problems into smaller, specific problem sets
• Research that decreases development time is desirable.

Manufacturing becoming more important; UTSR solicitation should address processing related issues with science.

Communication/relationships are important.
DOE action item – Continue assisting transfer of problem specifics to UTSR participants and look for additional feedback mechanisms.