Generator Interconnection Issues

White Paper Outline

1. Technical Issues
   a. Utility Distribution System Operation
      i. Planning
      ii. Relaying & Fusing
      iii. Real Time Operations
   b. Interconnection Study
      i. Major Component Design Requirements
         (a) Data Requirements
         (b) Isolating Transformer(s), Isolating Device, Interconnection Lines, Termination Structure
      ii. Relaying Design Requirements
         (a) General Considerations
            (i) Synchronous Projects
            (ii) Induction Projects
            (iii) Inverter Type Projects
         (b) Instrument Transformer Requirements
         (c) Islanding and Direct Transfer Trip
         (d) Reverse Power Relaying
         (e) Automatic Reclosing
         (f) Single-phase Sectionalizing
iii. Telemetry and Disturbance Monitoring Requirements

iv. Miscellaneous Operational Requirements
   (a) Operating in Parallel
   (b) Reactive Power Control
   (c) Standby Power
   (d) System Stability and Site Limitations

v. Revenue Metering Requirements

vi. Communication Circuits

2. Regulatory Issues

   a. Serving Retail Electric Loads
      i. Public Act 141
         (a) Is the entity operating the microgrid distribution system a public utility? If so, what regulations apply?

      ii. Obligation to Serve
          (a) Does the utility have an obligation to provide backup generation and delivery service when operating as an electrical island?

      iii. Liability
          (a) Does the utility tariff rules still apply when operating as an electrical island?

   b. Selling Power Back To The Grid
      i. Who regulates this?
      ii. What approvals from whom are required (MPSC, FERC, other)?
c. Net Metering Issues

d. Stranded Utility System Costs
   i. Generation
   ii. Delivery System