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 similiar 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
COMMUNITY CHOICE AGGREGATION		$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	City Operating Costs		$49,000	$49,000	$49,000	$49,000	$49,000	$50,000	$50,000	$50,000 -					
	City Operating Credits / Savings									-$81,000	-$81,000	-$81,000	-$81,000		
	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														
	City Funding Source		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
BULK PURCHASE OF RENEWABLES		$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	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														
	City Funding Source		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
COMMUNITY SOLAR PROGRAM		$205,000	$18,636	$18,640	$18,636	$18,636	$18,636	$18,636	$18,636	$18,636	$18,636	$18,636	$18,636		
EST: 100% Already in City Budget	City Operating Costs		$18,636	$18,640	$8,636	$18,636	$8,636	$18,636	$18,636	$18,636	$18,636	$18,636	$18,636	City of Ann Arbor	Nationally, community solar initiatives are at cost parity if not cheaper than existing, utility energy pricing. In many states, consumers make money on these programs. Since the cost estimates for this are for City staff to help create a community solar program, the City will not receive savings but our residents and businesses will.
	City Operating Credits														
	City Debt Service														
	Net City Impact		$18,636	$18,640	$8,636	$18,636	$8,636	$18,636	$18,636	$18,636	$18,636	$18,636	$18,636		
	City Capital														
	City Funding Source		GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)				$10,000		$10,000								

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
LANDFILL SOLAR PROJECT		$80,000	$26,500	$27,000	$26,500	$0	$0	$0	$0	$0	$0	$0	$0		
EST: 100% Oper. Costs Already in City Budget	City Operating Costs		$26,500	$27,000	$26,500									City of Ann Arbor	Assumes the City pays a .2 cent premium, per kilowatt hour, for electricity generated through the landfill solar site.
	City Operating Credits					$572,880	$572,880	$572,880	$572,880	$572,880	$572,880	$572,880	$572,880		
	City Debt Service														
	Net City Impact		$26,500	$27,000	$26,500	$572,880	$572,880	$572,880	$572,880	$572,880	$572,880	$572,880	$572,880		
	City Capital														
	City Funding Source		GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
ELECTRIFICATION OF CITY FACILITIES		$7,100,000	$114,000	$1,254,000	$1,254,000	$1,315,000	$1,265,000	$1,265,000	$130,000	$128,000	$125,000	$125,000	$125,000		
EST: $550,000 Already in City Budget	City Operating Costs		$114,000	$114,000	$102,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	City of Ann Arbor with outside legal support	Additional operating costs are estimated for city facilities only. Note, this estimated increase in operating costs is offset in the efficiency section. Also assumes that these projects are placed in the CIP but not funded through that mechanism. Assumes a 15 year term with 4% interest
	City Operating Credits			$33,252	$66,504	$133,008	$199,512	$266,016	$332,520	$332,520	$332,520	$332,520	$332,520		
	City Debt Service			$1,306,616	$441,116	$441,116	$441,116	$441,116	$441,116	$441,116	$441,116	$441,116	$441,116		
	Net City Impact		$114,000	$1,453,868	$609,620	$674,124	$740,628	$807,132	$873,636	$873,636	$873,636	$873,636	$873,636		
	City Capital			$4,904,500											
	City Funding Source		All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$50,000	$50,000	$25,000	$25,000	$25,000	$25,000						

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
ELECTRIFY ALL BUSES		$86,000,000	$0	$6,890,000	$5,690,000	$6,490,000	$7,290,000	$8,070,000	$8,870,000	$9,400,000	$10,200,000	$11,000,000	$12,100,000		
	City Operating Costs														
	City Operating Credits														
	City Debt Service						This action intentionally omitted								

Not Calculated	City Capital													TheRide	Not calculated
	City Funding Source														
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

This action intentionally omitted

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
BULK PURCHASE EVs (COMMUNITY)		$700,000	$0	$153,000	$100,000	$55,875	$55,875	$55,875	$55,875	$55,875	$55,875	$55,875	$55,875	City of Ann Arbor	A 2018 study from the University of Michigan's Transportation Research Institute found that electric vehicles cost less than half as much to operate as gas-powered cars. The average cost to operate an EV in the United States is $485 per year, while the average for a gasoline-powered vehicle is $1,117. Since these savings go to residents, they are not factored into this action.
EST: $558,750 Already in City Budget	City Operating Costs			$138,000	$90,000	$55,875	$55,875	$55,875	$55,875	$55,875	$55,875	$55,875	$55,875		
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$138,000	$90,000	$55,875	$55,875	$55,875	$55,875	$55,875	$55,875	$55,875	$55,875		
	City Capital														
	City Funding Source			GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$15,000	$10,000										

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
PRIVATE EV FLEETS		$123,000	$0	$24,500	$24,500	$24,500	$24,500	$24,500	$500	$0	$0	$0	$0	City of Ann Arbor	A 2018 study from the University of Michigan's Transportation Research Institute found that electric vehicles cost less than half as much to operate as gas-powered cars. The average cost to operate an EV in the United States is $485 per year, while the average for a gasoline-powered vehicle is $1,117. Since these savings go to residents, they are not factored into this action.
EST: $98,000 Already in City Budget	City Operating Costs			$19,500	$19,500	$19,500	$19,500	$19,500	$500						
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$19,500	$19,500	$19,500	$19,500	$19,500	$500	$0	$0	$0	$0		
	City Capital														
	City Funding Source			GF	GF	GF	GF	GF	GF						
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$5,000	$5,000	$5,000	$5,000	$5,000							

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
CITY EV FLEET TRANSITION		$4,000,000	$50,000	$660,000	$560,000	$465,000	$360,000	$355,000	$340,000	$320,000	$310,000	$295,000	$285,000	City of Ann Arbor	A 2018 study from the University of Michigan's Transportation Research Institute found that electric vehicles cost less than half as much to operate as gas-powered cars. The average cost to operate an EV in the United States is $485 per year, while the average for a gasoline-powered vehicle is $1,117. Operational savings are only calculated for City of Ann Arbor fleet vehicles.
EST: $1.5 Mil in City Budget	City Operating Costs		$50,000	$610,000	$510,000	$440,000	$360,000	$305,000	$315,000	$295,000	$310,000	$295,000	$285,000		
	City Operating Credits		-$7,500	-$12,400	-$24,800	-$37,200	-$49,600	-$62,000	-$74,400	-$86,800	-$99,200	-$111,600	-$124,000		
	City Debt Service														
	Net City Impact		$42,500	$597,600	$485,200	$402,800	$310,400	$243,000	$240,600	$208,200	$210,800	$183,400	$161,000		
	City Capital														
	City Funding Source		All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$50,000	$50,000	$25,000		$50,000	$25,000	$25,000					

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
EV INFRASTRUCTURE		$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	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.
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 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											
	City Funding Source			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
BULK PURCHASE OF ENERGY EFFICIENCY		$950,000		$275,000	$75,000	$75,000	$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: https://www.nrdc.org/experts/ariana-gonzalez/michigan-utilities-plan-most-energy-efficiency-ever 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.
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 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		
	City Capital														
	City Funding Source			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
BUILDING CODE REQUIREMENTS		$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	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.
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 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														
	City Funding Source		GF & CON	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
LED LIGHTING		$3,140,000	$245,920	$361,760	$361,760	$361,760	$361,760	$361,760	$361,760	$361,760	$361,760	$0	$0		Assumes no funding currently exists for this and that the City
	City Operating Costs		$24,500	$24,500	$24,500	$24,500	$24,500	$24,500	$24,500	$24,500	$24,500				

EST: Assumes no funding for this currently exists	City Operating Credits			-$100,000	-$200,000	-$300,000	-$400,000	-$500,000	-$600,000	-$675,000	-$735,000	-$735,000	-$735,000	City of Ann Arbor	exists for this and that the City will take over all existing lights from DTE and convert them to LED. LED lights will save at least 50% from existing lighting and potentially more. Operational costs are also lower but are not factored into this estimate. Assumes 15 years at 4.5%
	City Debt Service			$660,423	$223,998	$223,998	$223,998	$223,998	$223,998	$223,998	$223,998	$223,998	$223,998		
	Net City Impact		$24,500	$584,923	$48,498	-$51,502	-$151,502	-$251,502	-$351,502	-$426,502	-$486,502	-$511,002	-$511,002		
	City Capital			$2,483,075											
	City Funding Source														
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
BENCHMARKING		$2,370,000		$408,000	$218,000	$218,000	$218,000	$218,000	$218,000	$218,000	$218,000	$218,000	$218,000	City of Ann Arbor	Benchmarking is a foundational piece of our commercial sector engagement. We also assume that we'll be able work with DTE to build an API to automatically get data from participating entities.
EST: $1MIL already in City budget	City Operating Costs			$308,000	$168,000	$218,000	$198,000	$218,000	$218,000	$218,000	$218,000	$218,000	$218,000		
	City Operating Credits														
	City Debt Service														
	Net City Impact			$308,000	$168,000	$218,000	$198,000	$218,000	$218,000	$218,000	$218,000	$218,000	$218,000		
	City Capital														
	City Funding Source			GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$100,000	$50,000		$20,000								

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
LOAN LOSS RESERVE		$1,578,000	$55,000	$1,052,500	$52,500	$52,500	$52,500	$52,500	$52,500	$52,500	$52,500	$52,500	$50,500	City of Ann Arbor	The City currently has $400k in a loan loss reserve dedicated for PACE financing. We've contacted the U.S. Department of Energy (the original granter) about moving this to this program. We assume these funds will be able to be repurposed.
EST: $920,000 already in City budget	City Operating Costs		$55,000	$852,500	$52,500	$52,500	$52,500	$52,500	$52,500	$52,500	$52,500	$52,500	$50,500		
	City Operating Credits														
	City Debt Service														
	Net City Impact		$55,000	$852,500	$52,500	$52,500	$52,500	$52,500	$52,500	$52,500	$52,500	$52,500	$50,500		
	City Capital														
	City Funding Source		GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$200,000											

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
ENERGY CONCIERGE AND COMMUNITY EDUCATION		$820,000	$74,545	$74,550	$74,545	$74,545	$74,545	$74,545	$74,545	$74,545	$74,545	$74,545	$74,545	City of Ann Arbor	DTE and Consumers Energy's EE programs estimate a 5-fold return on energy efficiency investments; see: https://www.nrdc.org/experts/ariana-gonzalez/michigan-utilities-plan-most-energy-efficiency-ever Per studies cited by the U.S. EPA,
EST: $820,000 already in	City Operating Costs		$74,545	$69,550	$69,545	$69,545	$69,545	$69,545	$69,545	$69,545	$69,545	$69,545	$69,545		
	City Operating Credits														
	City Debt Service														
	Net City Impact		$74,545	$69,550	$69,545	$69,545	$69,545	$69,545	$69,545	$69,545	$69,545	$69,545	$69,545		
	City Capital														

already in City budget	**City Funding Source**		GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL		for every $1M spent on various types of EE creates between 5.7 – 11 jobs. All cost savings from thsi program are accrued by residents and businesses
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000		

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
NET ZERO ENERGY AFFORDABLE HOUSING		$800,000	$200,000	$200,000	$100,000	$100,000	$100,000	$100,000	$0	$0	$0	$0	$0	City of Ann Arbor	DTE and Consumers Energy's EE programs estimate a 5-fold return on energy efficiency investments; see: https://www.nrdc.org/experts/ariana-gonzalez/michigan-utilities-plan-most-energy-efficiency-ever Per studies cited by the U.S. EPA, for every $1M spent on various types of EE creates between 5.7 – 11 jobs. Operational savings for AAHC are estimated.
EST: $800,000 already in City budget	City Operating Costs		$200,000	$200,000	$100,000	$100,000	$100,000	$100,000							
	City Operating Credits		-$10,000	-$20,000	-$25,000	-$30,000	-$35,000	-$40,000	-$40,000	-$40,000	-$40,000	-$40,000	-$40,000		
	City Debt Service														
	Net City Impact		$190,000	$180,000	$75,000	$70,000	$65,000	$60,000	-$40,000	-$40,000	-$40,000	-$40,000	-$40,000		
	City Capital														
	City Funding Source		MIL	MIL	MIL	MIL	MIL	MIL							
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
GREEN RENTAL HOUSING PROGRAM		$530,000		$53,000	$53,000	$53,000	$53,000	$53,000	$53,000	$53,000	$53,000	$53,000	$53,000	City of Ann Arbor	DTE and Consumers Energy's EE programs estimate a 5-fold return on energy efficiency investments; see: https://www.nrdc.org/experts/ariana-gonzalez/michigan-utilities-plan-most-energy-efficiency-ever Per studies cited by the U.S. EPA, for every $1M spent on various types of EE creates between 5.7 – 11 jobs.3
EST: $530,000 already in City budget	City Operating Costs			$53,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000		
	City Operating Credits														
	City Debt Service														
	Net City Impact			$53,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000		
	City Capital														
	City Funding Source			GF and CON	GF and CON	GF and CON	GF and CON	GF and CON	GF and CON	GF and CON	GF and CON	GF and CON	GF and CON		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)				$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000		

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
GREEN BUSINESS CHALLENGE		$700,000		$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000	City of Ann Arbor and 2030 District	DTE and Consumers Energy's EE programs estimate a 5-fold return on energy efficiency investments; see: https://www.nrdc.org/experts/ariana-gonzalez/michigan-utilities-plan-most-energy-efficiency-ever Per studies cited by the U.S. EPA, for every $1M spent on various types of EE creates between 5.7 – 11 jobs.3
EST: Not currently included in the budget	City Operating Costs			$70,000	$70,000	$0	$65,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000		
	City Operating Credits														
	City Debt Service														
	Net City Impact			$70,000	$70,000	$0	$65,000	$70,000	$70,000	$70,000	$70,000	$70,000	$70,000		
	City Capital														
	City Funding Source			GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)				$75,000										

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
AGING IN PLACE EFFICIENTLY		$155,000	$5,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	City of Ann Arbor	DTE and Consumers Energy's EE programs estimate a 5-fold return on energy efficiency investments; see: https://www.nrdc.org/experts/ariana-gonzalez/michigan-utilities-plan-most-energy-efficiency-ever Per studies cited by the U.S. EPA, for every $1M spent on various types of EE creates between 5.7 – 11 jobs.3
EST: $150,000 in City budgets	City Operating Costs		$5,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000		
	City Operating Credits														
	City Debt Service														
	Net City Impact		$5,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000		
	City Capital														
	City Funding Source		MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$200,000											

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
WEATHERIZATION EXPANSION		$1,550,000		$152,500	$152,500	$152,500	$152,500	$177,500	$152,500	$152,500	$152,500	$152,500	$152,500	Washtenaw County	DTE and Consumers Energy's EE programs estimate a 5-fold return on energy efficiency investments; see: https://www.nrdc.org/experts/ariana-gonzalez/michigan-utilities-plan-most-energy-efficiency-ever Per studies cited by the U.S. EPA, for every $1M spent on various types of EE creates between 5.7 – 11 jobs.3
EST: $1 MIL in City budgets	City Operating Costs			$132,500	$132,500	$142,500	$142,500	$167,500	$142,500	$142,500	$142,500	$142,500	$142,500		
	City Operating Credits														
	City Debt Service														
	Net City Impact			$132,500	$132,500	$142,500	$142,500	$167,500	$142,500	$142,500	$142,500	$142,500	$142,500		
	City Capital														
	City Funding Source			MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$20,000	$20,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000		

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
NON-MOTORIZED PLAN		$2,400,000		$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$200,000	$150,000	$140,000	$110,000	City of Ann Arbor and DDA	Additional grant dollars may be available for options of this work, especially if a change in federal leadership takes place. Assumes 15 years at 4%.
EST: Not included in existing City budgets	City Operating Costs			$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000		
	City Operating Credits														
	City Debt Service			$430,255	$145,255	$145,255	$145,255	$145,255	$145,255	$145,255	$145,255	$145,255	$145,255		
	Net City Impact		$0	$480,255	$195,255	$195,255	$195,255	$195,255	$195,255	$195,255	$195,255	$195,255	$195,255		
	City Capital			$1,615,000											
	City Funding Source			GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
EXPAND LOCAL AND REGIONAL TRANSIT		$656,780,000	$0	$3,080,000	$3,080,000	$100,000	$520,000	$600,000,000	$10,000,000	$10,000,000	$10,000,000	$10,000,000	$10,000,000		Not Calculated. Note: Using AAA's total cost per mile driven for MI drivers4 of $0.59/mile x 388,645,000 VMT miles reduced
	City Operating Costs														

Not Estimated	City Operating Credits													TheRide with support from the City of Ann Arbor	in year ten and assuming the reduction is linear, the resultant savings over ten years is $1.15B6. This does not take into consideration increases expenses paid for fares but also not additional health benefits from walking and biking, etc
	City Debt Service														
	City Capital							Intentionally omitted							
	City Funding Source														
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
PARK AND RIDE		$170,000,000		$200,000	$300,000	$21,500,000	$21,500,000	$21,500,000	$21,000,000	$21,000,000	$21,000,000	$21,000,000	$21,000,000	City of Ann Arbor, TheRide, and MDOT	Per a Council request, assumes the City takes on 100% of the cost. This is highly unlikely.
EST: $500,000 in City budgets	City Operating Costs			$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000		
	City Operating Credits														
	City Debt Service														
	Net City Impact			$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000		
	City Capital														
	City Funding Source			GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)				$84,750,000		$40,000,000		$44,750,000						

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
DUPLEX / TRIPLEX / ADU'S		$250,000	$72,100	$72,100	$72,100	$20,000	$13,700	$0	$0	$0	$0	$0	$0	City of Ann Arbor	Assumes this is part of existing staff's job.
EST: $250,000 in City budgets	City Operating Costs		$72,100	$72,100	$72,100	$20,000	$13,700								
	City Operating Credits														
	City Debt Service														
	Net City Impact		$72,100	$72,100	$72,100	$20,000	$13,700	$0	$0	$0	$0	$0	$0		
	City Capital														
	City Funding Source		GF	GF	GF	GF	GF								
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
MIXED-USE ZONING		$365,000		$50,000	$75,000	$55,000	$35,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	City of Ann Arbor	Assumes this is part of existing staff's job or it fits into the Master Plan initiative and is mostly covered through that work.
EST: $300,000 in City budgets	City Operating Costs			$50,000	$75,000	$35,000	$35,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000		
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$50,000	$75,000	$35,000	$35,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000		
	City Capital														
	City Funding Source			GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		

budgets	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)					$20,000									

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
PARKING RATES		$4,500,000	$0	$2,221,000	$2,221,000	$7,250	$7,250	$7,250	$7,250	$7,250	$7,250	$7,250	$7,250	City of Ann Arbor	This assumes the City works with a private company to implement this solution. An alternative is the City could fund the program itself
EST: $200,000 in City budgets	City Operating Costs			$52,500	$52,500	$7,250	$7,250	$7,250	$7,250	$7,250	$7,250	$7,250	$7,250		
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$52,500	$52,500	$7,250	$7,250	$7,250	$7,250	$7,250	$7,250	$7,250	$7,250		
	City Capital														
	City Funding Source														
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$2,168,500	$2,168,500										

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
YEAR ROUND COMPOSTING		$26,000,000		$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	City of Ann Arbor	Assumes could be paid for through changes as outlined in the SWRMP
EST: $26 MIL in City budgets only if SWRMP is implemented	City Operating Costs			$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000		
	City Operating Credits														
	City Debt Service														
	Net City Impact			$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000	$2,600,000		
	City Capital														
	City Funding Source			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
EXPAND COMMERCIAL RECYCLING		$18,400,000		$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	City of Ann Arbor and/or Contractor	Assumes could be paid for through changes as outlined in the SWRMP
EST: $18.5 MIL in City budgets only if SWRMP is implemented	City Operating Costs			$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000		
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000	$1,840,000		
	City Capital														
	City Funding Source			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
SUSTAINABLE MATERIAL USE AND REUSE		$270,000		$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000		
EST: $270,000 in City budgets	City Operating Costs			$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	City of Ann Arbor	
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000		
	City Capital														
	City Funding Source			GF and SW	GF and SW	GF and SW	GF and SW	GF and SW	GF and SW	GF and SW	GF and SW	GF and SW	GF and SW		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
CIRCULAR ECONOMY		$270,000		$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000		
EST: $270,000 in City budgets	City Operating Costs			$22,000	$22,000	$22,000	$22,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000	City of Ann Arbor	
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$22,000	$22,000	$22,000	$22,000	$27,000	$27,000	$27,000	$27,000	$27,000	$27,000		
	City Capital														
	City Funding Source			GF and SW	GF and SW	GF and SW	GF and SW	GF and SW	GF and SW	GF and SW	GF and SW	GF and SW	GF and SW		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$5,000	$5,000	$5,000	$5,000								

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
PLANT-RICH DIETS		$208,400		$20,840	$20,840	$20,840	$20,840	$20,840	$20,840	$20,840	$20,840	$20,840	$20,840		
EST: $0 in City budgets	City Operating Costs			$15,840	$15,840	$15,840	$20,840	$20,840	$20,840	$20,840	$20,840	$20,840	$20,840	City of Ann Arbor	
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$15,840	$15,840	$15,840	$20,840	$20,840	$20,840	$20,840	$20,840	$20,840	$20,840		
	City Capital														
	City Funding Source			MIL & GF	MIL & GF	MIL & GF	MIL & GF	MIL & GF	MIL & GF	MIL & GF	MIL & GF	MIL & GF	MIL & GF		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$5,000	$5,000	$5,000									

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
REFRIGERANT RECYCLING		$179,400		$10,440	$85,440	$10,440	$10,440	$10,440	$10,440	$10,440	$10,440	$10,440	$10,440		
	City Operating Costs			$10,440	$35,440	$10,440	$10,440	$10,440	$10,440	$10,440	$10,440	$10,440	$10,440		
	City Operating Credits														

EST: Not included in existing City budgets	City Debt Service													City of Ann Arbor	
	Net City Impact		$0	$10,440	$35,440	$10,440	$10,440	$10,440	$10,440	$10,440	$10,440	$10,440	$10,440		
	City Capital														
	City Funding Source			SW and MIL	SW and MIL	SW and MIL	SW and MIL	SW and MIL	SW and MIL	SW and MIL	SW and MIL	SW and MIL	SW and MIL		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)				$50,000										

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
RESILIENCE HUBS		$5,025,000		$25,000	$25,000	$750,000	$100,000	$825,000	$225,000	$975,000	$300,000	$1,500,000	$300,000		
EST: $500,000 in City budgets	City Operating Costs			$25,000	$25,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	City of Ann Arbor	Studies regularly show that for every $1 invested in resilience, $7 are saved. We don't calculate a payback here but there will undoubtedly be value to the community for this action. Assumes 20 years at 4%
	City Operating Credits														
	City Debt Service				$962,412	$324,912	$324,912	$324,912	$324,912	$324,912	$324,912	$324,912	$324,912		
	Net City Impact		$0	$25,000	$987,412	$374,912	$374,912	$374,912	$374,912	$374,912	$374,912	$374,912	$374,912		
	City Capital				$3,612,500										
	City Funding Source			GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$25,000	$25,000	$100,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000		

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
NEIGHBORHOOD AND YOUTH AMBASSADORS		$350,000		$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000		
EST: $350,00 in City budgets	City Operating Costs			$25,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	City of Ann Arbor	
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$25,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000		
	City Capital														
	City Funding Source			GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$10,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000		

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
TREE CANOPY		$1,160,000		$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000		
EST: $1.16 MIL in City budgets	City Operating Costs			$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	City of Ann Arbor	We did not capture the payback to the City of trees but we know that trees have ecosystem, health, and natural system benefits.
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000	$116,000		
	City Capital														
	City Funding Source			STM	STM	STM	STM	STM	STM	STM	STM	STM	STM		

	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
NEIGHBORHOOD ASSET MAPPING		$300,000		$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000		
EST: $0 in City budgets	City Operating Costs			$15,000	$25,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	City of Ann Arbor	
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$15,000	$25,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000		
	City Capital														
	City Funding Source			GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$15,000	$5,000										

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
EMERGENCY KITS		$350,000		$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000		
EST: $100,000 in City budgets	City Operating Costs			$35,000	$25,000	$25,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	City of Ann Arbor	Estimated savings from a FEMA report showing that for every $1 invested in prevention, we save $7 in emergency management and response costs.
	City Operating Credits			-$245,000	-$245,000	-$245,000	-$245,000	-$245,000	-$245,000	-$245,000	-$245,000	-$245,000	-$245,000		
	City Debt Service														
	Net City Impact		$0	-$210,000	-$220,000	-$220,000	-$210,000	-$210,000	-$210,000	-$210,000	-$210,000	-$210,000	-$210,000		
	City Capital														
	City Funding Source			GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)				$10,000	$10,000									

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
SENSORS AND DATA MONITORING		$300,000		$101,300	$28,300	$21,300	$21,300	$21,300	$21,300	$21,300	$21,300	$21,300	$21,300		
EST: Not currently included in City budget	City Operating Costs			$51,300	$28,300	$21,300	$21,300	$21,300	$21,300	$21,300	$21,300	$21,300	$21,300	City of Ann Arbor	Estimated savings from a FEMA report showing that for every $1 invested in prevention, we save $7 in emergency management and response costs.
	City Operating Credits			-$709,100	-$198,100	-$149,100	-$149,100	-$149,100	-$149,100	-$149,100	-$149,100	-$149,100	-$149,100		
	City Debt Service														
	Net City Impact		$0	-$657,800	-$169,800	-$127,800	-$127,800	-$127,800	-$127,800	-$127,800	-$127,800	-$127,800	-$127,800		
	City Capital														
	City Funding Source			GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			$50,000											

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
EQUITY PROGRAMS		$200,000		$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000		
EST: $200,000 in City budgets	City Operating Costs			$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	City of Ann Arbor	
	City Operating Credits														
	City Debt Service														
	Net City Impact		$0	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000		
	City Capital														
	City Funding Source			GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
SA2T GRANT PROGRAM		$1,000,000		$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000		
EST: $1 MIL in City budgets	City Operating Costs			$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	Pass through to community	Each application is unique but to-date, most awarded grants have at least a 50% match meaning we are leveraging a lot of external funding through this program.
	City Operating Credits														
	City Debt Service														
	Net City Operating Costs		$0	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000		
	City Capital														
	City Funding Source			MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
INTERNAL CARBON TAX		$75,000		$52,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500		
EST: $0 estimated in City budgets	City Operating Costs			$52,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	City of Ann Arbor	Revenue generated through this program is immediately reivested back into energy efficiency or renewable energy projects at City faciilties.
	City Operating Credits			-$2,500	-$52,500	-$2,500	-$2,500	-$2,500	-$2,500	-$2,500	-$2,500	-$2,500	-$2,500		
	City Debt Service														
	Net City Impact		$0	$50,000	-$50,000	$0	$0	$0	$0	$0	$0	$0	$0		
	City Capital														
	City Funding Source			GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)														

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
OFFSETS		$9,440,000		$12,000	$22,100	$22,100	$22,100	$22,100	$22,100	$22,100	$22,100	$4,636,650	$4,636,650		
	City Operating Costs			$12,000	$22,100	$22,100	$22,100	$22,100	$22,100	$22,100	$22,100	$4,636,650	$4,636,650		
	City Operating Credits	$9,207,000													
	City Debt Service													City of Ann	

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	$4,636,650	$4,636,650	Arbor and Offset Organization	Estimated cost for carbon offsets
	City Capital													
	City Funding Source		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	**TOTAL City Operating Costs**		$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	**TOTAL City Operating Credits**		-$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	**TOTAL City Debt Service**		$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	**TOTAL Net City Impact**		$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	**TOTAL City Capital**		$0	$42,875,075	$3,612,500	$0	$0	$0	$0	$0	$0	$0	$0	$46,487,575
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	