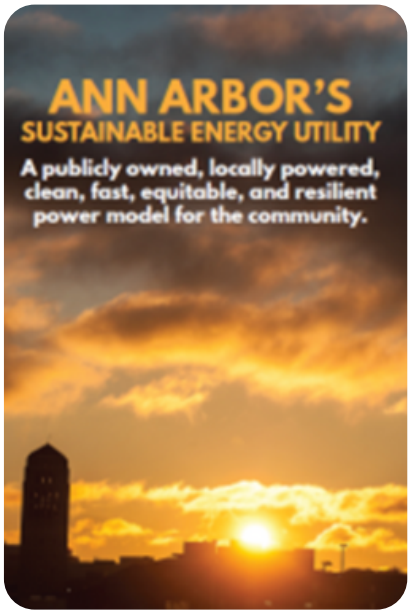
City of Ann Arbor
Office of Sustainability and Innovations

SEU FAQ

WHAT IS A SUSTAINABLE ENERGY UTILITY?



The Ann Arbor SEU is a community-owned energy utility that provides electricity from local solar and battery storage systems installed on homes and businesses throughout the City. The SEU provides 100% clean, reliable, locally built, and affordable electricity; built by the community, for the community.

Traditionally, an electric utility was an all-or-nothing proposition – each customer/household could have only one provider, which would provide 100% of their energy services. Innovations in distributed energy (e.g., solar energy and energy storage) and advancements in energy technologies mean we can think about that differently now – and the SEU envisions a new type of entity that focuses on community installed and community-owned clean energy. Through the SEU, Ann Arborites will increasingly reduce the amount of energy we use through energy waste reduction and get our remaining needs from clean, local, publicly owned sources.

WHAT SERVICES COULD A SEU OFFER?

Ann Arbor's SEU would be a municipal utility that delivers energy waste reduction programs, along with clean, local, and reliable energy to residents by building local renewable energy systems on roofs, carports, and in strategic public spaces. The energy will be provided to residents and businesses through direct installations on their properties as well as through small-scale distribution systems (known as microgrids). This is an alternative to the system of large-scale poles and wires and distant power plants used by traditional municipal and investor-owned utilities.

Ann Arbor's SEU would leap past old utility models and focus on the most innovative and impactful services for our residents, including:

- Improved energy reliability, including during times when the "grid" goes down, by increasing residents' access to solar and energy storage.
- Robust energy waste reduction (efficiency) programs to support residents and businesses – even those who don't own their dwellings -- with improving indoor comfort, health, and safety, all while saving money.
- Microgrids between neighboring households, where solar and storage are shared.
- On-bill financing to help lower the upfront costs and increase the flexibility of paying for our clean energy transition.
- District level geothermal systems so that neighbors can jointly tap into the earth to heat and cool their homes and businesses.
- Community solar programs that allow neighboring residents to invest and harvest the benefit from solar installed at community centers, in parks, or in shared areas around the City.
- Support for beneficial electrification and associated work force training and rebate programs to help people transition to cleaner and safer all-electric homes and businesses.
- Energy justice initiatives, including broad and deep access to renewable energy, the creation of programs for low-income and underserved residents, and the expansion of weatherization services.

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WHAT SERVICES MIGHT AN SEU OFFER AT THE START?

Since a SEU delivers electricity as part of its structure, rapid solar deployment will be at the heart of initial offerings. In addition to onsite solar and energy storage services, energy waste reduction offerings and on-bill financing options are envisioned as key initial service offerings.

WHAT IS THE DIFFERENCE BETWEEN A SEU AND A TRADITIONAL MUNICIPAL ELECTRIC UTILITY?

There are varying forms of municipal utilities, but the most common is a public utility that serves a community by owning and maintaining the electrical distribution infrastructure (the local "grid") and selling electricity from third-party generators to its customers, which are physically connected to that grid. When an entity tries to create a utility in this way, it must "take" the current utility's property through a court process, which seeks to determine the value of the utility's monopoly interest. Once that price has been agreed upon, the community must purchase that infrastructure from the previous utility. Historically, these efforts can take the greater part of a decade and cost millions to litigate. If successful, the newly formed utility has significant debt its residents must bear associated with purchasing this infrastructure from the previous utility – infrastructure that may not be in the best condition. Additionally, the utility still must determine how it will provide 24-7 power to its customers and meet reliability standards (not to mention decarbonize the power supply) through power purchase agreements, new generation, or other means.

In contrast, a SEU would move away from this model. It would not focus on buying existing poles and wires from an investor-owned utility, but would instead focus on creating a new option for Ann Arbor residents and businesses to procure their power by investing in local infrastructure, such as onsite solar and energy storage, micro-grids, energy waste reduction efforts, beneficial electrification, and district level geothermal. In this way, Ann Arbor becomes less dependent on the traditional grid and distant fossil fuel power plants while increasing reliability, improving affordability, and powering our lives with clean energy.

IS THE CITY LOOKING INTO A TRADITIONAL MUNICIPAL UTILITY?

A conversation about traditional municipalization has begun in our community, and the City Council recently asked the Energy Commission to consider whether to recommend a feasibility study. The staff of OSI (The Office of Sustainability and Innovations) has been investigating this alternative option (the SEU) with technical and policy advisors, with the original goal of developing a formal recommendation in early 2022. The community conversation around municipalization led staff to expedite their investigation and publish the report now, so that it can inform public discourse and decision-making around this issue.

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WHY NOT WAIT TO LAUNCH THE SEU UNTIL THE CITY DECIDES IF IT WILL PURSUE A TRADITIONAL MUNICIPAL UTILITY?

Why wait? With a SEU, we can start almost immediately – giving our residents and businesses options they don't have today to have cleaner, more reliable, and local energy, at a lower cost. With a 2030 goal to meet, Ann Arbor needs to pursue all options for fast decarbonization. Also, the sooner we can become more resilient, the less our residents and businesses suffer from grid outages, which have become more common.

Moreover, the path to creating a traditional municipal utility is not simple. The costs of purchasing the poles and wires from an investor-owned utility are extraordinarily high in terms of equipment and legal costs, as well as time. We are likely to meet great resistance from powerful entities and be in legal battles for years. If we do, eventually, win those legal arguments and find the money to procure the poles and wires, we will have spent enormous money, time, and political capital, without having actually changed our energy generation (aka, we'll still be using energy largely from fossil fuels). It can take many years to bring new, large renewable energy systems online, so why wait to start? The SEU will allow us to immediately begin investing in local renewable energy production and energy waste reduction efforts. Things our community wants and needs now.

The timeline we have set for community-wide carbon neutrality is aggressive, in line with the science of climate change. Science also tells us that actions taken today can be more powerful in addressing climate change than even larger actions tomorrow. With a SEU, we can start almost immediately to reduce our environmental footprint, enhance reliability, increase resilience, and avoid long and expensive legal fights to procure antiquated and failing distribution infrastructure (i.e., the grid).

WHAT IS A TRADITIONAL MUNICIPAL UTILITY FEASIBILITY STUDY?

A traditional municipal utility feasibility study is a preliminary analysis of how much it will cost to buy and operate the electrical distribution infrastructure (e.g., poles, wires, and sub-stations) from an existing utility, as well as the cost for procuring an alternative power supply for the City's residents and businesses. It is an estimate used to assess the financial feasibility of traditional municipalization efforts and the likely rates that would need to be charged. If requested, a feasibility study could also assess the quality of that infrastructure and estimate costs to do things like bury the power lines, have improved maintenance/tree trimming programs, and otherwise modernize the infrastructure to improve reliability and allow for an electrified future.

WOULD ONE FEASIBILITY STUDY OF TRADITIONAL MUNICIPALIZATION BE ENOUGH?

It is almost certain additional studies would need to follow the initial feasibility study. It is rare for the initial feasibility study to come back with cost and time estimates that accurately reflect the magnitude of moving forward, including a detailed analysis of the quality of the infrastructure, replacement needs, maintenance requirements, and staffing needs commensurate with the goals established by our community – equitable decarbonization by 2030.

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WHAT IS THE UPFRONT COST OF STARTING A SEU COMPARED TO STARTING A TRADITIONAL MUNICIPAL UTILITY, AND HOW COULD THIS BE PAID FOR?

Starting a SEU requires the adoption of an ordinance by City Council and seed funding to immediately begin installing solar and storage systems, along with energy waste reduction programs. Seed funding could be as small as a few hundred thousand dollars to tens of millions, depending on how quickly we choose to begin and scale up, along with what outside investment options are available. . Funding for the SEU could be provided directly from existing City funds, through a millage, from impact investors, private philanthropy, grants, through bonding, or through a combination of these options.

Regardless of which funding and financing options are selected, these costs would be significantly less than the costs of procuring the energy distribution system and associated property, which would be necessary to start a traditional municipal utility, as the costs to procure the local “grid” alone are likely to dwarf the costs of the services an SEU could immediately provide.

WHEN WERE MUNICIPAL UTILITIES IN MICHIGAN FORMED?

Bay City is the oldest (1868) and the youngest is Zeeland (which was re-established in 1935.) There is one place in the Upper Peninsula that is in the process of attempting to municipalize now. See the appendix for a table for when Michigan municipal utilities were formed.

ARE THERE EXAMPLES OF SEU’S ELSEWHERE?

A SEU is novel in the context of Michigan’s utilities, but it builds on concepts that are present in other jurisdictions. Both DC and Delaware have versions of a Sustainable Energy Utility. Both models are working to support equitable clean energy initiatives in their regions. While the utility laws are very different in those places, these examples present insights into what kinds of services could be offered, how they are priced, and what is possible when a utility focuses on renewable energy, equity, and local generation. In addition, some other Michigan municipal utilities, notably Holland, offer innovative programs (on-bill financing, low income energy waste reduction offerings) that could advance many of the goals we have. Therefore, there would be many utility program examples which Ann Arbor could emulate and learn from.

DOES A SEU REQUIRE STATE LEGISTIVE CHANGES?

No. All that is required to start a SEU is the adoption of an ordinance enabling its creation by City Council.

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DOES A SEU REQUIRE A VOTE OF THE PEOPLE?

Not unless bonding (or certain other financing options) were selected as the funding mechanism. Individuals and businesses would choose individually ("vote with their feet") to sign up (or not) for SEU services.

WHAT ARE THE OBJECTIVES FOR CREATING A SEU?

In designing a SEU, the City focused on six objectives:

1. Shifting our energy system from carbon intensive energy sources to carbon-free energy sources as outlined in A2ZERO;
2. Finding solutions commensurate with the pace necessary to achieve a just transition to community-wide carbon neutrality by 2030;
3. Creating a customer-centric model that empowers people and businesses — regardless of their size or location-- to have choice in meeting their energy needs and reducing energy costs;
4. Centering the needs of low-income and historically under-represented groups in the energy system and ensuring they have access to programs that improve comfort, affordability, and sustainability;
5. Moving away from viewing energy as a commodity to viewing energy as a service; and
6. Improving our energy system's reliability and resilience by lowering our dependence on a single grid.

WHY CONSIDER MICROGRIDDING?

Currently, people with solar systems at their homes or businesses cannot share this electricity across property lines because they are not a utility. If the City were to create a SEU, that barrier to microgridding would be eliminated. Microgrids could pair solar generation with energy storage to distribute electricity at scales larger than an individual home/building, meaning the SEU could design solar and energy storage systems for a neighborhood. In addition to the climate benefits of microgridding with renewable energy, these power storage and sharing abilities sharply improve reliability and improve resilience, while expediting equitable access to renewable energy.

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HOW COULD THE SEU SUPPORT ENERGY WASTE REDUCTION?

Energy waste reduction would be, a crucial service offering for the SEU because it is a cornerstone to decarbonization, makes residents and businesses better able to afford the energy they use, and makes the whole community less grid dependent. Local power can only do so much (we don't have enough roof space, parking lots, and open spaces to meet our current power needs 100% of the time with solar energy). This means that Ann Arbor's SEU would not only invest its efforts into newer, greener technologies, but also the deep efficiency and waste reduction efforts that immediately assist homeowners, renters and businesses with reducing energy usage, saving money, and improving the comfort and health of their homes and businesses.

WHY A SEU?

With a SEU, we can start now and focus on meeting our 2030 decarbonization goals while giving our residents options for immediate services -- and results. We can begin building renewable energy and energy storage systems, microgrids, and robust energy waste reduction programs. We can enable local businesses to grow the renewable energy industry. We can reduce our use of and reliance on the grid. The grid is not the goal. **Decarbonization**, **resilience**, and **equity** are the goals.

An SEU does not need the assets of a traditional municipal utility to start offering new energy options to residents and businesses. Starting a SEU also does not prevent the later formation of a traditional municipal utility, should that be pursued. The SEU provides steps the City can take now, and either continue without a traditional municipal utility or later incorporate into such an entity if it chooses that path. In other words, a SEU offers a cost-effective course of action that can be taken now, as the City explores the benefits and challenges a traditional municipal utility might present, and whether it makes sense for Ann Arbor

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IS AN SEU PUBLIC POWER?

Yes! A SEU is a municipal utility, which is run by the government (just as our water and sewer services are). A SEU is different, however, than traditional municipal utilities in that it would start as a complementary utility to DTE. This means that residents currently served by DTE could choose to enroll in the SEU as well, in order to receive clean energy, energy waste reduction offerings, and energy storage solutions not currently offered by DTE, reducing their reliance on the grid. This approach provides flexibility and provides choice for residents as we move away from the centralized grid to investing in local renewable energy generation. By providing a parallel energy service, Ann Arbor's SEU would not need to fight with DTE over buying their old and under-performing energy distribution infrastructure. Instead, the SEU can immediately focus on installing clean energy.

HOW DOES AN SEU COMPARE TO COMMUNITY CHOICE AGGREGATION?

Community Choice Aggregation (CCA) disaggregates energy infrastructure from the commodity costs of electricity. It puts the CCA in control of where electricity is procured, enabling access to 100% clean energy at competitive rates to the existing utility. The CCA customer pays the existing utility for using their lines and wires to deliver electricity, with customers still receiving their bills through the existing utility. CCAs, unlike SEUs, would not have the power to offer on-bill financing or other powers that are restricted to utilities.

One key difference between CCA and the SEU is that the SEU does not require new legislation; it is allowed under current laws. CCA would require new state legislation that would almost certainly face strong opposition from incumbent utilities. Another key difference is the amount of control given to residents to choose their energy supply – a CCA transfers that decision making from DTE to the municipality; a SEU gives residents that choice.

As currently envisioned, if CCA were to be enabled by legislation in 2024 (which is not within the City's control), the City would need to form a Joint Powers Authority (JPA) to oversee the eventual creation and management of the CCA. This would be followed by an official CCA launch and energy procurement, likely in 2026 or 2027. At this point, all those who did not opt-out of the CCA would become customers and have access to 100% renewable electricity. Creating a SEU and pursuing CCA legislation are not mutually exclusive. Rather, a SEU can create conditions where a CCA could be incredibly successful, and the SEU does not need CCA to be successful.

Suppose CCA legislation does not pass at the State an SEU puts Ann Arbor well on our way toward achieving our clean energy goals by immediately starting to generate local renewable energy. If CCA is enabled by State law, the City can leverage it to procure renewable energy immediately for the community, supplementing whatever energy needs are not currently being met by the SEU. Thus, CCA and SEU are not competing strategies – but strategies that can be pursued simultaneously.

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HOW DOES AN SEU ALIGN WITH A2ZERO?

An SEU is a direct path to achieving our A2ZERO goals, including:

- Enabling rapid deployment of local renewable energy so that we can quickly reduce our reliance on fossil fuels without having to wait for legislation, legal battles, or cooperation from entities with less urgent timelines (Strategy 1).
- Directly incentivizing fuel-switching from methane-producing gas-burning appliances, to clean electricity, in our homes and businesses (Strategy 2).
- Facilitating and directly assisting residents and businesses with deep energy waste reduction measures, creating cost savings, emissions reductions, and improved health and comfort (Strategy 3).
- Deployment of local microgrids with on-site and nearby solar and energy storage that can directly enhance our resilience, reduce our reliance on the grid for power, and help us weather grid outages (Strategy 6).
- Centering energy justice in our work, putting resources into programs for low-income and underserved populations so that renewable energy, weatherization, energy waste reduction measures, and resilience are accessible to ALL in our community (Strategies 6&7).

An SEU enables our community to bring our City into the future without having to compromise our principles. It also allows us to show others in Michigan and the U.S. what is possible when a community approaches local decarbonization in a holistic fashion.

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HOW DOES A SEU ALIGN WITH THE CITY'S ADOPTED ENERGY CRITERIA AND PRINCIPLES?

As shown in the table below, a SEU strongly aligns with our adopted Energy Criteria and Principles and allows us to meet our 2030 goals.

SUMMARY OF HOW AN SEU ALIGNs WITH ANN ARBOR'S ENERGY CRITERIA AND PRINCIPLES AND ACHIEVEMENT OF CARBON NEUTRALITY BY 2030

	Current System	Sustainable Energy Utility
Reduce GHG Emissions	Poor	Excellent
Additionality	Poor	Excellent
Equity and Justice	Poor	Good
Enhance Resilience	Poor	Excellent
Start Local	Fair	Excellent
Speed	Poor	Excellent
Scalable and Transferable	Poor	Excellent
Cost Effective	Fair	Good

This table reflects how well each of the above options aligns with A2ZERO's 2030 goal established by City Council and the adopted Energy Criteria and Principles.

Reducing GHG Emissions reflects the probability that the proposed strategy will achieve a high (over 50%) reduction of community-wide GHG emissions by 2030. Electricity consumption represents 40% of community-wide emissions, so this requires procuring 100% renewable energy by 2030 as well as addressing the need to electrify.

Additionality requires that energy projects are new and displace fossil fuel energy sources. Priority is placed on projects that would displace regional fossil fuel energy sources and result in actual emissions reductions. Projects to be additional must not have occurred without our community's investment.

Equity and Justice represents a comprehensive impact on affordability for low-income residents, equitable outcomes, procedural justice, resolution of historical injustices, and fair labor practices. This includes minimizing energy costs rather than increasing them, enhancing the quality of life for frontline communities, and partnering with frontline communities.

Resilience Enhancement means that an action increases the resilience of the City, people, and ecosystems to climate-related disruptions. This is reflected in a system's ability to continue to provide electricity after a disaster or emergency.

Start Local not only looks at where the project is implemented but also it's impact on job creation in Michigan and investing in our local economy.

Speed represents the timeline of implementation, including whether current policies support immediate action.

Scalability and Transferability means how easily a project can be expanded or upgraded on demand and transferred to other Michigan communities.

Cost Effectiveness looks at relative capital and operating costs as well as estimated payback periods.

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WHAT STEPS WOULD BE NECESSARY TO START AN SEU?

Starting a SEU requires the adoption of an ordinance by City Council and seed funding. Staff recommend starting to gather resident interest in enrolling in a SEU right away, while simultaneously finalizing a rate analysis, defining the SEU's governance structure, and modeling the technical requirements and costs associated with a neighborhood microgrid.

HOW DO I REGISTER MY INTEREST IN AN SEU?

To register your interest in an SEU, please fill out this short survey: https://www.opentownhall.com/11807.

Or send an email to sustainability@a2gov.org.

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APPENDIX A: MUNICIPAL UTILITIES IN MICHIGAN

Utility/ website	City Name	Year Founded	Customers Served
Village of Baraga	Baraga, MI	No data	
City of Bay City	Bay City, MI	1868	20,000
City of Charlevoix	Charlevoix, MI	No data	4,400
Chelsea Light and Power	Chelsea, MI	1898	2,800
Village of Clinton	Clinton, MI	1893	
Coldwater Board of Public Utilities	Coldwater, MI	1891	
Croswell Municipal Light & Power Dept.	Croswell, MI	No data	
City of Crystal Falls	Crystal Falls, MI	1890	
Daggett Electric Department	Daggett, MI	No data	
City of Dowagiac	Dowagiac, MI	No data	
City of Eaton Rapids	Eaton Rapids, MI	1898	2,755
City of Escanaba	Escanaba, MI	No data	
City of Gladstone	Gladstone, MI	1897	
Grand Haven Board of Light & Power	Grand Haven, MI	1896	14,500
City of Harbor Springs	Harbor Springs, MI	No data	3,600
City of Hart	Hart, MI	No data	1,300
Hillsdale Board of Public Utilities	Hillsdale, MI	1892	6,300
Holland Board of Public Works	Holland, MI	1893	28,000
Village of L'Anse	L'Anse, MI	No data	
Lansing Board of Water & Light	Lansing, MI	1885	95,000
Lowell Light & Power	Lowell, MI	1895	2,600
Marquette Board of Light & Power	Marquette, MI	1889	16,000
City of Marshall	Marshall, MI	1893	4,500
City of Negaunee Dept. of Public Works	Negaunee, MI	1885	
Newberry Water and Light Board	Newberry, MI	No data	
Niles Utilities Department	Niles, MI	No data	7,500
City of Norway	Norway, MI	No data	
Village of Paw Paw	Paw Paw, MI	1890	
City of Petoskey	Petoskey, MI	No data	5,481
City of Portland	Portland, MI	1896	2,500
Sebewaing Light & Water	Sebewaing, MI	1911	
City of South Haven	South Haven, MI	No data	7,400
City of St. Louis	St. Louis, MI	No data	1,900
City of Stephenson	Stephenson, MI	No data	
City of Sturgis	Sturgis, MI	1896	7,200
Traverse City Light & Power	Traverse City, MI	1912	12,000
Union City Electric Department	Union City, MI	"Early 1920s"	
City of Wakefield	Wakefield, MI	No data	
Wyandotte Municipal Services	Wyandotte, MI	1894	12,000
Zeeland Board of Public Works	Zeeland, MI	1902	6,200