Notrees Energy Storage Project

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Project Objectives
• Use energy storage to increase the value and practical application of wind generation
• Integrate storage with intermittent renewable energy production
• Improve use of power-producing assets by storing energy during non-peak generation periods
• Demonstrate benefits of using fast response energy storage to provide ancillary services for grid management
• Verify that energy storage solutions can operate within the ERCOT market protocols
• Demonstrate ramp control and related operational benefits
• Prove storage is commercially viable at utility scale

Energy Storage System
• Technology: Advanced lead-acid battery
• OEM Partner – Xtreme Power (XP)
• 36 MW / 24 MWh output
• Modules housed in ~ 6,000 sq. ft. building

Project Activities to Date
• Site construction began December 2011
• XP DPM™ modules being manufactured and installed
• Metrics & Benefits Plan developed

Upcoming Activities
• Acceptance testing of XP DPR modules ongoing
• Completion of site construction by November 2012
• Commercial operation by December 2012
• First year “Technology Performance Report” by Dec 2012
• System performance testing & analysis, 2013-14

Battery Acceptance Test Plan
• Real power (kW) from the DPR
• Reactive power (kVar) from the DPR
• Apparent power (KVA) from the DPR
• Power factor
• Total dc voltage – Between storage PowerCells and electronics
• PowerCell column pack dc voltage – Between storage PowerCells and electronics
• Max PowerCell column pack dc voltage – Between storage PowerCells and electronics

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