Xcel Energy®

Xcel Energy Smart Grid
A White Paper

INTRODUCTION

"He's been dead more than 75 years, but Thomas Edison—hailed as the father of the light bulb—probably could run the nation's modern-day electric grid. It just hasn't changed that much."

Denver Business Journal
March 30, 2007

Xcel Energy's business strategy has multiple components, including a focus on our customers, people and communities. Our strategy of delivering reliable energy is complimented by our commitment to find the most environmentally feasible methods of meeting the energy demands of our customers. One area of opportunity revolves around the concept of a smart grid. While the industry has various definitions of a smart grid and there are multiple efforts underway that are called "smart grid," we believe the opportunity to develop a fully inter-connected system allowing customers to automatically manage their energy consumption and enabling Xcel Energy to reliably produce and deliver that energy through real-time, automated controls is now available.

Xcel Energy's vision of a smart grid includes a fully network-connected system that identifies all aspects of the power grid and communicates its status and the impact of consumption decisions (including economic, environmental and reliability impacts) to automated decision-making systems on that network. This vision leverages the multitude of vertical system solutions currently available and deploys a horizontal integration of these systems into a real-time, automated "neural network" that will manage all of the variables involved in delivering energy to the consumer. We believe this vision of an advanced decision-making system will allow Xcel Energy to more efficiently deliver energy while providing consumers with valuable information for better decisions on when, where and how to consume energy. The impact will be a greatly improved delivery system that optimizes the impact on the environment, ensures the most efficient delivery, and maximizes reliability.

Xcel Energy has been recognized in the past for its ability to drive transformation, in addition to its ability to bring partners to the table for leveraged development. Our past successes combined with a continued commitment of transformation presents us with a unique position to be one of the leaders in Smart Grid development and deployment within the industry. We are excited to establish this industry leadership with Xcel Energy's vision of the smart grid.

The purpose of this white paper is to dive into the details of Xcel Energy's Smart Grid, offer insight into related industry activity, and explain the steps we are taking to bring this smart grid vision to life through the implementation of a Smart Grid City. By doing so, we will validate our vision and demonstrate to the marketplace the possibilities.

What is a Smart Grid?

The fundamental method of operating the nation's power grid has not changed much in the past 100 years. It has remained essentially the same, although the number of customers and their needs have grown exponentially. Utilities across the nation—and indeed, around the world—are trying to figure out how to bring their networks into the 21st century and the digital age. This effort to make the power grid more

intelligent is generally referred to as creating a "smart grid." The industry sees this transformation to a smart grid improving the methods of delivery as well as consumption. Xcel Energy not only sees it as improving our energy security issue, but is the first utility to view smart grid as an environmental solution, helping solve the more pressing global issue of climate change.

While details vary greatly, the general definition of a smart grid is an intelligent, auto-balancing, self-monitoring power grid that accepts any source of fuel (coal, sun, wind) and transforms it into a consumer's end use (heat, light, warm water) with minimal human intervention. It is a system that will allow society to optimize the use of renewable energy sources and minimize our collective environmental footprint. It is a grid that has the ability to sense when a part of its system is overloaded and reroute power to reduce that overload and prevent a potential outage situation; a grid that enables real-time communication between the consumer and utility allowing us to optimize a consumer's energy usage based on environmental and/or price preferences.

What Does Smart Grid Mean to Xcel Energy?

Our vision of smart grid covers the entire value chain – "wind to light," or "coal to cool air"– and sees smart grid as a continuing organic evolution that includes multiple layers of functional intelligence leading to real-time analytics, decision-making, and action.

We plan on partnering with key industry leaders to jointly fund the design and deployment of a complete smart grid model to a city within Xcel Energy's service territory. The deployment of a working model will allow us to test and prove the value assumptions directly with our customers and regulators. By collaborating with industry leaders, we will spread the cost and associated risk across multiple players, thereby allowing a fully deployed smart grid system that can demonstrate the capabilities of technology to reform the industry.

Our vision of smart grid includes the optimization of all investment, operational expenditures, and environmental impact in coordination with consumer choices and by better managing supply (both central and distributed generation) and consumption. It allows consumers to become dynamically engaged in making intelligent and automated energy choices based on their own individual priorities, effectively balancing cost, reliability, and environmental impact on an individual customer basis; ensuring full application integration leading to the transformation of data and knowledge into real-time decisions and actions; and resulting in measurable value for all stakeholders across the entire value chain.

Concerns about climate change, environmental impact and sustainable energy solutions, along with a renewed personal sense of responsibility for limiting our carbon footprint, are key reasons consumers are pushing for cleaner, more efficient energy solutions. An integrated smart grid allows customers to better plan and manage their energy consumption while optimizing the grid through real-time generation and distribution control management.

The smart grid will create the ability to optimize traditional fuel sources and integration of renewable sources and distributed generation to reduce the impact we have on the environment, while still meeting our consumers' growing energy demands. We believe the smart grid will result in:

- **Positive environmental impact**
- **Customer choice from products to services**
- **Enhanced system reliability**
- **Increased efficiency of power delivery**
- **Extended asset life**

We expect the smart grid to provide tangible and intangible benefits to all stakeholders, including consumers, shareholders, and regulators. It will bring environmental benefits that impact all of us today, as well as our future generations. Customers will have options and choices when it comes to the amount and type of power they use, and when to use those energy resources. Our systems will be more reliable, creating a reduced need for building additional capacity, and allowing us to better manage energy demand with the resources available and create higher returns. Utility operating costs will be lower as a result of automation and better visibility into operational aspects of the grid, leading to more efficient and effective use of resources.

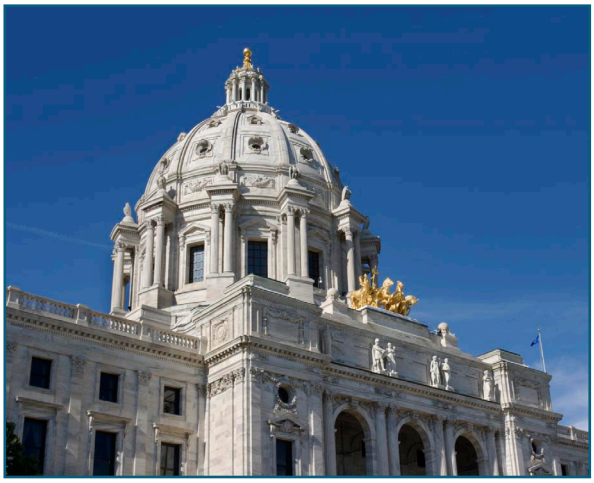
SITUATION ANALYSIS

"Peak demand for electricity is projected to...grow by 19% over the next decade; ...currently committed capacity is projected to grow only by six percent."

The Brattle Group,
May 2007

The drive to pursue status as a "Next Generation" utility is based on the realities of a rapidly changing market dynamic that requires a balance among the environment, energy security, customer choices and energy concerns.

Environment – Concerns over environmental impacts of utility operations are at all-time high. Awareness of issues involving greenhouse gases and the promotion of "green power" has never before been at such a high level in the public consciousness. Utilities are pressured on many fronts to adopt business practices that respond to global environmental concerns. According to a study conducted by the National Renewable Energy Lab, if we do nothing, U.S. carbon emissions are expected to rise from 1700 million tons of carbon (Mtc) per year today to 2300 Mtc by the year 2030. In that same study, they demonstrate that utilities, through implementation of energy efficiency programs and use of renewable energy sources, could not only displace that growth, but actually have the opportunity to reduce the carbon output to below 1,000 Mtc by 2030.



To that end, Xcel Energy supported the legislative requirements in both our Colorado and Minnesota jurisdictions for increasing the renewable aspects of our portfolio. We have committed to the following renewable energy benchmarks:

- **In Colorado, by 2020, 20% of annual retail electricity sales**
- **In Minnesota, by 2025, 30% of annual retail electricity sales, 25% of which will be derived from wind energy**

Energy Security – Our nation has never seen threats like we have over the past several years. General societal threats can cascade over to industry reliability threats. In addition, our nation's electric system is vulnerable and is critical to our way of life. Smart grid technologies can expand capabilities to effectively minimize and manage both concerns.

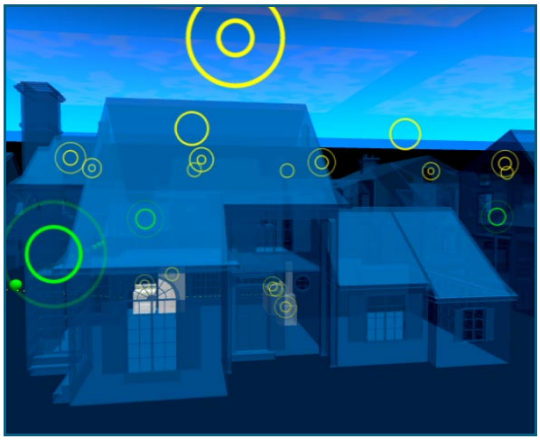
Customer Choices – The requirements of customers to be offered choices has also never been as high as they are today, and the demands of customers are expected to rise even further in the years ahead. Larger houses, exponentially larger amounts of electric usage, and higher expectations for choices and options for services in a digital economy have given rise to the need to provide more flexibility in how energy is provided to customers.

Energy Concerns – Given the global political climate and unstable foreign energy markets, the energy sector has been asked to respond to energy issues by adopting business practices that provide assurances that energy can be delivered to end-users reliably, continuously, and cost-effectively. With concerns over rising energy costs, many utilities are actively seeking ways to modify long-term strategies by ensuring that fail-safe provisions are accounted for.

Together these elements will lead to the most significant transformation of the energy market in a century. The migration of many disjointed energy markets into one has begun.

Smart Grid Capabilities

We believe a Smart Grid will provide new capabilities to customers, utilities and the overall energy market. Consumers will have the opportunity for choices not just with the type of energy they receive but also with the ability to manage their own consumption habits through in home automation. They will have visibility into how energy is used within their home, how much that usage costs them, and what kind of impact that usage has on the environment. They will have the option of self-managing that usage interactively, or setting preferences allowing the utility to automatically make adjustments based on those choices. We believe the smart grid will also open up opportunities for new consumer services, energy management offerings and products not currently possible with today's infrastructure. We believe smart grid will allow utilities to intelligently respond to supply availability and demand.

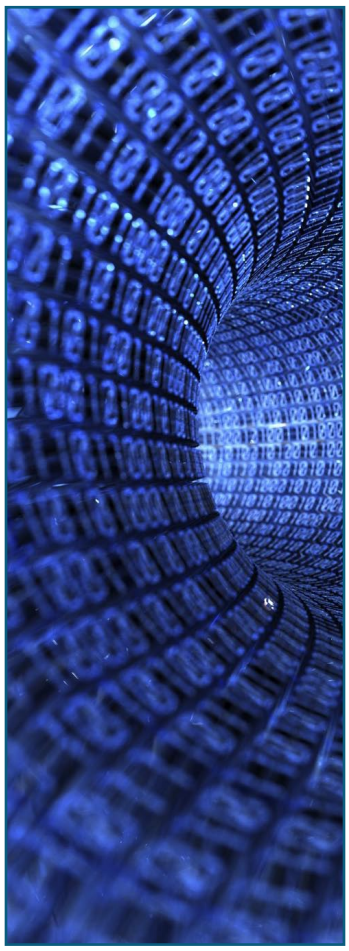


Utilities can expect to enhance and refine their distribution and generation management with the help of real-time system information. As a result, they will be able to respond to peak demand loads more efficiently; identify outages and their related causes more precisely (enabling faster restoration); dispatch a more cost-effective mix of fuel sources (while minimizing environment impacts); and automatically re-route energy as needed to meet consumer demands and avoid unnecessary strain on the power grid.

Smart grid capabilities will enable marketers to have a real-time view of the demand on various aspects of the grid and manage the market accordingly.

With smart grid concepts continuing to evolve and emerge, we believe additional capabilities will be realized related to the integration of real-time data analytics and decision-making throughout all the components of a smart grid. These will become more apparent as the smart grid is implemented and matures.

Smart Grid Technologies



The fundamental component for making the smart grid work will be a robust and dynamic communications network; providing the utility the ability for real-time, two-way communications throughout the grid and enabling interaction with each component from fuel source to end use. Other key components for bringing the smart grid to life are utility devices (monitors, switches, fuses, etc.) for communication throughout the grid infrastructure and devices at consumers' premises (meters, monitors, device / appliance controls, logic) for communications with the customer. Finally, there must be integration logic that brings all of this information together into a manageable, understandable format through the use of data management tools and neural networks.

Smart Grid Benefits

While we can identify several quantifiable benefits the smart grid will bring today, we believe many other significant benefits exist that will not become apparent until the smart grid begins to be implemented. Specifically, we believe there is compelling evidence that supports the following long-term benefit assumptions:

- **Significant reductions in residential peak demand energy consumption achieved by providing real-time price and environmental signals in conjunction with advanced in-home technologies**
- **Additional reductions in residential peak demand by fully integrating the utility system with distributed generation technologies (scalable for mass penetration)**
- **Up to 30% reduction in distribution losses from optimal power factor performance and system balancing**
- **Potential carbon footprint reduction as a result of lowered residential peak demand and energy consumption, improved distribution losses and increased conservation options**
- **Possible reductions in the number of customer minutes out as a result of improved abilities to predict and/or prevent potential outages, and more effective responses to outages and restoration**
- **Expected deferral of capital spends for distribution and transmission projects based on improved load estimates and reduction in peak load from enhanced demand management**
- **Potential utility cost savings from remote and automated disconnects and reconnects, elimination of unneeded field trips and reduced customer outage and high-bill calls through home automation**

THE MARKET

The Department of Energy has defined a smart grid road map intended to help guide utilities in developing future strategies. It includes:

- **Smart meters enabled with two-way communication**
- **Intelligent home and smart appliances**
- **Demand side management and distributed generation**
- **Automatic correction for voltage, frequency and power factor issues**
- **Superconducting cables for long distance transmission**
- **Access to affordable pollution-free, low-carbon electricity generation**
- **Affordable energy storage devices available to anyone**

Xcel Energy is not the only utility considering smart grid strategies. However many of our peer's efforts involve implementation of significant smart meter initiatives—and they refer to those implementations as "smart grid" initiatives. As a result, the terms smart metering and smart grid are often used synonymously. Up to a year ago, no one identified a discrete definition of "smart grid." To address this and related problems, Xcel Energy worked with various stakeholders to develop a coherent vision of the smart grid by establishing a working group, called the Smart Grid Forum, to engage technology companies, public officials, policy experts, environmental advocates, and other participants in an effort to define what the smart grid means for our company, and to determine how stakeholders can help realize that vision.

As a result of the Smart Grid Forum, Xcel Energy has a more expansive conception of the smart grid than that of others in the industry. We are looking at the integration of the fuel source to the end-use consumer and all touch points in between. We believe that everything from a piece of coal or a breeze of wind to the thermostat has to be part of the smart grid and that it must include integration among all of the components. Very few, if any, of our peer utilities have a documented smart grid vision that encompasses the entire horizontal utility value chain like Xcel Energy does, nor do they tout the horizontal integration of various smart grid components as the key to the success. Xcel Energy has further set itself apart by identifying smart grid as one component to help meet the environmental challenges facing our industry and the world.

Because of our comprehensive smart grid vision and our incorporation of the environmental aspects into smart grid, many organizations in the marketplace have identified Xcel Energy as a leader in this space. However, as concerns for climate change and environmental impacts continue to increase, and consumers increasingly become aware of and educated about these issues, more and more utilities are doing things to help move the industry forward in relation to smart grid. While those things continue to only focus on specific components of the smart grid and not the end-to-end horizontal value chain that Xcel Energy has identified, it will likely not be long before others recognize the need for the broader, environmental focus, and perhaps overtake our hard-earned leadership position. If we act quickly, we can solidify our leadership position and be a significant influencer for moving our industry forward.

What Others are Doing

Southern California Edison

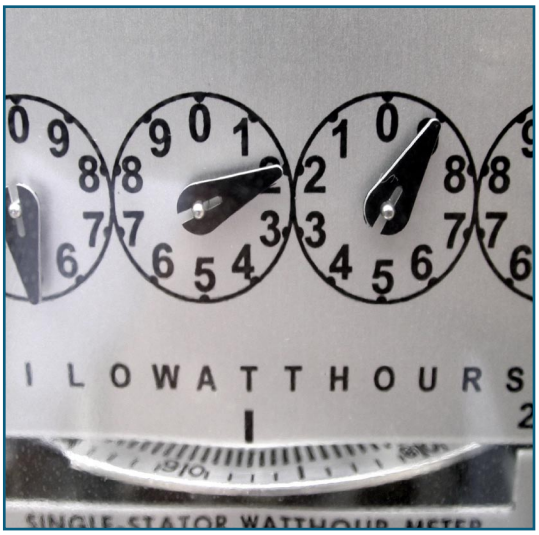
- **Smart Meters — replacement of 5 million meters; field testing in 2007; final vendor selection by year-end; full deployment in 2009 (subject to PUC approval)**
- **Infrastructure expansion — $5 billion in last 5 years; plans for $9 billion during the next five years (Neighborhood power distribution circuits and on/off routing switches)**
- **PHEVs — Announced a partnership with Ford in July to explore this technology**

Pacific Gas & Electric — Partnering with Tesla Motors on PHEVs and vehicle to grid technology

American Electric Power — Deploying advanced metering and an enhanced infrastructure; expected in place by 2010, fully deployed by 2015 to its 5M+ customer base

Others — Several states have AMI initiatives in place or plans for one in the future

Regulatory Strategies



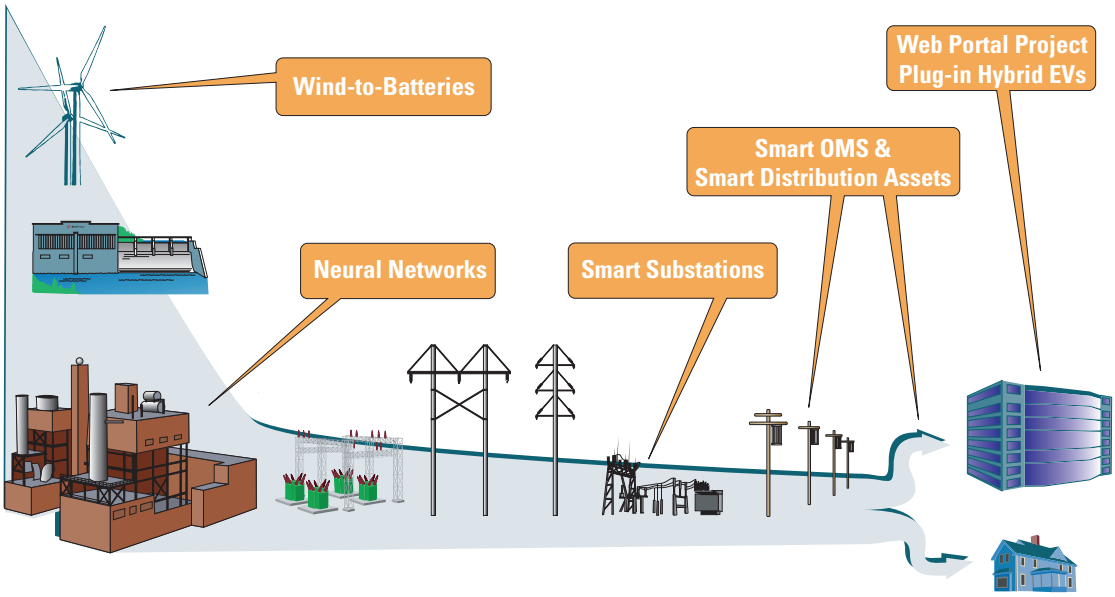
To date, there has been regulatory approval for significant amounts of funding targeted at smart metering and a few cases of funding for various types of energy storage initiatives. However, while metering and energy storage are key components to a smart grid, the real risk in a true coal-to-cool-air, wind-to-light implementation of the smart grid is that these technologies that transform conservation and efficiency efforts can lead to degradation of the regulated return and uncompensated demand destruction. Mitigation of that risk requires efforts of both the utility, as well as the regulators. Utilities will need to focus on the creation of new products and services, transforming from a product model to a service model, and offering customers more options. Regulators will need to be partners in establishing different pricing regimens; ones which create incentives for utilities to earn revenue in ways that aren't entirely linked to additional sales. The focus needs to be on the total customer bill, with an eye toward rewarding both the utility and the customer for conservation.

One of the design principles that will be applied in Xcel Energy's approach to the smart grid, as demonstrated in the following paragraphs, will be focused on gaining consumer, regulatory, and legislative support for these efforts and a recognition that there needs to be some innovation in how utilities are compensated and allowed to make a return on their shareholders investment.

Xcel Energy's Approach to the Smart Grid

As mentioned previously, Xcel Energy's approach was to first convene a Smart Grid Forum to help define our vision for the smart grid. Once that was defined, a video was created to encapsulate the vision and then a high-level implementation plan developed. Our approach to smart grid implementation follows our Utility Innovations business model, the objectives of which are to:

- **Collaborate with influential partners to craft a clear and understandable smart grid vision and identify a well-defined approach to smart grid deployment, aligned with our corporate objectives**
- **Develop a public policy strategy that manages expectations; addresses the long-term vision and current technical capabilities; and ensures return on investment**
- **Test smart grid components to measure and prove benefit; manage risk; and determine specific deployment strategies**



Consistent with our model, our Smart Grid implementation involves a three-phased approach comprised of:

(I) Quick-hit projects

(II) Smart Grid City

(III) Xcel-wide deployment of proven technologies.

Phase I is in progress today. Phase II is planned for deployment in 2008 – 2010.

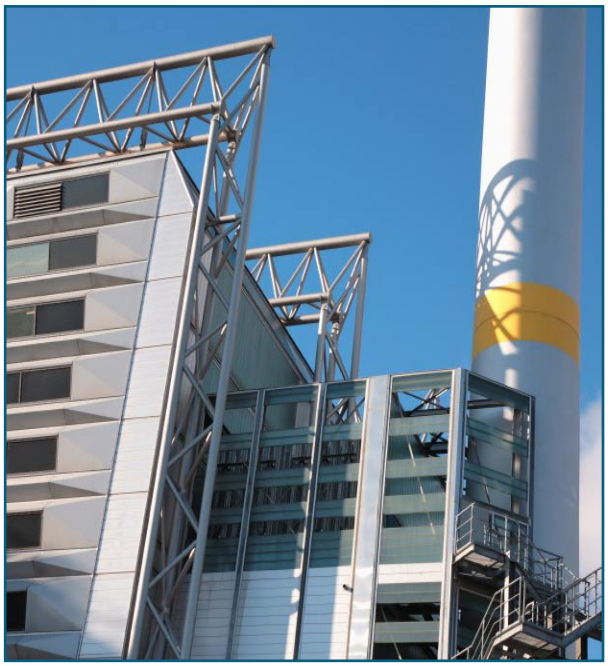
Phase III will be dependent on the learnings from the first two phases.

Phase I – Quick-Hit Projects

In order to show action and quickly demonstrate smart grid concepts within each component of our utility value chain, engage partners with tangible investment opportunities, continue to publicize and communicate our vision of smart grid, and develop momentum and buy-in internally for the smart grid concept, seven quick-hit projects were identified to test various technologies that could be used to build intelligence into the power grid.

Wind Power Storage: This project tests a one-megawatt battery energy storage system connected directly to a wind turbine at the MinnWind wind farm in southwest Minnesota in an effort to store wind energy and return it to the grid. It is expected to demonstrate long-term emission reductions from increased availability of wind; help reduce impacts of wind variability; and allow us to meet Renewable Energy Standard legislation requirements. It will also help us test the technology to make wind power dispatchable on a utility scale.

Neural Networks: This project creates a state-of-the-art system that helps reduce coal slagging and fouling (build up of hard mineral in the boiler). Slagging results in several million dollars in lost revenue each year. Boiler sensors plug directly into the Distribution Control. Neural networks will model the slagging/fouling by using historical data to "learn" boiler behavior. The system also captures and incorporates knowledge directly from the plant engineers and operators – effectively capturing, modeling, and using hundreds of years of collective experience. Smart grid technologies will also help solve the impending demographic challenge all companies face.



Smart Substation: This project is retrofitting an existing substation (Merriam Park) with cutting-edge technology for remote monitoring of critical and non-critical operating data. Includes developing an analytics engine that processes massive amounts of data for near real-time decision-making and automated actions. The team will monitor breakers, transformers, batteries and substation environmental factors (such as ambient temperatures, variable wind speeds, security cameras, etc.) This project will help prove our ability to optimize power factor performance and obtain a significant reduction in distribution losses leading to a reduction in our carbon footprint. Expected operational benefits include reduced maintenance and installation costs; improved employee safety and equipment life; faster restoration times; and increased system reliability. This system will also test and demonstrate newly developed security technology.

Smart Distribution Assets: This project tests existing meter communication equipment that can automatically notify Xcel Energy of outages and help the utility restore outages more quickly. By using this Advanced Meter Technology, our Control Center will be able to detect isolated outages in advance of customer calls and dispatch crews to the correct location faster.

Smart Outage Management: This project tests diagnostic software that uses statistics on eight factors, including equipment maintenance, real-time weather and history to predict problems in the power distribution system (an Outage Cause Model). A Substation Feeder Analysis system can detect cable and device failures on monitored substation banks (a Cable Fail Predictor.) Success means responding to outages faster, with properly equipped crews—and possibly even preventing the problem—and detecting outages well before a customer's first call.

Plug-in Hybrid Electric Vehicles: This project builds upon our previous impact study and takes it a step further by testing Plug-in Hybrid EVs in the field. The team is equipping six Ford Escape Hybrids with vehicle-to-grid technology, which will allow them to charge from and discharge energy to the grid, in one of the nation's first field tests of this emerging technology. This project will help prove the significant environmental benefits associated with the dual value (transportation and electric energy storage) inherent in PHEVs by demonstrating to what degree the variable nature of renewable sources can be eliminated by utilizing massive amounts of storage devices connected to the grid and available to be dispatched. This project will move us closer to better understanding the energy security benefit of PHEVs by helping quantify the percentage of the vehicle fuel market that potentially can be moved to domestic electric energy sources. In addition, it serves as a testing and validation opportunity for other types of distributed generation, related to how they can be managed and how the energy from distributed generation can be put back onto the grid when needed.

Consumer Web Portal: This project will allow customers to program or pre-set their own energy use and automatically control power consumption based on personal preferences based against both energy costs and environmental factors. The Web interface will give customers an opportunity to automatically control their energy. Customers will be able to choose to turn devices on or off from pre-selected preferences (for example, hourly price points or green energy signals sent from the Web.)

Each of these projects is at various stages of development/deployment ranging from requirements definition, through final testing and analysis stages. Partners, each willing to co-invest, have been identified for all of the projects. All projects are expected to be complete, with final reports available, by the end of 2008.

Phase II – Smart Grid City

The quick-hit projects from Phase I are focused on vertical aspects of the utility. As indicated previously, we believe the true value from a smart grid comes from the communications infrastructure and the integration of those various components. As such, we believe the next critical step in Xcel Energy's smart grid deployment will be a comprehensive demonstration of our vision of smart grid, brought to life in a mid-sized metropolitan city within our service territory; a 100% deployment of all of the elements from our quick-hit projects in one location, including all premises and the monitoring and control of all resources on the grid.

This Smart Grid City (Phase II of our plan) will be a true coal-to-cool air/ wind-to-light development test bed for integration of information between silos. It will be a proof-of-concept that validates or disproves the proposed environmental, financial, and operational benefits of our Smart Grid vision. In the end, our Smart Grid City will become an international showcase of the possibilities.

Deploying Smart Grid City

- Funding of Smart Grid City is designed as a shared-risk model with contributions from multiple partners, thereby significantly expanding the scope while limiting financial risk to any one company or investor. The initiative will be funded similar to our Utility Innovations funding model, using partner-based co-investment in which the partners provide funding for all or part of an initiative in return for a share of the intellectual property and enhancements to, or creation of, their products and services. We anticipate co-investment from five to seven primary strategic partnerships and several other secondary partners. This funding model is expected to leverage Xcel Energy's investment of $15 million six to seven times for a total Smart Grid City investment of approximately $100 million.
- The technology will consist of converting existing metering infrastructure to true two-way architecture integrated with outage management and customer information systems. In addition, we will convert substations to "smart" substations; provide/install 10,000 in-home control devices and the necessary infrastructure to fully automate home energy use; and integrate 1,000 dispatchable distributed generation technologies (PHEVs, battery systems, vertical wind turbines, and solar panels) designed to minimize our carbon footprint by eliminating the inherent variable nature of renewable energy sources.
- The city selection process will ensure the necessary political and regulatory engagement needed for support of the demonstration effort but also for future deployments.
- The initiative will be overseen by a Smart Grid Advisory Board consisting of members from our strategic partnership companies that will provide direction for the effort.

Smart Grid City Characteristics

An ideal location for Smart Grid City would be one that:

- Is operationally well defined and located in a geographically concentrated area (Geographic isolation is preferred; however, not required)
- Contains, or has easy access to, components necessary to implement and validate the Smart Grid concept
- Is a medium-sized metropolitan area (Approximately 50,000 customers)
- Offers "friendly" regulatory and political support
- Is visible, somewhat recognized, community (Neither obscure or remote)
- Is home to environmentally conscious consumers (Open to PHEVs, alternative sources of energy, and variations of energy usage)
- Provides optimal economic development, political, public relations and branding opportunities
- Remains open to opportunities to provide new services to the city. (Examples include: customers energy use and carbon foot print information, reliability information on specific city facilities, traffic lights, city buildings, and other high priority customers. Ability for cities to set priorities for power restoration and ability for city to see power restoration progress)
- Offers regulatory and political incentives for change (Tariffs, return, etc.)

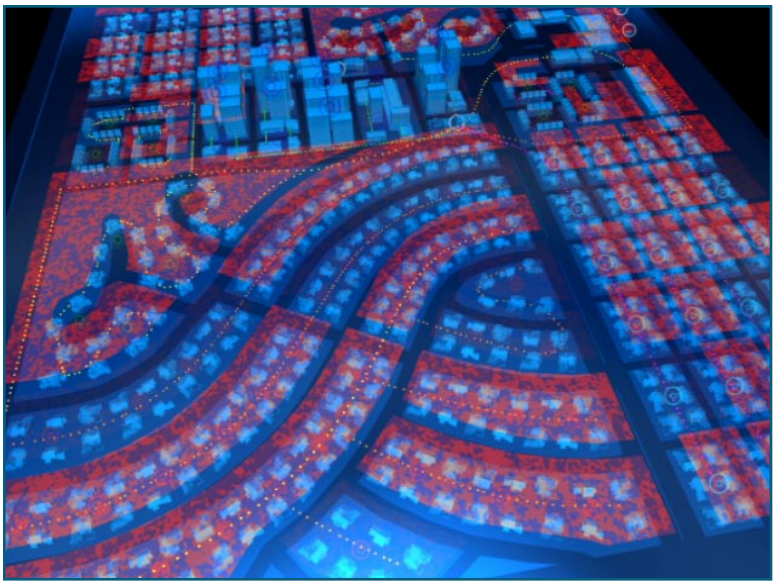
Smart Grid City Regulatory Strategy

One of the objectives of our Smart Grid City initiative is to demonstrate the possibilities that smart grid technologies have for the enhancement of the grid of the future as well as its impact on the environment. We are also anticipating significant involvement in the effort from regulators and legislators as well to help educate them on those possibilities. The goal will not be to request specific recovery on the dollars we invest in the Smart Grid City effort but rather set the stage and work with the regulators on how recovery should be sought in the future. Because of the potential for rate return degradation and uncompensated demand destruction that the smart grid will result in, we believe that regulatory structures will need to be significantly different in the future than they are today. Our hope is to use Smart Grid City to help bring awareness to these issues and enable regulators an opportunity to see the value of smart grid and be open to making changes; perhaps even provide that test ground to experiment with different regulatory scenarios.

Proposed Timeline

Partner alignment	End of 2007
Scope and design	End of Q1 2008
Build out	April 2008 through March 2009
Benefit assessment	Beginning Q4 2008 through Q4 2009

During the initial partner alignment, we expect to finalize timelines and resource commitments from partners. We will also start discussions around intellectual property ownership between collaborators and ensure knowledge sharing occurs among this industry leadership group. Last, we will identify additional partners and thought leadership necessary to guarantee program success.



SUMMARY

The utility industry today is faced with not only supplying resources to accommodate the projected growth in demand for energy, but also minimizing and reducing the impact we have on the environment from producing that energy. Xcel Energy believes the smart grid provides a solution to this challenge. The benefits and payoffs are numerous.

For consumers, a smart grid means they can use electricity more wisely and save money by setting "smart" appliances that slow down or shut down on a hot, sunny day when demand for power and its corresponding cost are high. It means having many different options for using energy, and it means having a much better understanding of their overall energy use. For environmentalists, a smart grid means using technology to help solve climate change by conserving energy and using it more wisely. It also means better integration of renewable resources into standard operations, avoiding the creation of more carbon gases that have been linked to global warming. For investors, it provides additional revenue opportunities, will lead to the deferral of significant capital infrastructure investments, and will provide the ability to dramatically upgrade systems. It also means significantly improving reliability and increasing customer satisfaction.

The utility industry has reached a critical tipping point and our market is poised for change. The time for action is now—and perhaps more importantly, we can't afford not to. Smart grid is the vehicle to move us away from Edison's grid and move us towards both carbon neutrality and a fully secure energy future.

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