

## DRAFT A2ZERO INVESTMENT PLAN

This document outlines one possible scenario, amongst many, of potential investment amounts, sources, and funds between 2020 and 2030 in order to achieve the goals as outlined in the living A2Zero Carbon Neutrality Plan. The near years have more certainty than later years. As such, staff recommend that this document be considered a 3-year investment plan, which can provide greater direction and clarity regarding investment opportunities and needs in years 1-3 and serve as guidance for future years. This is similar to how the City budgets. If done this way, this investment plan would be reviewed every 2-years to make refinements and provide a revised, rolling 3 year investment plan that could guide the A2Zero work.

The remainder of the A2Zero Investment Plan is organized as follows:

Column A provides the name of a given action. Underneath is an *estimate* of how much funding is already available or is likely to be available within the existing City budget. For example, this may include existing staff or some alignment with existing actions/priorities meaning that some resources are already available to support a given action.

Column B provides information on investment source. This includes operating costs, operating credits (savings accrued to the City from the given action; not to residents), any debt service payments the City may have to make (based on estimates in the "city capital row"), the net budget impact to the City, and external sources of investment, including philanthropic, grants, pro-bono assistance, public-private partnerships, etc. The values in these rows will change over time as new sources of investment become available.

Column C shows the total *estimated* cost for a given action, over the full 10-years.

Columns D - N show annual *estimates*, by investment source, for each action.

Column O identifies the party primarily responsible for implementation.

ACTION	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES		
<b>COMMUNITY CHOICE AGGREGATION</b>	\$1,645,000	\$49,000	\$49,000	\$49,000	\$49,000	\$799,000	\$300,000	\$200,000	\$150,000	\$0	\$0	\$0	City of Ann Arbor	Nationally, CCA's are at cost parity if not cheaper than existing, utility energy pricing meaning that this action will most likely save our residents (and the City) money. The "City Operating Credits / Savings" estimates only look at energy savings related to City operations. It is anticipated that residents will save approximately 3-5% on their electricity costs by enrolling in a CCA.		
EST: \$392,000 Already in City Budget		\$49,000	\$49,000	\$49,000	\$49,000	\$49,000	\$50,000	\$50,000	\$50,000	-						
City Operating Costs		\$49,000	\$49,000	\$49,000	\$49,000	\$49,000	\$50,000	\$50,000	\$50,000	-						
City Operating Credits / Savings																
City Debt Service																
Net City Impact		\$49,000	\$49,000	\$49,000	\$49,000	\$49,000	\$50,000	\$50,000	(\$31,000)	(\$81,000)	(\$81,000)	(\$81,000)				
City Capital																
<b>City Funding Source</b>		GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF				
Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)						\$750,000	\$250,000	\$150,000	\$100,000							

ACTION	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES		
<b>BULK PURCHASE OF RENEWABLES</b>	\$605,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	City of Ann Arbor and \$66k for community liaison stipends	Onsite renewables have a 10-12 year payback but are warranted for 25 years, meaning the community and the City will see savings in the future. Additionally, the pilot bulk buy programs are saving residents anywhere from 5%-15% additional off the cost of solar. We anticipate achieving savings on City properties electrical bills 12 years after the installation is complete - which is not calculated in this matrix.		
EST: 100% Already in City Budget		\$55,000	\$49,000	\$55,000	\$55,000	\$49,000	\$55,000	\$55,000	\$49,000	\$55,000	\$49,000	\$55,000				
City Operating Costs		\$55,000	\$49,000	\$55,000	\$55,000	\$49,000	\$55,000	\$55,000	\$49,000	\$55,000	\$49,000	\$55,000				
City Operating Credits																
City Debt Service																
Net City Impact		\$55,000	\$49,000	\$55,000	\$55,000	\$49,000	\$55,000	\$55,000	\$49,000	\$55,000	\$49,000	\$55,000				
City Capital																
<b>City Funding Source</b>		MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL				
Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			\$6,000	\$0	\$0	\$6,000			\$6,000		\$6,000					





ACTION	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
<b>EV INFRASTRUCTURE</b>	\$42,000,000	\$0	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000		
EST: \$500,000 in City Budget	City Operating Costs		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	City of Ann Arbor and DDA	As an alternative, we could explore public charging infrastructure through a public-private partnership which would significantly lower the costs to the City. Assumes 20 year payback with 4% interest.
	City Operating Credits													
	City Debt Service		\$8,497,500	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000		
	Net City Impact	\$0	\$8,547,500	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000		
	City Capital		\$33,872,500											
	<b>City Funding Source</b>		GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA		
Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)	\$150,000		\$250,000	\$250,000	\$200,000	\$200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		

ACTION	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
<b>BULK PURCHASE OF ENERGY EFFICIENCY</b>	\$950,000		\$275,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000		
EST: \$500,000 Already in City Budget	City Operating Costs		\$250,000	\$50,000	\$50,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	City of Ann Arbor and \$66k for community liaison stipends	DTE and Consumers Energy's EE programs estimate a 5-fold return on energy efficiency investments; see: <a href="https://www.nrdc.org/experts/ariana-gonzalez/michigan-utilities-plan-most-energy-efficiency-ever">https://www.nrdc.org/experts/ariana-gonzalez/michigan-utilities-plan-most-energy-efficiency-ever</a>  Per studies cited by the U.S. EPA, for every \$1M spent on various types of EE creates between 5.7 – 11 jobs. Estimated savings are for City facilities only.
	City Operating Credits		-\$250,000	-\$400,000	-\$628,770	-\$628,770	-\$628,770	-\$628,770	-\$628,770	-\$628,770	-\$628,770	-\$628,770		
	City Debt Service													
	Net City Impact	\$0	-\$350,000	-\$578,770	-\$553,770	-\$553,770	-\$553,770	-\$553,770	-\$553,770	-\$553,770	-\$553,770	-\$553,770		
	City Capital													
	<b>City Funding Source</b>		GF & MIL	GF	GF	GF	GF	GF	GF	GF	GF	GF		
Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			\$25,000	\$25,000	\$25,000									

ACTION	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
<b>BUILDING CODE REQUIREMENTS</b>	\$1,935,000	\$49,000	\$255,000	\$255,000	\$255,000	\$206,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$210,000		
EST: \$1.5 MIL Already in City Budget	City Operating Costs	\$49,000	\$200,000	\$245,000	\$245,000	\$206,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$210,000	City of Ann Arbor	Per studies cited by the U.S. EPA, for every \$1M spent on various types of EE creates between 5.7 – 11 jobs. This also assumes that training and related code-work is integrated into the job description for building inspectors.
	City Operating Credits													
	City Debt Service													
	Net City Impact	\$49,000	\$200,000	\$245,000	\$245,000	\$206,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$210,000		
	City Capital													
	<b>City Funding Source</b>		GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON		
Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			\$55,000	\$10,000	\$10,000									

ACTION	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
<b>LED LIGHTING</b>	\$3,140,000	\$245,920	\$361,760	\$361,760	\$361,760	\$361,760	\$361,760	\$361,760	\$361,760	\$361,760	\$0	\$0		
	City Operating Costs	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500				Assumes no funding currently exists for this and that the City























EST: \$233,000 in city budget	Net City Impact	\$0	\$12,000	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$4,636,650	\$4,636,650	Arbor and Offset Organization	Estimated cost for carbon offsets
	City Capital														
	<b>City Funding Source</b>	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

**SUMMARY**

		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
A	<b>TOTAL City Operating Costs</b>	\$793,281	\$8,491,870	\$7,119,461	\$6,847,486	\$6,791,186	\$6,719,486	\$6,585,486	\$6,558,986	\$6,529,986	\$11,099,036	\$11,162,036
B	<b>TOTAL City Operating Credits</b>	-\$17,500	-\$1,305,748	-\$1,078,896	-\$686,682	-\$737,578	-\$788,474	-\$834,370	-\$1,002,770	-\$1,075,170	-\$1,087,570	-\$1,099,970
C	<b>TOTAL City Debt Service</b>	\$0	\$10,894,794	\$4,292,781	\$3,655,281	\$3,655,281	\$3,655,281	\$3,655,281	\$3,655,281	\$3,655,281	\$3,655,281	\$3,655,281
D	<b>TOTAL Net City Impact</b>	\$775,781	\$18,080,916	\$10,333,346	\$9,816,085	\$9,708,889	\$9,586,293	\$9,406,397	\$9,211,497	\$9,110,097	\$13,666,747	\$13,717,347
E	<b>TOTAL City Capital</b>	\$0	\$42,875,075	\$3,612,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
F	philanthropic, state, federal, pro bono, public-private partnership)	\$150,000	\$3,259,500	\$87,588,500	\$455,000	\$41,071,000	\$480,000	\$45,100,000	\$281,000	\$150,000	\$156,000	\$150,000

\$46,487,575