Grid Modernization (Smart Power Grid) Technologies – Report Outline

1. Grid Modernization Concept
   a. Background
   b. Current U.S. Initiatives
   c. SmartGrid Characteristics

2. Grid Modernization Benefits
   a. Service Reliability
   b. Outage Recovery
   c. Power Quality
   d. Grid Efficiency

3. Grid Modernization Technologies (see Technologies Matrix)
   a. Architecture & Communication Standards
   b. Monitoring & Load Management
   c. Advanced Grid Operations
   d. Modeling & Simulation

4. Michigan Modernization Projects
   a. DTE Modernization Activities (DG, AMR, etc.)
   b. Consumers Energy Modernization Activities (EMS/SCADA, BPL, etc.)
   c. Great Lakes Energy Cooperative AMR (TWACS)
   d. Cloverland Cooperative AMR
   e. Midwest Cooperative AMR
   f. Cherryland Cooperative AMR (implementation in progress)
   g. Indiana Michigan Power AMR
   h. WE Energy AMR

5. MPSC Modernization Projects
   a. Distributed Generation Interconnection Standards
   b. Net Metering Program (5-year)

6. Grid Modernization Challenges
   a. Stakeholder Involvement
   b. Regulatory Interface (federal and state standards)
   c. Human Resources & Training
   d. Siting For Grid Expansion
   e. Financing For Modernization Projects

7. Grid Modernization Recommendations
   a. Michigan Collaborative
   b. Utility Pilot Project