

## Report to the Sustainable Design and Energy Committee

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**SUBSTITUTE – Establishing sustainability goals to guide the development of the Northeast Neighborhoods.**

At the January 12, 2009 meeting of the SDE Committee there were a number of questions and issues discussed. Staff has prepared this report to provide the committee with additional information.

The resolution establishes Sustainability Goals, which will provide direction to and establish expectations for the recommendations to be included in the Neighborhood Development plan for the Northeast Neighborhoods. The Plan itself will be finalized following the adoption of the resolution. This plan will include a series of recommended strategies, tools and implementation steps, which will need to be carried out to achieve the sustainability goals. The implementation recommendations will also identify the roles and responsibilities of the City, developers, builders, residents, and businesses in carrying out the recommendations in the plan.

The actual development of these neighborhoods will be guided by a number of City ordinances and regulations including, but not limited to the zoning code (Chapter 28), the sub-division ordinance (Chapter 16), the storm water management and infiltration ordinance (Chapter 37), the traffic and circulation ordinance (Chapter 10), the building code (Chapter 29), and the Electrical, Plumbing and Heating Codes (Chapters 19, 18 and 30). All will be utilized to guide the extension of infrastructure and review of development proposals.

While the plan has not been completed, staff has not yet identified specific changes to ordinances that would be needed to implement the plan recommendations. However, in order to achieve some of the goals, such as requiring storm water infiltration closer to the source; staff will need to work with developers to ensure that these goals are accomplished when the individual developments are approved. Again, the implementation steps will be discussed in the plan. In addition, staff will consider the possibility of incentives to help achieve these goals, but these will be discussed in the plan and would take action from the Common Council to implement.

The plan will also discuss a process/method for measuring progress towards achieving these goals. Currently, the resolution indicates that these are goals and as such the City would work with developers, builders, residents, and businesses to meet these goals. The plan will identify the tools that will be used to collect data and the frequency to measure whether the goals are being met and to help determine whether the plan or the goals need to be adjusted based on this review.

The City envisions conducting a review of this plan every five years from the time the first buildings are built. This would allow for the opportunity to adjust the plan or the goals to meet the needs at that time.

With regard to energy use in homes, Facilities Management did some research and according to Focus on Energy, saving 25% energy from that used by an average single-family home in the MGE area is an Energy Star certified home. Currently not all single-family homes built in Madison are Energy Star, so having a goal of 100% of the single-family homes built in these neighborhoods to be Energy Star homes maybe a good goal. It is worth noting that Energy Star homes tend to be newer and therefore probably larger and have more equipment, like AC, automatic garage doors, etc. So on a square foot basis they probably are even better than the numbers below show.

Average MGE single-family home: 8,700 kWh, 875 therms

Average Energy Star single-family home: 6,525 kWh, 656 therms

Obviously this can change dramatically depending on usage. A 2-person household can use 516 therms and 4380 kWh, while the next-door neighbor (also a 2-person household) uses 816 therms and 8436 kWh in a similar sized house that is also Energy Star certified. This shows how important it is to include the residents and businesses as key stakeholders in achieving the goals.

Facilities Management was not able to get good data for multi-family dwelling units.

The committee could consider looking at a recognition program for builders and developers that go beyond Energy Star certified. For instance, builders and developers that achieve 10% or 20% additional energy savings beyond Energy Star certified could receive recognition from the City and the mayor. Some developers may find this gives them a market advantage. Details of such a program would need to be developed further prior to implementation.

The intention of goal number two is that there be a combination of strategies that lower energy use and provide for renewable sources of energy. Clearly, both energy efficiency/conservation and renewable energy are important to achieve goal number two.

Members have brought up the idea of zero net energy. Below staff has included language that the committee may want to add to the resolution. This would call attention to the SDE's vision of Zero Net Energy and provide a link between the goals in the resolution and this compelling long-term vision. The resolution would provide a measurable first step to move us toward zero net energy.

***"WHEREAS** the Sustainable Design and Energy Committee has identified a goal of being a Zero Net Energy Community (energy used by a community equals the amount generated through renewable energy applications) by 2050; and"*

Finally, it should be mentioned again, that the plan will contain specific recommendations to guide the development of land and extension of infrastructure and services to support the build out of these neighborhoods over the next few decades. It will be critical for this neighborhood plan to have a fully thought-out implementation strategy that will not only assists with the development over time, but also provide a framework on how the City, developers, builders, residents and businesses in this area can meet these goals. The SDE Committee could review the plan before the Common Council adopts it and provide additional recommendations to the Plan Commission and the Common Council at that time.