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Grad students evaluate city's sustainability

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If you've ever questioned whether solar or wind energy is viable for your home or business, some of the answers will soon be at your fingertips.

The Dubuque City Council heard presentations Tuesday from graduate students in the University of Iowa's School of Urban and Regional Planning who studied five topics relating to sustainability efforts in Dubuque.

The most eye-popping effort is the renewable energy mapping and policy project. Students created an interactive map that provides people with an opportunity to click on their property and get an idea of what the return on investment would be for solar and various wind technologies.

"What they did is they produced a set of tools that will allow residents and businesses to make smart, well-informed and intelligent decisions," said Dan McDonald, of Greater Dubuque Development Corporation, the community partner for the project that will host the interacti

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on its web page. "They knocked it out of the park."

The project team decided from the outset it would not advocate for renewable energy but entered the project with the idea of developing an economic development tool for the city.

"The result is the first comprehensive urban scale renewable energy study and policy analysis," said student Robyn Fennig.

Using advanced computer technology, students created a map of the solar radiation intensity for not only every parcel in the city, but a 4-by-4 meter breakdown of the varying intensity on each roof.

"It not only shows which parts of the city are best for solar radiation but also which parts of buildings and parcels are best," said student Nick Benson, one of the project spokespersons.

A similar mapping was done for wind intensity and also the potential for geo-thermal heat citywide. While solar shows potential through wide swaths of the city, wind power was not as widespread of an option. Geo-thermal can depend on the proximity of the property to leaking underground storage tanks, of which there are several according to the Iowa Department of Natural Resources.

The group listed three areas for the city to address: Reduce regulatory barriers in Dubuque, reclassify small-scale turbines as accessory uses to conform to zoning regulations and seek ways to minimize the impact of renewable energy installations on the historic character of Dubuque.

"All of the presentations wrapped up with things like policy recommendations, action plan or asset mapping tool and that is what's the key takeaway for me has been," said Cori Burbach, sustainable community coordinator. "We're not going to have five reports that sit on a shelf somewhere. We now have our marching orders to go and use this information in a valuable way. I can't even tell you the value of what we have gotten out of this partnership with the University of Iowa."

The two-year project will continue in the fall with a new set of students looking at five new areas of study which have yet to be determined. There is not any direct funding from the city for the project. The university is contributing \$40,260 per year to the two-year program, which is a requirement for students to receive their master's degrees.

"A few weeks ago, I had the opportunity to represent the city and really the country on a sustainability exchange Sweden and Germany," Mayor Roy Buol said. "One of the questions I got asked a couple of times was if there was any coordination with universities or institutions of higher learning around our sustainability program. We were by far the smallest city represented and none of them had the answers to the question that I had. This partnership with the University of Iowa is going to pay big dividends for the city of Dubuque."

The other four topics and recommendations are:

* Green and Healthy Homes -- Streamline the intake process, integrate program data with other systems, set standards for health and energy efficiency gains and encourage rental property owners to participate.

* Connecting local foods to local institutions -- Start with small goals, determine how city and county government can support local food programs, facilitate annual networking event with Dubuque County Extension, lead by example, provide incentives to purchase local products, support the formation of a local food policy council and support the creation of a local food coordinator to sustain the project.

* Addressing poverty -- Increase outreach efforts to attract low- and moderate-income civic leaders, make successful programs such as Bridges Out of Poverty and the Multicultural Family Center high funding priorities,

Invest in key programs that are deficient such as mental health services, public transportation, partner with local higher education institutions to fill gaps, expand Sustainable Dubuque services for low and moderate-income residents such as home energy efficiency upgrades, indoor air quality and recycling at multifamily apartments.

* Measuring sustainability -- Continue to track data on the 11 sustainability principles.

"The takeaway I've gotten is even though we've done a lot in the area of sustainability we've got a long way to go," council member Kevin Lynch said. "We've still got a lot of work in front of us and you've opened a lot eyes."