

Public Policy Study and Program Proposal:

A Green Village

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### Part 1: Innovation – “A Green Village”

As described previously, this project is the first part of a four part energy initiative proposal that encourages innovation and intelligent energy practices for residential uses and the power utility industry. The village development proposal is intended to use current Iowa Power Fund and Vision Iowa money to award builders and technology innovators while they help to rebuild storm damaged cities (Hansen, Dec 2008). This examination will discuss stakeholders, proposed logic models and research questions that will be currently considered as part of the project where implementation of the project may reveal more research opportunities.

#### Stakeholders

A stakeholder is anyone who has an invested or legitimate interest in the outcome, the process, or the resources used to accomplish the mission of the project, and stakeholders may have differing viewpoints about a particular project that must be coordinated (Boutelle, 2004). The target of developments is to encourage innovation through rebuilding of the devastated communities, and the residents of those affected areas, residents of the new developments and managers of multi-dwelling units will have the ultimate stake in these projects.

The project will pilot in cities in Iowa as part of Vision Iowa and the Iowa Power Fund, and these programs already have many requests for funding. Those affected by diverted funding will be indirect stakeholders to this program. Iowa Green Communities programs, as well as state boards like Economic Development and Renewable Energy Infrastructure, may also provide insights and directions. Utility companies may provide statistics in addition to power production, innovations, current energy management programs, curtailment packages, and energy delivery systems as part of mutual benefit programs. Homebuilders will be solicited for building innovative and affordable housing designs with specifically and targeted affordable

prices. They, as well, can provide data for evaluation purposes such as building costs and property value enhancements.

State-funded universities, the Iowa Board of Regents, community colleges and private colleges will have a stake in award funding for scientific endeavors especially as institutional grants. The governments of the state, cities and counties, as well as government boards (e.g. Iowa Utilities Board and Iowa Environmental Council) will have to establish rules and to designate areas for development. Oversight of state funds for the project will be monitored by the Iowa Department of Economic Development and subsidiary boards.

### Logic model

This program will use the logic model (or the reasoning behind the program theory) as presented by the University of Wisconsin extension office (Taylor-Powell, n.d.) and recommendations from the Kellogg Foundation (1998). Taylor-Powell proposes general three-tiered models that examine inputs, outputs, and outcomes where logic models will vary based upon the interactions and complexity of the program design. The designer has to connect these basic parts and logic flows beyond the proverbial “miracle occurs” at this point (Taylor-Powell, n.d.: 13). The logic model (Figure 1) lays out what is needed to make the project develop and the expected outcomes. The initial projects will have to follow this logic model, and later projects will have to re-examine this model for applicability.

This project, research questions, and perceived successes are dependent upon willing participants, upon willingness of participants to report data, upon the financial ability of homeowners, upon energy prices, upon housing market pressures and upon builders to build near-zero energy consuming properties. As well, the project assumes there are “shovel-ready” projects and innovations that can be used to build the more efficient houses.

Logic Model (Template provided by the University of Wisconsin-Extension)  
 Situation: Building Energy Efficient Developments (Green Villages) to Rebuild Devastated Iowa Communities

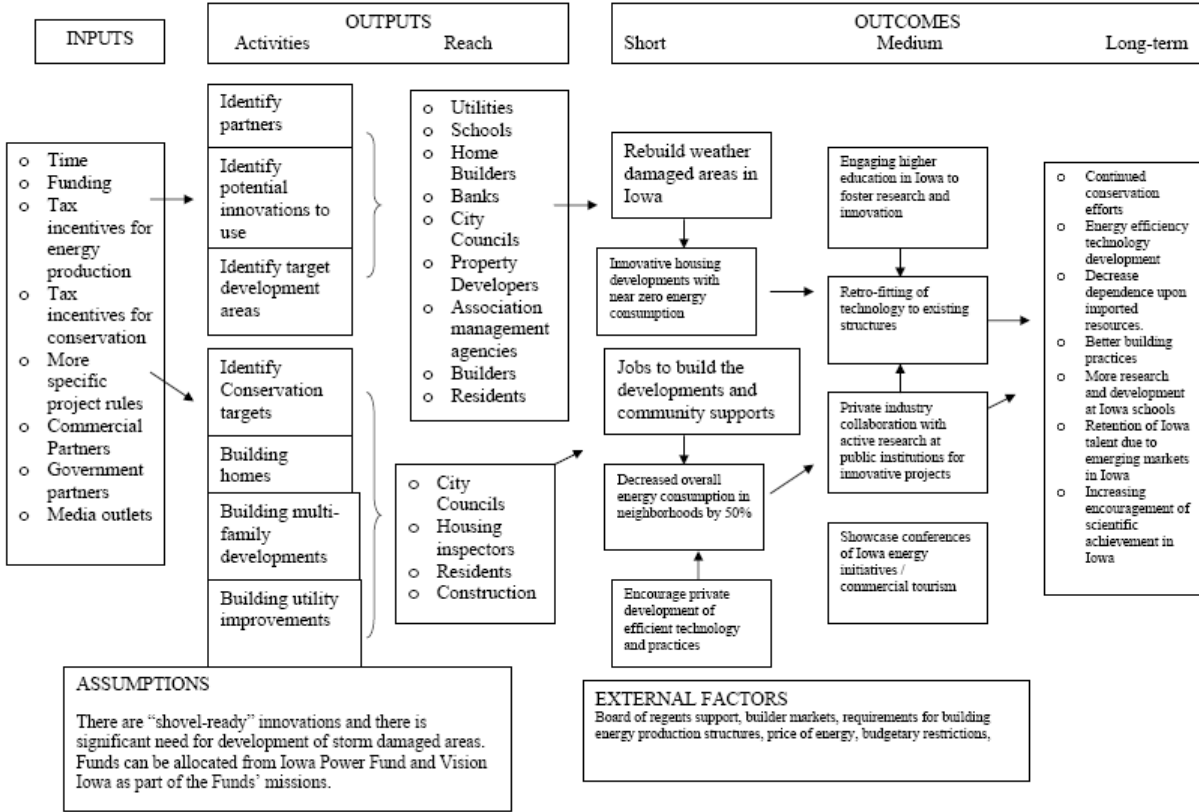


Figure 1: Logic Model

### Research questions

To evaluate the project and the theory, some research questions will attempt to answer structure and performance needs as suggested by Rossi et al (2004) as well as Trochim and Donnelly (2008). According to Rossi et al (2004), good evaluation questions are in the form of the functions the project must perform, and thus, performance is the crucial test. Yet, we have to identify what is measurable performance. Each question has to establish criteria, note standards, quantify performance against a standard and then build an assessment from the data.

Trochim and Donnelly (2008) suggest that evaluation questions have to identify the problem and the scope being considered. Further, they suggest asking where the issue originates, seriousness and size of the issue. Then, we must consider how the program addresses this issue and how well is the delivery of the program (Trochim and Donnelly, 2008). The evaluation questions will answer characteristics of the program, and then, we can review the development of program theory with respect to specific “outcomes” and “efficiency” goals (Rossi et al, 2004, 77). This follows Taylor-Powell’s (n.d.) recommendation that you have to measure results to determine success.

The objective of the project is to establish the best ways that government can encourage innovation by examining the mix of tax incentives, research programs, grant awards or subsidies prior to and during the program as compared to patents submitted from Iowa based firms. The evaluation questions will need to determine levels of consumption by a set of population. The characteristics (e.g. income, age, commute distances, and what utility services they use) of that population will help to identify potential beneficial improvements. As well, are there available projects at utilities and education institutions that may provide energy efficiencies and what do they need to become implemented projects? For residential customers, we will ask what types of

construction enhancements improve energy efficiency and at what cost they can be implemented. How many pounds of garbage does a person produce in one month or one year? We also can determine how well community associations influence conservation? To what degree do community associations (like condo associations) affect an individual's conservation efforts? Can tax incentives encourage more conservation, construction enhancements and to what degree?

We can determine what level of collaboration yields the most effective government help to industry innovation by investigating the effect of standard regulations, new regulations for new developments, and tax policy. For this, we determine what is collaboration and the "levels" whether simple co-sponsorship, co-development, funding for research, or solo innovation.

Questions of fact are referenced from fact and evidence. They would determine the political and social environment of the program. For example, we should determine how much does a unit of energy cost by production source (natural gas, wind, coal, gasoline, nuclear). Which sources of energy does the state of Iowa have to import, if any? What are the current tax incentives in place that influence those prices and importation? After implementation of the program, we can examine what changes, if any, occurs in the matrix of energy prices.

### Summary

The investment in this project will return technologies and opportunities for Iowa to build and to profit from energy efficiency technologies. There are many stakeholders for this project and the proposed funding will cause many to analyze the merits of the proposal here. Using the proposed logic model, we have a graphical layout of inputs, outputs and projected outcomes (near term and long term). Furthermore, this project will provide the opportunity to analyze consumer behavior and innovation with respect to government incentives and interventions.

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