



ENVIRONMENTAL SUSTAINABILITY COMMITTEE AGENDA

CITY OF NOVI

July 22, 2024 | 5:30 PM

Mayor's Conference Room
Novi Civic Center | 45175 Ten Mile Road
(248) 347-0445

CALL TO ORDER

ROLL CALL - Council Members Heintz, Gurumurthy, and Smith

APPROVAL OF AGENDA

APPROVAL OF MINUTES

[July 9, 2024](#) Minutes

REMARKS FROM THE CHAIRPERSON

PRESENTATIONS

Angela Fox, Royal Oak Sustainability Manager

MATTERS FOR COMMITTEE DISCUSSION

Oakland County Water Resources Commission - Jim Nash

[Ann Arbor](#) Solarize Program

[City of Novi](#) Energy & Water Use

ROUNDTABLE DISCUSSION

REVIEW OF ACTION ITEMS

PUBLIC COMMENT

ADJOURNMENT

NOTICE: People with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk (248) 347-0456 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.



CITY OF NOVI
Environmental Sustainability Committee
July 9, 2024, 5:30 p.m.
Mayor's Conference Room | 45175 Ten Mile Road
(248) 347-0445

CALL TO ORDER 5:33 p.m.

ROLL CALL: Council Members Heintz, Gurumurthy, and Smith

PRESENT: Council Members Heintz, Gurumurthy, and Smith

STAFF LIAISON: Danielle Mahoney, Assistant City Manager

ALSO PRESENT: Katherine Oppermann, Recording Secretary
Ezekiel Chojnacki, Graduate Management Analyst
Vishal Swamy, Stewards Sustainability Leadership Institute (SSLI) 4-H Club

APPROVAL OF AGENDA

Motion: Heintz, Seconded: Gurumurthy, Minutes approved 3:0

APPROVAL OF MINUTES – June 17, 2024

Motion: Heintz, Seconded: Gurumurthy, Minutes approved 3:0

REMARKS FROM THE CHAIRPERSON

MATTERS FOR COMMITTEE DISCUSSION

1. Previous Environmental Sustainability Related Initiatives
Chairperson Smith thanked Assistant City Manager Mahoney for preparing the list of past and current city initiatives related to environmental sustainability.
2. Consideration of Solarize Project
Graduate Management Analyst Ezekiel Chojnacki spoke about Ann Arbor Solarize, a community bulk-buy solar program. Their program and toolkit emphasize a resident-led model where the City offices operate as an organizer/facilitator between residents and a vetted list of local contractors (vetting is performed by Michigan Saves). Through this program a group of residents are able to get a discount, often 10 – 20% on solar installations by buying as a group since it is more cost effective for a contractor to do multiple installations in a concentrated area. Such a discount does require a certain number of homes to sign up for the program.

Ms. Mahoney noted that City staff thinks that a similar program could be a good way for the City of Novi to “dip their toes in” to expanding solar power in the area. She noted that as Ann Arbor offers a Solarize toolkit we could easily use it as a guide for our own efforts. Mr. Chojnacki noted that other area communities, such as Farmington, are already using the toolkit.

A potential challenge, compared to Ann Arbor, that Novi would face in having a Solarize program is that we do not have a dedicated Sustainability office and staff. Any of the necessary work at this stage would have to be taken on as an additional task by existing staff.

Councilmember Gurumurthy asked if we would then go about gauging interest by holding an informational session. Ms. Mahoney affirmed that yes, we would, and that based on the Ann Arbor toolkit the pilot process would be estimated to take 7-8 weeks.

At the Committee's request Mr. Chojnacki will be taking on the task of getting data regarding the number of successful installations that have resulted from the Ann Arbor program.

The Committee also briefly discussed the recent Michigan House Bill 5028, the “Homeowners’ Energy Policy Act” which prohibits Homeowners Associations from banning rooftop solar panels and other energy-saving equipment.

Mr. Chojnacki also noted Ann Arbor's pledge to never include solar panels in home valuations (thereby not taxing the improvement). A similar policy could also be implemented in Novi as an additional incentive to solar installations. Chairperson Smith noted that such a pledge could also be used towards other energy-saving equipment such as heat pumps.

Chairperson Smith thanked Mr. Chojnacki for his work on the Solarize project thus far and moved onto the next Committee topic.

ROUNDTABLE DISCUSSION

1. Novi SSLI (Stewards Sustainability Leadership Institute)
Vishal Swamy, Founder and Chair of the Stewards Sustainability Leadership Institute (SSLI) 4-H Club gave a presentation to the Committee on the student group and its projects and accomplishments. The SSLI program pillars are projects, outreach, and education. Among their many noteworthy successes are the Project Solar Parks partnership with Oakland County and their Composting Education Day. SSLI is very interested in collaborating with the Environmental Sustainability Committee and the City of Novi on potential future programs and outreach events. Some proposed ideas would be a City of Novi Earth Day event, increased sustainability education to residents, having a City facilities energy audit and the development of a Sustainability Action Plan.

Chairperson Smith thanked Mr. Swamy for his presentation and noted that he was very impressed by the work and passion of Mr. Swamy and the other students involved with the SSLI 4-H club. He also said that he and the committee would appreciate a list of the successful partnerships that SSLI had as potential future resources.

The Committee affirmed that they are committed to finalizing their goals (quick wins, short-term, and long-term) and moving forward. Community education was stressed as an important 1st step on many of the items being discussed and that the modes of communicating with residents will be important. Ms. Mahoney agreed and suggested that it would be useful for the City to gather data/metrics so that they can be clearly and concisely presented.

Mr. Chojnacki let the Committee know that the City was already working towards and Level 2 Energy Audit by applying for a grant to assist with the costs of such an effort. The grant, if awarded, would also allow for any excess funds left after paying for the audit to be used towards the implementation of energy saving improvements.

The City of Novi podcast "Now You Novi" was discussed as an avenue for both community education on sustainability topics as well as an opportunity to involve young community members such as Mr. Swamy and the Youth Council in outreach.

ACTION ITEMS

1. The Action Items going forward noted were:
 - a. For committee members to continue working with their contacts in other cities/organizations, ideally arranging for them to be involved in an upcoming committee meeting.
 - b. To arrange a tour of the Resource Recovery and Recycling Authority of Southwest Oakland County (RRRASOC) facility and potentially also of an area refuse facility. Both the Committee and Youth Council are interested in this opportunity.
 - c. To speak with Mr. Jim Nash, Oakland County Water Resources Commissioner
 - d. To identify the current water and wetland management process (via City, Consultant, EGLE, etc.)
 - e. To connect with the Friends of the Rouge organization

AUDIENCE COMMENTS –

Mr. Duchesneau stated that he was here to learn and that he suggests using Engage Magazine for educational outreach purposes since it seems to be a successful outlet for the City. He noted that he has toured the RRRASOC facility himself and was surprised by the

number of recyclable plastics. He also spoke briefly about the development of the City over the time he has lived there and the importance of the watershed.

Mr. and Mrs. Halvangis spoke on their particular interest regarding Shawood Lake as residents on it and also asked if the scope of the Committee will include nature sustainability, especially the area lakes. Councilmember Gurumurthy stated that yes, that topic was also of interest to the Committee.

ADJOURNMENT – 6:44 p.m.

Motion: Gurumurthy, Seconded: Heintz, approved 3:0

DRAFT



The City of Ann Arbor

Ann Arbor Solarize Toolkit

2024

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What is Solarize?

“Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has”

- Margaret Mead

Solarize is a group-buy program that brings residents, installers, and community organizers together to build community relationships and provide discounts on residential solar installations.

Solarize offers important ways to develop meaning in a community:

- **Building community relationships** - a collaboration of installers, community members, and local organizations work together to build trust and lend legitimacy to the program.
- **Becoming a part of something bigger** - residents can engage in a cause greater than oneself, becoming agents-of-change within their community

Solarize Ann Arbor differs from traditional Solarize programs by using a resident-led model. Residents choose installers and enlist participants, promoting peer-to-peer engagement and enhancing social cohesion. This bottom-up approach provides mutual benefits to both residents and installers. Some of these benefits include the following:

- Supports local businesses
- Builds trust
- Prompts meaningful action
- Develops a just transition to a new normal



What's in the Toolkit?



While the information in this toolkit is written primarily for those who will act as a program organizer, this toolkit is meant to be helpful for all who are interested in the Solarize program.

How to Organize a Pilot Group

Information on how to jump in and start a pilot group quickly and easily. Spreadsheets and templates that can be customized for individual programs.

Key resources can be accessed in this Google Drive folder:

https://drive.google.com/drive/folders/14sOl3iqLTain0qoZtX_F9a4G9tpplWVs

Expanding a Solarize Program

Information on how to grow the program after a successful pilot, adding more participating installers and greater outreach.

Key resources can be accessed in this Google Drive folder:

https://drive.google.com/drive/folders/16_qU265hqeifr7oj1T6Wj6cjFGC4zcQN

Resources

Referenced resources for participants including teaching materials, ads, presentations, and website structure used by the City of Ann Arbor. These can be customized for each community.

Roles & Responsibilities



Organizer

The organizer is key to ensuring proper program facilitation. The organizer must be adept at administrative tasks and clear communication as they coordinate between residents and contractors. The organizer is responsible for regular follow-ups after a group-buy event to maintain connections and momentum within the program. Local non-profits can function as an organizer for this program.

In Ann Arbor, city employees from the Office of Sustainability and Innovations act as the organizer



Host

The host is a local resident. An enthusiastic host is essential for gathering participants for a group-buy event. They are passionate about renewable energy and eager to network with fellow community members. The host is responsible for choosing an installer and inviting participants to group-buy events. Often, previous participants can be enlisted as hosts for future events.



Installer

A reliable installer is critical for creating a positive experience with solar adoption. An installer has to be willing to provide tiered discounts and have the capacity to successfully navigate a large number of projects at once.

Ann Arbor hosts choose from a list of vetted contractors provided by Michigan Saves, a local green bank

Organizer Task Sheet



The organizer is a key actor at every stage of the program. The organizer coordinates and conducts meetings and events, collects and compiles data on participants, and provides support for participants through the course of the program.



Schedule and Coordinate Events

- Create online registration
- Create Zoom meetings for events
- Present material at events
- Schedule and facilitate weekly check-ins with installer



Collect and Manage Data

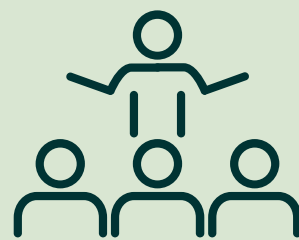
- Package residents' info for installers
- Monitor project progress
- Create and update spreadsheets



Participant Follow-Up

- Email group updates
- Promptly respond to participant questions and concerns
- Send feedback form

Host Task Sheet



The role of the host is critical at the early stages of a group-buy program. The host is responsible for community outreach and choosing an installer. Their integral involvement builds trust in the program and their passion for solar can be a powerful force of change within their community.



Community Outreach

Reach out to local networks to register participants for an upcoming group-buy meeting



Choose an Installer

Research local options and select a trusted installer for the group-buy*

*organizer assists with installer orientation to program if necessary



Share Passion for Solar

Present the reasons behind choosing to be a host and choosing the selected installer at the group-buy event

Installer Task Sheet



An installer can have a profound impact on the program. Installers must be willing to communicate regularly and effectively with participants and organizers, they must be able to effectively manage many projects at once, and they need to address issues promptly as they arise. Building a list of trustworthy installers is crucial to a successful long-term program.



Share Information

Present logistical information about solar installations at group-buy event



Project Management

- Design and install projects
- Regular, clear, and prompt communication with residents and organizer



Weekly Updates

Attend weekly meetings with organizer to discuss project updates and address issues

Start a Pilot Program

First, get started with a pilot program!

The organizer needs to identify a resident willing to act as a host for your first pilot group. Once the resident host has identified an installer they wish to work with, the organizer will approach the installer to pitch the group-buy pilot and parameters, and get their agreement to participate. Then, the organizer sets an event date several weeks out.

The organizer then helps the host reach out into the community to invite folks to an informational meeting. Casting a wide net is important. Aim for 40 sign-ups, if possible.

A pilot program is simply the first Solarize group to go through the program. It is a great opportunity to see what works and what needs improvement before moving forward with a full program.

At the event, the organizer presents information about solar, and answers questions, along with the installer.

After the event, the organizer helps keep track of participants and progress, until the end of the group-buy (suggest eight weeks from start to finish).

PROGRAM TIMELINE

The recommended timeline below is an overview of communications from the organizer to the host and installer over the course of the program. Each one will be covered more in depth in the coming pages.

	Week 0	Weeks 1-3	Week 4	Weeks 5-6	<u>Event!</u>	Week 7-?
Host Communications	Find a host!	Encourage host to obtain multiple bids from installers interested in participating in Solarize program. Weekly check-ins are helpful!	Once host has chosen an installer, work with the host to select an event date, begin outreach and advertising to obtain participants	Check in with the host on how many participants have signed up, what other advertising could be done. Send out meeting information to participants leading up to the event		After the event, send weekly updates to the host and event participants to inform them of the progress of the installer.
Installer Communications	---	---	Work with chosen installer and host to select an event date, make sure installer agrees to discount structure	Make sure the installer is prepared to talk about their company and to detail the process of getting solar		After the event, check in with the installer weekly to check on progress of estimate requests, site visits, completed estimates, and signed contracts

Pilot Program Task Sheet

1

Organizer Begins

The organizer could be a volunteer, a City employee, a student-led group, an organization, or someone else to oversee the program.

2

Set a Goal

Goals are good! People who attend meetings are more likely to go solar and big meetings build momentum, so meeting attendance may be an easy place to start. In Ann Arbor, we aim for 40 sign-ups for each group-buy kick-off meeting.

3

Find a Host and Solar Installer

Enlist a resident who is excited about solar and networking as a host! Establish a group-buy discount structure and work with a local, trusted installer. Ann Arbor negotiated 5% off for 3+ households, 10% off for 7+homes, 15% off for 10+ homes.

4

Schedule a Meeting

Assist the resident in reaching out into their network of contacts to invite folks to a group-buy meeting. Collect names of solar curious residents and follow-up. At the meeting, discuss the costs and benefits of solar, including what could affect pricing.

5

Follow up After the Meeting

Organize the purchase process so that everything goes smoothly for all involved. Stay in communication with the installers and the community members. Coordinate and track the estimate process.

6

Share and Repeat!

Success! Keep the community informed of progress. You have completed the pilot program, now it is time to grow! See section 3 for how to sustain and grow your Solarize program.

Before the Event

Leading up to a Solarize event pilot, the organizer will need to find and communicate with the host and installer to ensure everyone is on the same page. Follow the suggested week-by-week timeline for communicating with the host and installer.

Week 0

	Week 0
Host Communications	Find a host!
Installer Communications	---

The most important part of week 0 is **finding a host**. The host of a pilot event is someone who is interested in getting solar panels installed (or has already installed solar), is enthusiastic about sharing their interest in solar with neighbors, and is able to participate in outreach to gather participants. Send a potential host the [participant FAQs](#) to answer questions they have about the program.

Check these sources for potential hosts:

- Environmental groups
- Permitting office
- Social media
- Community events

Before the Event

Weeks 1-3

Focus on working with your host to find a solar installer to run the event. If the host already has solar, they can choose the installer that they previously worked with. If the host is new to solar, the host and organizer can work together to pitch the program to local installers new to the program, or the host can pull from a list of those who have already agreed to the program.

Clearly communicate with the installer to ensure that the installer agrees to a predetermined discount structure. The installer must also be willing and have the capacity to handle a large number of solar customers at once. Use the [installer FAQs](#) and [installer infographic](#) as resource tools.

	Week 0	Weeks 1-3
Host Communications	Find a host!	Encourage host to obtain multiple bids from installers interested in participating in Solarize program. Weekly check-ins are helpful!
Installer Communications	---	---

Event Planning Tips:

- Offer a virtual option to allow greater accessibility
- Record the virtual presentation to share with late additions and those who can't make the event date
- Emphasize the opportunity to build community and be an integral part of a movement in outreach communications



Before the Event

Weeks 4-6

	Week 0	Weeks 1-3	Week 4	Weeks 5-6
Host Communications	Find a host!	Encourage host to obtain multiple bids from installers interested in participating in Solarize program. Weekly check-ins are helpful!	Once host has chosen an installer, work with the host to select an event date, begin outreach and advertising to obtain participants	Check in with the host on how many participants have signed up, what other advertising could be done. Send out meeting information to participants leading up to the event
Installer Communications	---	---	Work with chosen installer and host to select an event date, make sure installer agrees to discount structure	Make sure the installer is prepared to talk about their company and to detail the process of getting solar

Weeks 4-6 are all about outreach. You should work with your host to leverage the connections they have in their community and take advantage of new modes of outreach as well. Reliable virtual methods for the City of Ann Arbor have included outreach on Facebook groups and Nextdoor. You can use [Ann Arbor's flier](#) as an example. Your flier can be distributed virtually as well as in neighborhoods.

The ["Solarize Sign-Up Form"](#) should be distributed to allow interested participants to sign up for the event. Email contacts can be collected through the sign-up form, and email reminders can be sent to this contact list. The Zoom link can be sent to registrants just prior to the scheduled event. Alternatively, if you are comfortable with Zoom registrations, you can set up a meeting in Zoom and use that functionality. It is important to note that participants are absolutely not obligated to follow-through with a solar installation just by attending a meeting.

Here's a [sample message](#) that you can send to your host about outreach to their networks.

Outreach tip:

Add poll questions to the sign-up form to gauge the motivation of your participants. Are they more interested in energy independence or reducing carbon footprint? Adjust your presentation language and information accordingly.

During the Event

Basic Agenda

[This meeting recording](#) provides an idea for meeting structure

- **Welcome from the host:** why they are going solar, and importantly, why they chose the installer that they chose.
- **Educational presentation:** information about solar by organizer or other third-party educator with no financial ties to installer. Check out this [sample slide presentation](#).
- **Financing information:** opportunities in your state could be included (eg: Michigan Saves Green Bank)
- **Installer presentation:** introduction and information about how a solar installation works
- **Q&A**
- **Define group-buy timeline** (suggest 8 weeks, with decisions made and contracts signed within that timeframe)

Most Importantly, an Easy Last Step!

At the end of the event, give participants simple instructions for how to request an estimate: **email the organizer!** Share the organizer's email on the last slide and encourage participants to send an email while it is onscreen. Remind them that there is no cost for an estimate and that they are encouraged to shop around. It's important to have an easy, actionable step at the end of the meeting.

Zoom Tips:

- Remember to hit record at the beginning of the meeting!
- Use the "Mute all Participants" option when there are audio disruptions
- Ask participants to save questions for the end, but encourage them to use the chat function to help keep track of questions

It is important to emphasize that all participants matter, regardless of the size of their action. For those who want to be involved but for whom solar is not feasible, they can become community advocates or hosts or take other important steps in energy conservation and pro-environmental behaviors.

After the Event

Next Steps

The first task for the organizer is to gather information from participants who have indicated interest. Use [this sample email](#) to request information from participants.

Once the information is received, it is compiled and forwarded to installers. This approach streamlines the intake process for installers dealing with large groups.

After an event, it is important to track and document the progress of installations for all the participants. [The Solarize Event Participation Tracker](#) is a crucial tool for keeping organized and communicating with the installer. There is a [video tutorial on how to use the tracker](#).

The [Solarize Feedback Form](#) is a great way to get participants' anonymous feedback about your event, and learn what went well and what could be done better. In Ann Arbor, this sent out a few weeks after the meeting, when most participants have had their initial estimates completed.

Event!

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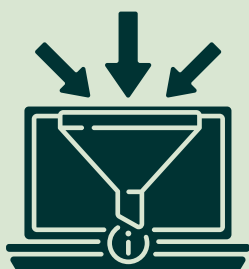


You are here!

After the Event

Organizer Task Sheet

The role of the organizer is key for maintaining regular, clear communication with participants and the installer following the group-buy event. Weekly meetings with the installer and weekly email updates to participants improve clarity and build relationships.



Gathering Data

Immediately following the event, organizers should gather information for the installers from interested participants by using this [sample email](#). Once the information is gathered, it can be compiled and forwarded to the installer as a single email.



Weekly Meetings

The organizer should set up a weekly standing meeting with the installer to go over the progress of individual projects. Organizers should ensure that installers are communicating effectively with participants and that the timeline is compatible with program length. Organizers and installers should work together to address issues with participants as they arise.



Weekly Updates

The organizer should send out weekly email updates to participants on the overall progress of the program. Emails can include the current number of signed contracts and the level of discount achieved. This is a great opportunity to plug other local events, as well as provide additional information about home electrification.

Follow-up Tips for Organizers:

- Encourage participants to reach out to the organizer via email if there are any issues with their project or if any questions arise
- Respond to emails in a warm and timely manner
- Admit when you do not know the answer to something, but do your best to find the answer or direct the participant to a party who does know

Expanding your Program

Congratulations! You have successfully piloted a Solarize event for your community. Now, what's next?



Increase Advertising



Engage Policy Makers



Recruit Trusted Installers



Find a Local Green Bank



Track and Share Data

Advertising

After completing a Solarize pilot event, sharing enthusiasm is a crucial next step so that others can benefit from the advantages of the Solarize program.

There are some best practices enacted by the Ann Arbor program that can be customized to expand program advertising and outreach efforts, as well as new program elements.

First, expanding outreach can help find new hosts and participants. The toolkit includes [advertisement templates](#), as well as an image of a [yard sign](#) that has been successfully used in Ann Arbor. It is also helpful to reach out to local policy makers and green banks to build coalitions for program support.

Finally, hosting a ["Power Hour"](#) can be a useful outreach tool. In Ann Arbor, a "Power Hour" is a recurring online event that engages and informs city residents on important topics such as renewable energy, electrification, and energy efficiency.

These events have been hugely successful, and have helped us connect with the community and promote our programs and initiatives, including Solarize.

Community Outreach Tips

- Ask your host and other participants to [display a yard sign](#) with information about the program
- Partner with organizations to increase credibility
 - In Ann Arbor, partnerships were developed between City employees, local businesses, non-profit organizations, and environmental groups
- Contact housing units, Home Owner Associations, and neighborhood groups to meet potential hosts
- Utilize social media and newsletters
- Installers can recruit hosts from their own leads as well

Policy Makers



Communicating with policy makers can be a meaningful way to build connections and lend legitimacy to a Solarize program.



Community policy makers and local government officials can help support outreach for Solarize events via community newsletters, neighborhood meetings, and other regular constituent communication.



Policy makers might also assist in establishing policies that reduce the time and money it takes to install a solar energy system, including evaluating local permitting processes and planning and zoning procedures

Ann Arbor's expedited permitting system for solar installations reduces the cost and turn-around time, reducing additional barriers to going solar. This [pre-submission checklist](#) helps streamline the application process.

Installers

Installer Recruitment

Solar installers are easy to find! The internet can be a powerful resource, as well as word-of-mouth from neighbors or friends. When discussing participation in the Solarize program with an installer, your most powerful tool is your pilot program data. Specific numbers on how many estimate requests there were and how many turned into sales are appealing to potential partners.

Installer Vetting

The process by which residents search for a solar installer can be daunting. If a homeowner is starting from scratch, a number of questions can quickly arise:

- How much can you trust a solar company found on the internet, even ones that are local or recommended by a neighbor?
- Companies will sometimes advertise with promises of "zero money down" or "no out-of-pocket expenses." How do you navigate such claims?
- How do you know if a solar installer is offering a reasonable price for your installation?

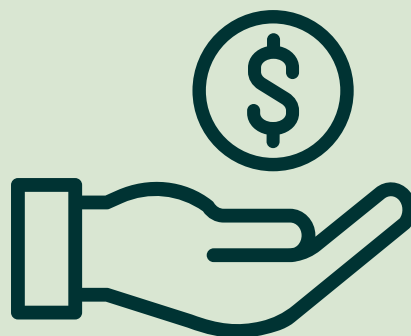
A program organizer should aim to recruit installers who are acting in good faith and who will provide excellent customer service to Solarize participants.

Third party vetting can guide the recruiting process. [Michigan Saves](#) is a local green bank that offers installer vetting and financing for participants. Nationwide resources you can leverage include: [Better Business Bureau](#), [Solar Reviews](#), and [Energy Sage](#).

Green Banks

Green banks can offer important support to your Solarize program in a few key areas.

Determining if your region has a local green bank and developing a relationship with them can improve trust and affordability within your program.



Installer Vetting

In Ann Arbor, the Solarize program uses Michigan Saves for installer vetting. Michigan Saves is a non-profit green bank that uses strict criteria focused on licensing and certification, industry-certified staff, and subcontractor vetting.

Financing

Green banks can offer affordable financing with low interest rates for home energy efficiency projects. Michigan Saves uses a loan loss reserve to enable them to reduce credit requirements, making financing more accessible for vulnerable populations.

Data Tracking

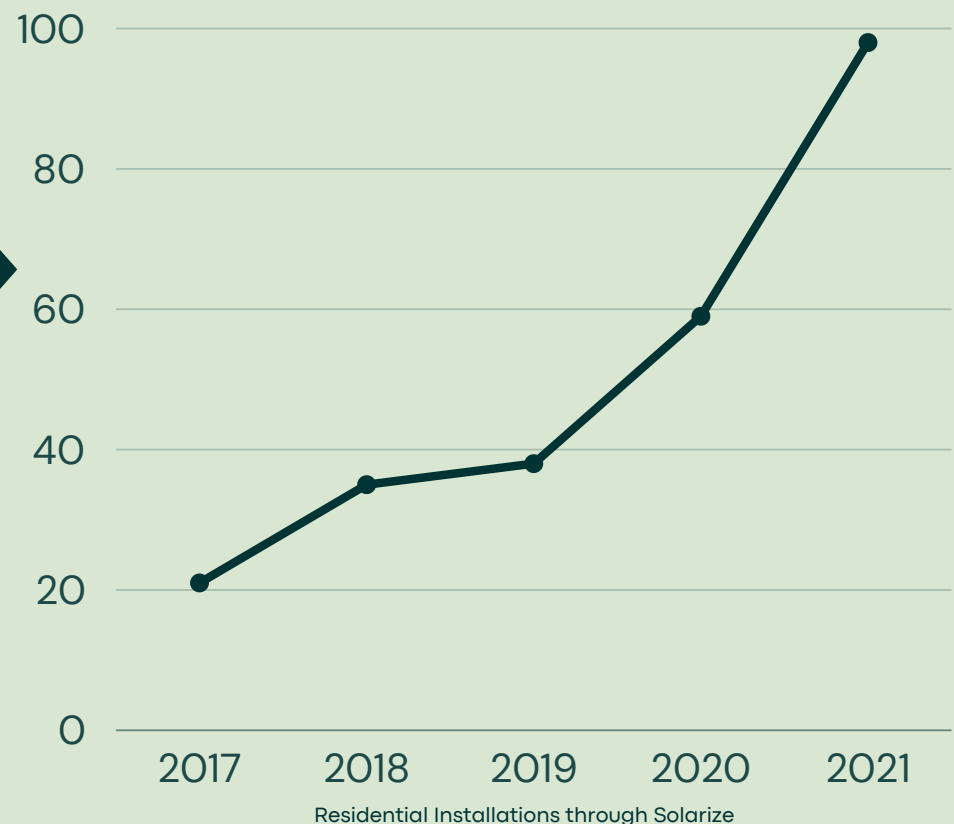
Data can provide compelling results that can encourage further community support.

The [Overall Solarize Results Tracker](#) is a tool that helps compile and organize group-buy results.

Spread the Word

Use compiled data to demonstrate the growth of solar in the community and encourage others to hop on board. Results can be shared with community members, policy makers, local community organizations, and installers.

Solar Installations in Ann Arbor



Visualizing data is a great way to display the progress of a Solarize program

Resources

All printable materials and templates available in the [Ann Arbor Solarize Google Drive Toolkit](#)

For additional information about Solarize Ann Arbor, contact Joe Lange,
Energy Analyst, Office of Sustainability and Innovations, City of Ann
Arbor

JLange@a2gov.org

Contacts & Acknowledgements

Prepared by Tara-Sky Woodward
reDirect Fellow, Fall 2022
taraskyw@umich.edu

In collaboration with Julie Roth
Energy Manager
City of Ann Arbor, Office of Sustainability and Innovations
jroth@a2gov.org

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the completion of this project

The City of Ann Arbor
Office of Sustainability and Innovations

MEMORANDUM



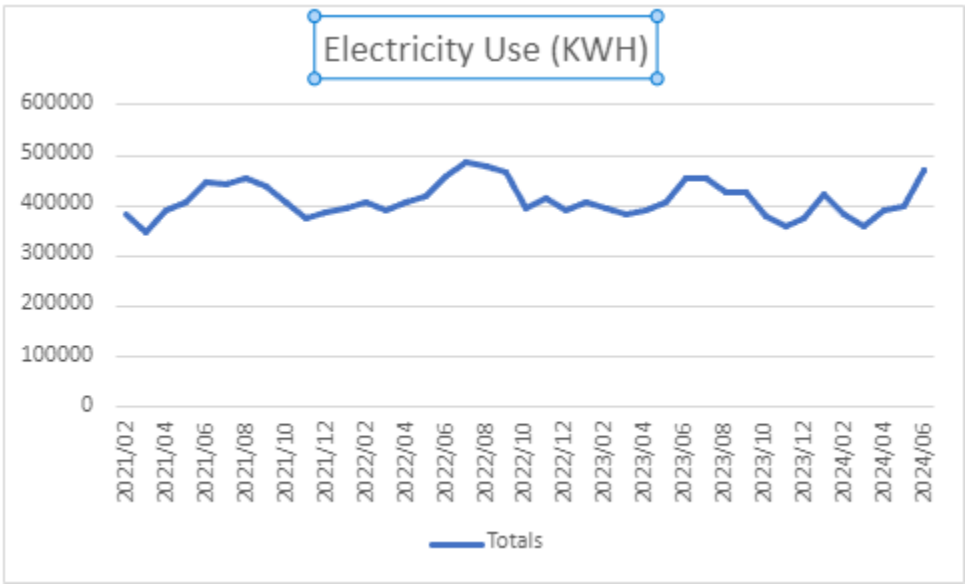
TO: ENVIRONMENTAL SUSTAINABILITY COMMITTEE
FROM: EZEKIEL CHOJNACKI, GRADUATE MANAGEMENT ANALYST
SUBJECT: ENERGY AND WATER USE
DATE: JULY 18, 2024

EXECUTIVE SUMMARY

This memo provides an analysis of energy and water use by the City of Novi, highlighting key consumption patterns, areas for improvement, and the integration of electric vehicle (EV) charging infrastructure. The aim is to offer data-driven insights to inform policy decisions and promote sustainable practices in our community. This memorandum was produced in response to the sustainability committee's desire to better understand Novi's current consumption patterns.

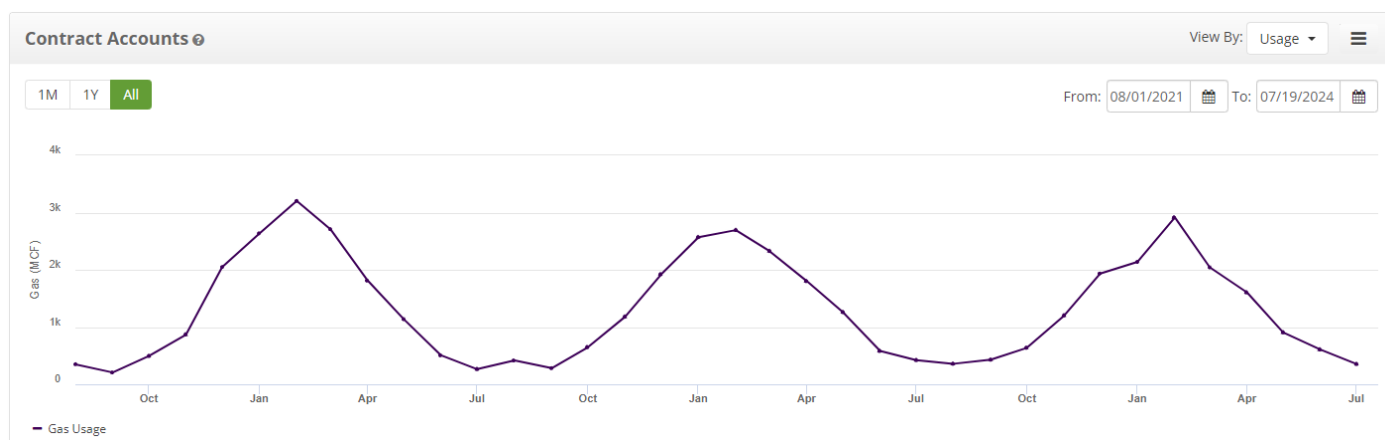
ENERGY USE OVERVIEW

Electricity



Electricity use in the city has remained relatively constant. Over the past three years, there has been no apparent change; however, there are consistent fluctuations based on the time of year, with increases during summer months (likely due to AC).

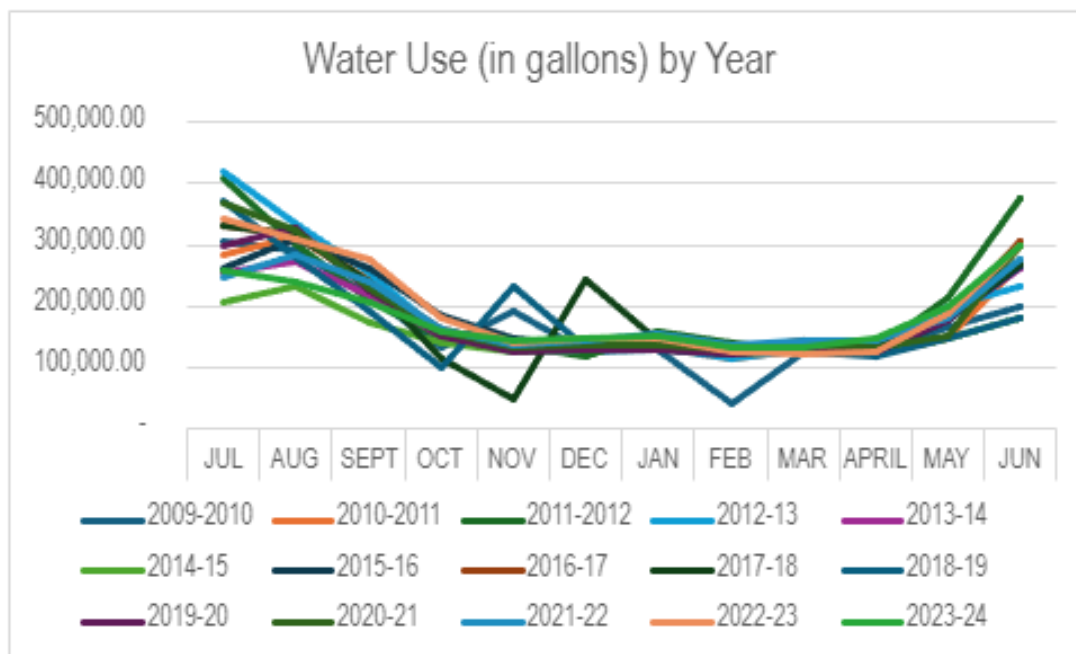
Gas

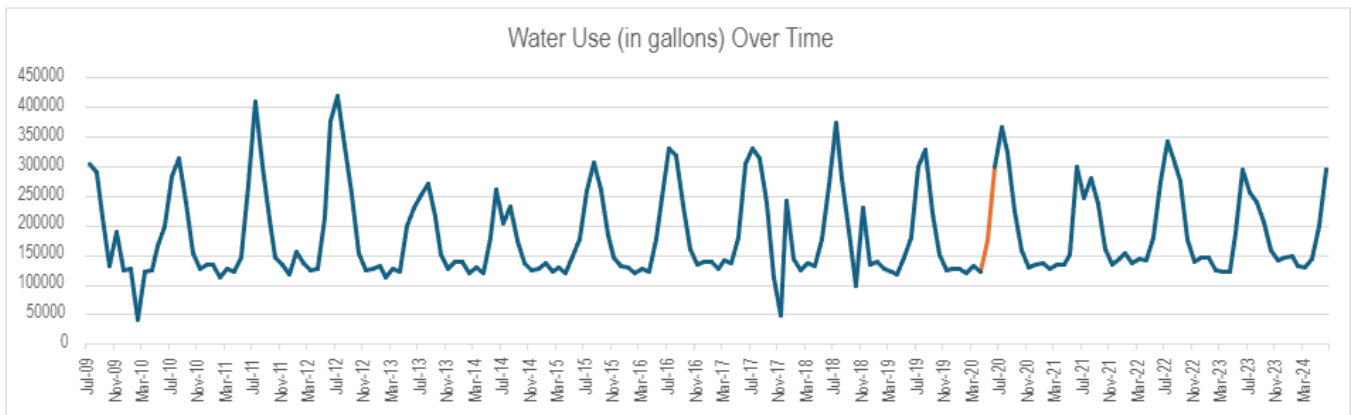


Gas use is inversely related to outdoor temperatures (and thus also inversely related to electricity). Gas use has remained relatively consistent over the past three years, with possibly a small decline in use during the winter.

Based on the data above, if the city is interested in reducing energy use, efforts should focus on temperature regulation. Heat pumps are a far more efficient method of temperature regulation in the winter. When used in conjunction with geothermal ground loops or cooling tubes, they can drastically reduce energy use.

WATER USE OVERVIEW





By examining the charts above it should be clear that the primary variable in water use is time of year. Even over the span of 15 years, the city government's water use remains relatively constant. The city can take two approaches toward reducing water use. First, by planting less water demanding foliage, the city could work to shorten the peaks seen in summer months. Second, by using low flow infrastructure, the city can shift the graph down, reducing use across the board, but not effecting the fluctuation.

ELECTRIC VEHICLE (EV) CHARGING INFRASTRUCTURE

City Owned

- The city has two EV charging locations. The first is publicly available at the library, and the Novi Police Department uses the second for its hybrid fleet.

City Wide

- There are approximately 15 public EV Charging stations in the City of Novi. Residents can find these charging locations using:
 - https://afdc.energy.gov/fuels/electricity-locations#/find/nearest?fuel=ELEC&ev_levels=all
 - <https://www.plugshare.com/>
 - https://ev.dteenergy.com/charging-stations?_gl=1*1o8dpnk*_ga*MjEzODY4OTE4MC4xNjg1NjIzNTA2*_ga_J2R5W9DWE4*MTY4NTY0ODI4Ny4xODEuMS4xNjg1NjQ4NTE4LjAuMC4w

The city can aid future EV Charging infrastructure by adding it to additional city buildings, incentivizing its use in new construction, and continuing to electrify its fleet.

CONCLUSION

The City of Novi is committed to promoting sustainable energy and water use practices while supporting the transition to a greener future. As seen in the data, Novi's energy and water use has remained unchanged for many years. With a new sustainability committee and interest in green solutions, we can enhance our community's resilience, reduce environmental impact, and provide our residents with modern, efficient infrastructure.