



City of Madison

City of Madison
Madison, WI 53703
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Meeting Minutes - Approved SUSTAINABLE MADISON COMMITTEE

Monday, April 23, 2018

4:30 PM

210 Martin Luther King Jr. Blvd.
City-County Building, Room 357

CALL TO ORDER / ROLL CALL

The meeting was called to order at 4:30 p.m. by Chair Shukla.

Others present: Jeanne Hoffman, Josh Arnold.

Present: 13 - Stacie A. Reece; Rajan V. Shukla; Michael J. Vickerman; Lance E. Green; Sam J. Breidenbach; Jesse J. Shields; Bradley Campbell; Jeannette E. LeZaks; Maria A. Schletzbaum; Kyla H.S. Beard; Richard A. Heinemann; Joseph M. Ryan and Samuel J. Dunaiski

Excused: 4 - David Ahrens; Denise DeMarb; Richard J. Pearson and Evelyn H. Atkinson

APPROVAL OF MINUTES

Motion to refer approval of April 3, 2018 Minutes to the May 21st meeting made by Vickerman, seconded by Campbell. Motion passed by voice vote/other.

PUBLIC COMMENT

None.

DISCLOSURES AND RECUSALS

None.

DISCUSSION ITEMS

1. [50657](#) Report Regarding 100% Renewable Energy/Zero Net Carbon Goal

Attachments: [Madison 100RE SMC update 2017-2-22.pdf](#)
[SMC Report 4 2 2018 FINAL.pdf](#)
[Madison SMC City Operations - SEG update 2018-04-23.pdf](#)
[Scenario Summary by Department August 2015.pdf](#)
[Final Draft Madison Municipal Energy Analysis June 2015.pdf](#)

Jeanne Hoffman and Josh Arnold presented (presentation is attached to this Legistar file.)

Hoffman suggests that SMC forms a technical working group. Bradley Campbell volunteered.

Hoffman starts the meeting by talking about the big picture. For example how do we get net zero goals included in programs like community block grants, TIF and all the sources of funding that the city has available – how do we get these programs to help us achieve our goals.

Hoffman stated that Dane county is issuing an RFP next week for a RECs program.

Hoffman explains that the city is limited in who it can buy electricity from - it must buy electricity from MGE and Alliant energy. In other states like Texas, the electricity market is much less regulated.

Hoffman gives a background on city facilities.
Hoffman explains that energy efficiency in existing buildings is difficult. Retro-commissioning is a cost effective approach but it can be difficult to do larger upgrades. Many buildings are old and in need of significant repairs outside of just energy efficiency measures. For example, the Metro bus barn needs many improvements including additional restrooms for female employees and many code related upgrades. Facilities Management must consider all potential upgrade requirements such as code improvements and space program efficiency improvements. Funding for building upgrades is limited and therefore energy efficiency upgrades must be carefully planned alongside other city needs.

To continue the bus barn example, federal money for transit infrastructure improvements has become more difficult to obtain in recent years further delaying much needed improvements to the bus barn.

Hoffman also referenced the REC discussion from the last meeting, stating that RECs should be considered a stopgap solution to carbon emissions reduction that could be retired later when energy efficiency upgrades and renewable energy projects are ready.

Stacie Reece has a question about the length of REC contracts. Hoffman says that shorter contracts are generally more expensive than long-term contracts.

The focus of today's report is on the electricity and diesel emissions produced by city operations.

The Brendle group's report has been used to obtain cost information for carbon emissions reduction ideas.

The first topic of discussion is how to reduce demand for electricity and diesel. The second topic will be how to increase supply of zero carbon fuel.

Josh introduces ECOFIS. It is an economic model from Navigant's European offices. The model shows carbon emission reduction opportunities ranging cost efficiency (\$/ton). On the far left side of the graph, a large box indicates that electric buses have excellent potential to reduce carbon emissions in a cost effective way. This is because the city has to replace buses on a regular schedule and the cost of a new electric bus is only a little bit higher than the cost of a new diesel bus. In fact electric buses cost less to operate the diesel buses and the small incremental cost of electric buses is quickly negated by the great operational savings. As a result electric buses are a very compelling opportunity to reduce carbon emissions.

Michael Vickerman points out that the graph shows the importance of the rate of turnover. Buses have to turn over on a shorter timeframe than buildings and therefore it is easier to invest in carbon reduction with the buses than with buildings.

However, it is important to remember that electric buses will only reduce carbon emissions if the electricity that they are supplied with is green. Green electricity could be provided with local solar PV systems or partnerships with MGE.

The next topic is how to reduce supply side missions. Utility-scale solar is the most cost effective opportunity to reduce carbon emissions in the near term. There is some discussion of the potential for third party participant solar projects. Apparently the city of Milwaukee is currently pursuing a RFP.

Installing a massive solar system to offset the city's electricity needs is difficult because MGE's renewable rider is limited by the load profile. This means that it is difficult to build a system large enough to offset all power consumption in a given year. It also requires the city to make changes to its operations such as pumping municipal water during the day rather than at night.

It is possible that energy storage could be deployed in a pilot to help deal with city needs in buildings that have very small roof area such as well pumping stations.

Hoffman poses a question to the committee: can the city take credit for the 30% emissions reduction as planned by MG&E?

Another question: does the SMC care where renewable energy assets are located? The committee should consider what is most important. Is it important that renewable energy assets create additionality?

Bradley Campbell will look at the assumptions used for Navigant's cost curve. Hoffman promises to re-examine the phase 1 and phase 2 solar assumptions.

Next topic: how to fill the gap between demand and supply? To put it another way, what should the city do while more technology such as storage mature? Hoffman suggests creating new programs or investment strategies that

leverage city funding to generate private sector investment. The MadiSUN project is given as an example of this kind of arrangement. Hoffman suggests that TIF financing could be a useful vehicle. However TIF financing is developer driven and this makes it difficult to make concrete plans for carbon emission reduction.

Discussion turned to the different kinds of REC options. Some RECs are acknowledged to have limited impact. For example, RECs that are sold out of the massive wind power markets in Texas are considered to have limited impact. In contrast some REC projects could push for new construction in the local market.

Different utility partnerships are discussed. For example, Alliant energy might be interested in developing a solar farm adjacent to the business parks on the far west side of Madison.

2. [50658](#) Report by Jeanne Hoffman regarding City/MGE - MOU Activities

This item was referred to the May 21, 2018 SMC meeting.

3. Update on Sustainability Program Coordinator Hiring Process.

Hoffman stated that the new position is still in Human Resources waiting for Position Description.

ADJOURNMENT

A motion was made by Vickerman, seconded by Shields, to Adjourn. The motion passed by voice vote/other. Meeting adjourned at 6:10 p.m.