

JOINT STUDY SESSION

**University City, City Council and
The Green Practices Commission**
CITY HALL, Fifth Floor
6801 Delmar Blvd., University City, Missouri 63130
Monday, April 28, 2025
6:00 p.m.

AGENDA

Requested by the Green Practices Commission

1. MEETING CALLED TO ORDER

At the Joint Study Session of the City Council and the Green Practices Commission of University City held on Monday, April 28, 2025, Mayor Terry Crow called the meeting to order at 6:00 p.m.

In addition to the Mayor, the following members of Council were present:

Councilmember Stacy Clay; (excused)
Councilmember John Tieman
Councilmember Steven McMahon
Councilmember Lisa Brenner
Councilmember Dennis Fuller
Councilmember Bwayne Smotherson

Also in attendance were City Manager, Gregory Rose; City Attorney, John Mulligan, Jr.; Director of Planning & Development, John Wagner, Senior Planner, Mary Kennedy; Connie Mueller, Nicole Baumgarten, Timothy Schmalz, Susanne Schoomer, and Ken Schechtman of the Green Practices Commission.

2. CHANGES TO THE AGENDA

None

3. GREEN PRACTICES COMMISSION PRESENTATIONS

- "The Carbon Assessment"
- "Importance of Rooftop Solar"

Mr. Rose stated that the Green Practices Commission requested a joint meeting to review a couple of issues with Council. Dr. Wagner is the liaison for this Commission.

Dr. Wagner stated that Commissioners Nicole Baumgarten, Susanne Schoomer, Ken Schechtman, Tim Schmalz, are in attendance, and the Chair, Connie Mueller, will preside over this presentation.

Commissioner Mueller stated that Nicole Baumgarten will be speaking on the topic of **Carbon Assessment**.

Commissioner Baumgarten thanked Council for seeking out the Commission's advice on the carbon assessment presented by Trivers and IMEG, and they hope that they can continue to assist the City.

Trivers and IMEG have been responsive and professional in their communications with the Commission; they have attended at least two official meetings with the Council and Green Practices, and they have done great work for the City in the past. However, after reviewing their proposal, **the Commission is recommending not to move forward at this time for several reasons:**

- Trivers' proposal has a high cost associated with it and many expensive add-ons
- Based on the cost, typically it would be standard practice to obtain a minimum of three bids, and the Commission is recommending that the City obtain those bids

The Commission believes that before obtaining these bids, the City should first understand and identify the goals of the assessment and what the desired outcomes should be for the carbon assessment. This would allow the City to better determine:

- If the proposed scope includes all the services that are needed;
- What additional services may be desired, and
- If any services are being offered that will not be useful to the City

Trivers' proposal recommends that the City use its proprietary software, however, the Commission believes that the Energy Star Portfolio Manager would be a better primary database. Energy Star is free software that allows the City to own and control the account, which means that the data can be updated and maintained by internal staff, alternative future contractors, interns, etc. Furthermore, Energy Star offers many tools and insights for free. But, if the City needed additional information that the software is not able to provide, the data can be exported and presented to a third party. If the City were to hire a Sustainability Officer, that officer would be able to update the portfolio without the need to contract with a third party.

Commissioner Baumgarten stated that the previous greenhouse gas assessment was performed by the Commission, so they are experienced with the software and Are qualified to set up and populate the data in Energy Star.

Finally, there is a concern that there could be a conflict of interest since Trivers has worked on these buildings in the past. So, if they are to measure and validate any of that information, it could present a conflict. **The Commission recommends that there be a third party that only represents the interests of the City and its residents.**

Councilmember McMahon stated he recalls that the idea for the carbon assessment came from the Green Practices Commission. So, did the City jump the gun, reach out to Trivers, and then the Commission was asked to look at the issue? Commissioner Baumgarten stated jump the gun or not, maybe Dr. Wagner or Councilmember Tieman can speak more to that. But her understanding is that it was presented to the City, which then sought out the Commission for advice. Councilmember McMahon stated, thinking back to the goals the City wants to develop, and if there is going to be a rebid, then to make sure the process is streamlined, staff should work with the Commission to ensure they are not creating goals that will have to be adjusted. Commissioner Baumgarten agreed and stated if the Commission can get on board to help develop those goals, they could also develop goals for the assessment that would be in line with the City's goals.

Mayor Crow posed the following questions to Commissioner Baumgarten:

Q. I understand the recommendation to obtain three bids, but based on my recollection, that train has already left the station. So, is the process that the Commission is asking the City to undertake now going to hinder some of the work that is already in progress?

A. I don't see how it could. But perhaps I need to know more about the specific work you're talking about to better answer that question. Q. Unless I'm missing something, isn't this all a part of the construction project that the City currently has going?

A. My understanding is that this is separate from that project.

Mr. Rose stated that included in the City's Work Plan is the Study of Greenhouse Gas Inventory, which is what's being proposed here and is scheduled to start in July. That study will be handled by Deputy City Manager Brooke Sharp, who contacted Trivers to assist staff with the scope to help them advance the project. However, what he is hearing from the Commission today is that they are comfortable with delaying this study so that the City can go through a more comprehensive process that includes their feedback regarding the scope.

Commissioner Baumgarten responded that is correct.

Commissioner Mueller stated Timothy Schmalz will be presenting their second topic.

The Importance of Rooftop Solar

Commissioner Schmalz stated that the Commission drafted an Ordinance to address a solar panel cost-benefit analyses.

Proposed Ordinance

"All new commercial and multi-family developments within University City with a footprint of at least 5,000 square feet will generate a solar panel cost-benefit analyses. They will report their findings to the Green Practices Commission, which will in turn report the findings to the City Council."

Commissioner Schmalz presented the following background information to help Council understand the importance of why they think this is something the City should do.

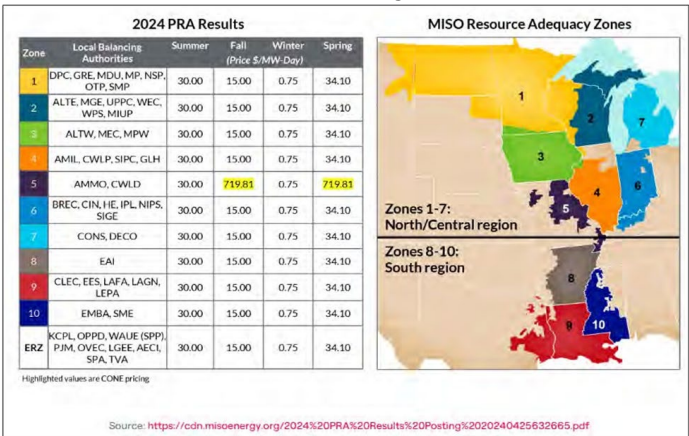
Why is Rooftop Solar so Crucial?

- Reduces Land Use; you can put flat things on flat roofs to benefit others in the region or neighborhood
- Reduces Need for Transmission Lines; if you are generating power on site you won't need to put in more lines to move the electricity from point A to point B

Everybody wants to support certain projects, and they are willing to put money towards those projects, but they don't want it in their backyard. One of the things about using rooftop solar is that if you put it on the roof of an existing building, nobody can really see it.

- Decreases Need for Litigation & Dragged-out Projects; the Proposed Ordinance would reduce the need for litigation

Midcontinent Independent System Operator (MISO)'s Planning Resource Auction



This map emphasizes the deficit that Missouri has when it comes to electricity generation.

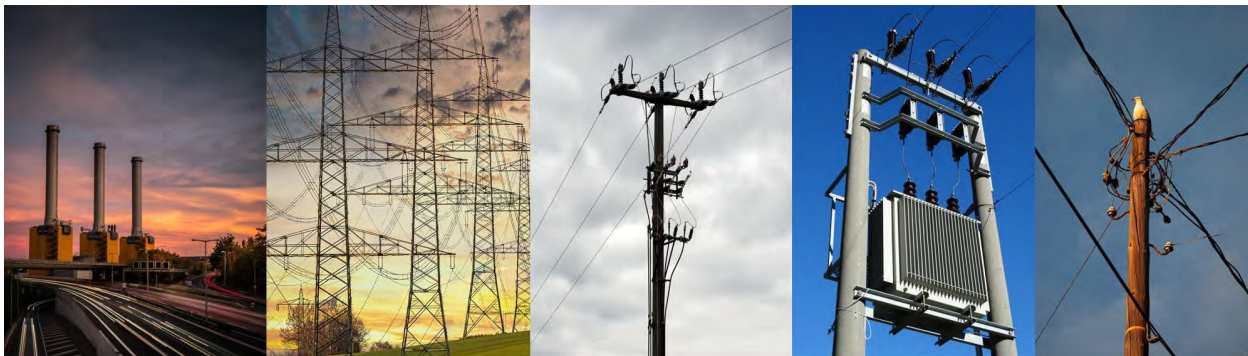
The yellow section of the map illustrates that when you compare Missouri and its electricity generation to other places in the Midwest Region, a kilowatt hour is estimated to be \$15.00, whereas in Missouri, the estimation is \$720.00. One reason for this is that Missouri is having issues generating enough power to meet the needs of the people. And if we put panels on roofs, it will help alleviate the energy deficit that the State is having. The two numbers in yellow highlight not only is there a need for it, but there is also a cost savings that residents of Missouri would see.

Missouri faced an energy deficit of 872 MW in 2024; (down from a 2,435 MW surplus in 2023) that can be traced back to:

- Power Plant Retirements
- Planned Power Plant Maintenance
- Seasonal Outages
- Higher Electricity Demand
- Tighter Limit on Imports

If we maintain the status quo with regard to power generation nationwide, different things would happen in terms of additional infrastructure, power plants, power lines, voltage lines, and transformers that would cost a lot of money and are not the prettiest thing to see. Complicating that is the additional cost of the repair of poles and infrastructure that is coming towards the end of their lifespan.

The Grid Infrastructure Outlook with Status Quo



12,500+ Power Plants

200,000+ miles of High Voltage Power Lines

Millions More Miles of Low Voltage Lines

Millions of Transformers and Similar Equipment

Electric Poles at “End of Life” or in Disrepair

Increased Grid Infrastructure Results in:

- Blackouts
- Wildfires
- Costs

❖ All of this comes down to having to spend more money.

If the City were to pass an Ordinance that simply states we want new construction to explore the potential of rooftop solar; not installing solar panels, here are what some of the results could be.

Adding Rooftop Solar (and Solar Construction) Will

- Reduce costs and emissions
- Increase Reputation, Resilience to Power Failures, and Property Values

The proposed Ordinance moves U City in the direction of learning the capabilities so developers might decide what they want to do.

If the City moves to the next step of preparing a newly constructed building for solar power or solar water heating, these are some of the benefits.

Benefits of Solar-Ready Design

- Solar-ready rooftops – ones that are designed and oriented for Photovoltaic (PV) and Solar Water Heating – save more money than retrofitting existing buildings
 - ✓ 10 kW PV system: \$2,644 cheaper installation costs
 - ✓ Scaling up saves more: 3-story mixed-use building installation savings could be anywhere between \$12,500 to \$25,000 for PV

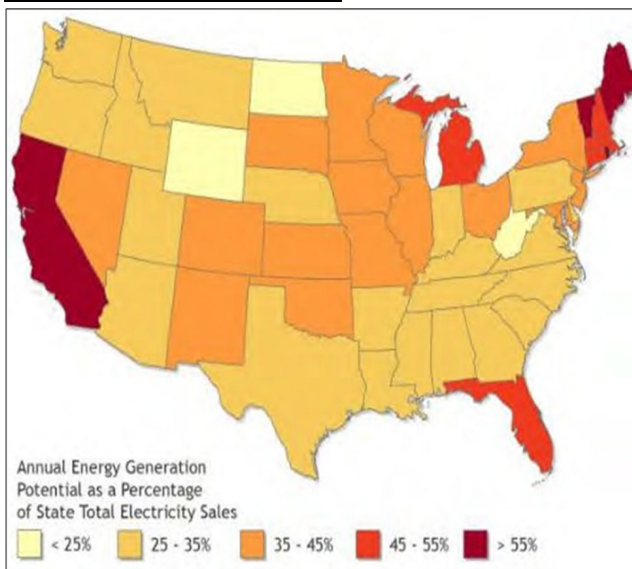


The cost of a kit sold on eBay

Risks of Rooftop Solar Include:

- Water Damage
- Reduced Governmental Financial Support and Incentives
- Structural Implications
- Falls & Injury
- Theft
- Costs
- Increased Risk of Fire

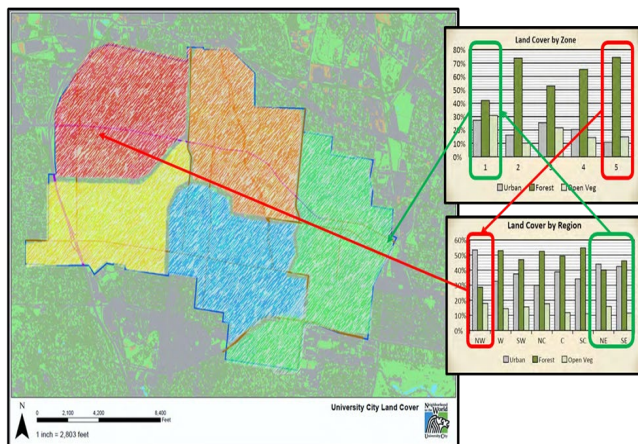
Potential Rooftop Solar Annual Generation from all Buildings as a Percentage of Each State's Total Electricity Sales in



2013

Missouri's potential is roughly 35-45 percent.

University City Land Cover



The color-coded regions illustrate the amount of electricity consumption.

Blue = the smallest amount of money for kilowatt hour per square foot

Red = the highest amount of money for kilowatt hours per square foot

The average house in the red region consumes over two and a half times more than the State's average in terms of dollars per kilowatt hour.

The red arrows point to two major commercial areas with lots of flat roofs and not a lot of shadow, which is something you need for Photovoltaic (PV) and Solar Water Heating.

The top right-hand column circled in red with a high amount of gray, effectively illustrates that the tree cover is very low, and that there is a lot of potential to use energy at this location. The people and businesses in this area are spending more money, which perhaps this proposal could help them save.

The Loop has a considerable amount of urban cover and flat areas that solar could do very well on.

Why Should We Pass This Ordinance?

- Demonstrate benefits of solar to developers; conducting an analysis puts U City on their radar
- Provide the opportunity for energy buy-back from new solar roofs
- Help U City gather data on obstacles to installing rooftop solar
- Does not require anyone to install solar panels
- Establish U City at the forefront of sustainable practices
- Low risk of developers pulling out due to this requirement since this service is extremely cheap or completely free; at most, they charge \$1,750.00 for a detailed analysis

Solar Ordinances in the STL Region

- **STL City (2020)** passed a solar readiness for commercial & residential construction
 - Five stories or less
 - Roofs need to be sturdy enough for solar arrays
 - Must have electrical infrastructure installed "For Future Solar Electric"
- **Clayton** earned a Silver Solsmart designation
 - Reviewed local zoning requirements
 - Adopted nationally recognized standards for the growing solar market
 - ✓ "Cutting red tape"
 - ✓ Improved conditions for solar growth

- Trained staff on permitting & inspecting
- **Collinsville** changed its code requiring native plants under commercial solar installations
- **Lee's Summit, MO**, Municipal Code 15.2830 requires:
 - New residential dwellings to be designed, oriented, and equipped with upgraded electric, roofing, etc., to accommodate future PV or SWH.

Commissioner Schmalz concluded by stating that U City has a chance to do something that will have a big payback without a lot of cost. That's why the Commission thinks that this proposal is something worth considering.

Councilmember McMahon posed the following questions to Commissioner Schmalz:

Q. If this Ordinance seeks to obtain a solar panel cost-benefit analyses so developers can decide if this is something they would like to do want on their own, and it gives this Commission some data to show that U City is moving in this direction and here's what we've already accomplished, will there be an additional step down the road that says residents and businesses now need to do something to get their roofs ready for solar panels?

A. Yes, this would be the first sort of baby step in the process. There is a lot of savings and potential that could be realized in U City. You don't want to scare anybody away by requiring them to put in a \$45,000 solar array to build here. So doing something that is cheap or even free could incentivize developers and business owners to put up solar panels because they understand that in five years they could start to save money or increase the value of their property if they decide to sell. The potential for group purchases, i.e., renting out one of the City's facilities to put panels up or renting out the roof of Costco, as well as renewable energy credits, can also increase how money can be made. Knowing what's here and what they could do is the starting point that the Commission is aiming for.

Q. Is 5,000 square feet a number that was selected because it's kind of the tipping point for what would be effective?

A. We went back and forth as to what the size would be. We wanted a number that would encompass the vast majority of commercial buildings we have here, but didn't want something so small that it would discourage a developer. Most of the commercial buildings in U City are relatively small; for example, the old Mad Crab building on Olive is 6,000 square feet. So, we are looking at a space that size and bigger to get a report.

Councilmember McMahon stated when the proposed Ordinance says "a footprint," are you talking about the building's structure or its exterior walls? I think we need to know what the definition of a footprint is because there are a couple of outlots being proposed on Council's next agenda, and one of those buildings is 80 X 60.7 feet, which is just under 5,000. I also think some definitions will have to be defined when you get into the issue of development because there are a lot of moving parts. What do we mean by development?

Finally, I think we need to think about enforcement; is this a part of the permitting process? Will only certain folks have to do this? Councilmember McMahon stated he thinks what the Commission wants to do is capture as many buildings as it can to get good data that convinces people to move in this direction.

Commissioner Schmalz stated you're right, all of those moving parts need to be taken into account. The Commission has talked about some of them, but talking about it is not sufficient in terms of legal ordinances, so thank you for that feedback.

Councilmember McMahon thanked Commissioner Schmalz for his presentation and stated these were just comments that should not be perceived as any form of disagreement with what the Commission is trying to do.

Councilmember Fuller posed the following questions to Commissioner Schmalz:

Q. Some states have solar panels in their parking lots. So, would you restrict this only to new buildings because there are all sorts of ways you can go with this?

A. I think the Commission restricted itself to rooftops for this presentation, but he would be all for the use of parking lots.

Q. Would the cost-savings you're suggesting apply only to that specific building, or could it be shared with the City?

A. I did a quick analysis on the old Seafood City building. Looking at the entire footprint, I crunched some numbers using only the square foot viewing of the rooftops from above, and determined that you can produce about one and a half megawatts of power and still only use about two-thirds or three-quarters of that rooftop. However, I don't think it takes multi-floors into account. At this point, the Commission has limited itself to solar panels that would be on a flat surface, but parking lots are certainly something they could explore.

Councilmember Fuller stated he thinks all of this is well needed, and would encourage the Commission to explore parking lots.

Mayor Crow stated if this is to move forward, probably one of the first steps would be for the working group or directors to go through some of these issues that need to be checked off before the City Attorney attempts to draft any type of ordinance. He stated his assumption is that there is no current legislation similar to this one, but if there is, that would certainly help to move this along a little bit faster.

Commissioner Schmalz stated a lot of the ordinances he found nationwide were for new construction to be solar-ready; they must be plugged and played with solar panels, and that's not what this Commission is suggesting. But they could look at aspects of those ordinances to sort of massage out what they are trying to do.

Mayor Crow stated Council appreciates and respects what this Commission has done, and hopefully, Mr. Rose and his staff will move forward with some of these concepts.

4. ADJOURNMENT

Mayor Crow thanked everyone for coming out this evening and closed the Study Session at 6:31 p.m.

LaRette Reese
City Clerk, MRCC