SmartGrid demonstration project timeline

KCP&L energizing life

Phase 1	**Project Definition and Compliance (2009-2010)** • Ensure project definition, scope and objectives, and implementation methodology are aligned with the Department of Energy objectives • Install advanced communication infrastructure, smart metering and measurement devices in the demonstration area • Begin public outreach and education plan • Increase awareness and adoption of KCP&L's portfolio of energy-efficiency programs
Phase 2	**Project Performance Baseline (2010)** • Detail technology requirements and system design • Compile historical consumer usage data to create baseline • Develop Smart End-Use program models that allow customers access to data
Phase 3	**SmartGrid Infrastructure Deployment (2011-2012)** • Upgrade Smart Substation technology (substation network, control and distribution system and electronic relays) • Upgrade Smart Distribution grid automation to proactively manage energy flow and communications with substation • Implement Distribution Management System to allow grid managers to monitor system and make decisions
Phase 4	**Distributed Energy Resource Deployment (2011-2012)** • Implement Smart End-Use technology (in-home displays, demand-response thermostats, home energy portal) • Implement Smart Generation technologies (roof-top solar, grid-connected battery and plug-in electric vehicle charging) • Implement Distributed Resource Management System to optimize and manage power system • Implement pilot pricing structures to allow customers to better manage usage
Phase 5	**Data Collection, Reporting & Project Conclusion (2012-2014)** • Evaluate operation of integrated demonstration systems • Collect performance and end-use consumption data • Analyze grid efficiency and performance improvements • Evaluate new enterprise business models

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