

Accelerating Iowa City's Climate Actions

November 14, 2019



Achieving 45% Reduction in Carbon Emissions by 2030 and Reaching Net-Zero by 2050

CITY OF IOWA CITY
UNESCO CITY OF LITERATURE

Table of Contents

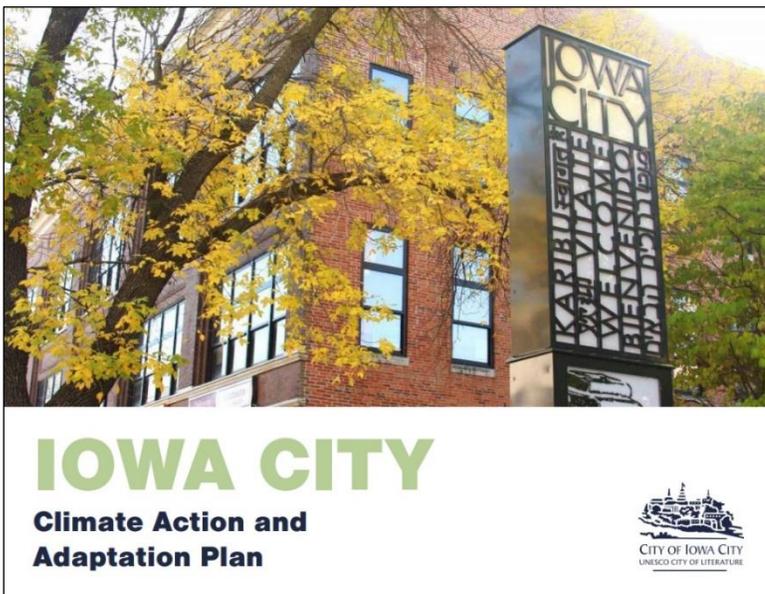
Introduction	2
August 6, 2019 Climate Crisis Resolution	3
Iowa City Community-wide Greenhouse Gas Emissions 2018	5
Key Stakeholder Initiatives	7
Climate Action and Adaptation Plan: Summary of Actions	9
Accelerating Iowa City's Actions	10
Buildings	11
Transportation	15
Waste	18
Adaptation	20
Sustainable Lifestyle	23
Ensuring Equity in our Climate Action Response	25
City Government Roles and Responsibilities	26
Public Funding	29
Getting to 2030: Greenhouse Gas Emissions Scenarios	32
Closing Summary and Acknowledgements	36
Appendix	37

Introduction

In December 2016, the Iowa City City Council established goals aligning with the Paris Climate Agreement, to reduce citywide carbon emissions by approximately 25% by 2025 and 80% by 2050. In partnership with the community and with the guidance of an appointed Climate Action Steering Committee, the City of Iowa City developed its first comprehensive Climate Action and Adaptation Plan. The Plan's development allowed for significant community and stakeholder input that was solicited in ten public meetings. In addition to those public meetings, hundreds of individuals responded to a survey to aid in the Plan's development. The Plan was finalized by the Climate Action Steering Committee and adopted by the City Council on September 18, 2018.

As additional climate science research and reports were since issued by agencies such as the Intergovernmental Panel on Climate Change (IPCC), the City Council committed on August 6, 2019, to update carbon emissions targets. As the resolution on the following pages declares, Iowa City's latest goals are to reduce citywide carbon emissions 40% by 2030 and reach net-zero emissions by the year 2050.

The City Council also called for this report, issued within 100 days of the resolution, to provide specific methods by which the City can accelerate progress on the initiatives described in the 2018 Climate Action Plan. This report was presented on November 14, 2019, to the City Council and the Iowa City community for review and comment. It is expected that the Iowa City Climate Action Commission and the general public will provide comment on the contents of this report prior to the City Council providing any final direction on specific actions.



Iowa City's Climate Action and Adaptation Plan along with other climate action resources can be accessed at www.icgov.org/climateaction.

August 6, 2019 Climate Crisis Resolution

Prepared by: Ashley Monroe, Assistant City Manager, 410 E Washington St., Iowa City, IA 52240 (319) 356-5010

19

Resolution 19-218

Resolution declaring a climate crisis and requesting immediate and accelerated action to address the climate crisis and limit global warming to 1.5 degrees Celsius.

Whereas, Climate change is an urgent unfolding crisis that presents a serious threat to global stability and human existence; and

Whereas, The City of Iowa City developed a Climate Action and Adaptation Plan, approved in September 2018, to achieve the Council-set targets matching the Paris Agreement for a citywide carbon emissions reduction of 25-28% from 2005 levels by 2025 and 80% by 2050; and

Whereas, The Climate Action and Adaptation Plan notes that the majority of Iowa City's carbon emissions are sourced from fossil-fueled energy production by utilities and the University of Iowa; and

Whereas, In October 2018, the Intergovernmental Panel on Climate Change (IPCC) issued a special report on the impacts of global warming and the need to reduce global greenhouse gas emissions well before 2030 to hold warming to 1.5 degrees Celsius; and

Whereas, To stay within 1.5 degrees Celsius, the IPCC report indicates that global net human-caused emissions would need to fall 45% from 2010 levels by 2030 and reach "net zero", offsetting carbon emissions with carbon removal, by 2050; and

Whereas, In 2018, the United States' Fourth National Climate Assessment made clear that climate change will wreak havoc across the United States, and the current pace and scale of national climate action is not sufficient to avert substantial damage to the economy, environment, and human health over the coming decades; and

Whereas, According to the Urban Sustainability Directors Network *Climate in the Heartland Report*, Iowa City, like the Iowa City metropolitan area and the state of Iowa, is already suffering impacts of climate change and the expectation that damaging weather events, including average annual temperatures exceeding the hottest years of historical temperature ranges, increased spring and summer rainfall, excessive daily rainfall frequency, growing season length, and temperature of heat waves, cold waves, and summertime nights will continue and grow more severe if global greenhouse gas emissions are not significantly reduced; and

Whereas, Climate change will continue to impact the affordability of basic human necessities such as food, housing, healthcare, transportation, and energy, adding additional pressure on persons and families of low-income and challenging Iowa City's goal of fostering an inclusive, just, and sustainable community for all; now, therefore be it

Resolved, That the City Council hereby declares a state of climate crisis, given that the crisis poses a serious and urgent threat to the well-being of Iowa City, its inhabitants, and its environment; and, be it

Further Resolved, Iowa City adopts the IPCC targets of a 45% reduction in carbon emissions by 2030 and reaching "net-zero" by 2050; and, be it

Further Resolved, Iowa City will continue to coordinate its efforts with local municipalities, energy utilities, education institutions, as well as other local, regional, and state governments to accelerate actions to rapidly reduce greenhouse gas emissions from fossil fuels, such as gasoline, diesel and natural gas, refrigerants, and other sources; and, be it

Further Resolved, That the City Council directs the City Manager's Office to develop and deliver a report within 100 days, recommending ways to accelerate Iowa City's climate actions consistent with new reduction targets; and, be it

Further Resolved, That City Council intends to schedule a presentation of and opportunity for public comment on these strategies to achieve goals for emission reductions; and, be it

Further Resolved, That Iowa City's climate mitigation and adaptation planning, policy, and program delivery shall ensure a just transition for all its people; and, be it

Further Resolved, That as Iowa City works on climate mitigation it shall continue to advance climate adaptation efforts to address unavoidable current and future climate change impacts; and, be it

Finally Resolved, That City Council will work with the City Manager's Office to develop a budget that enables urgent climate action in the near term, while ensuring a climate resilient future for Iowa City in the long term.

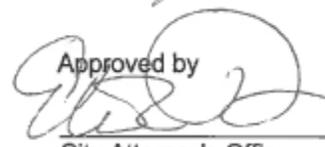
Passed and approved this 6th day of August, 2019.



Mayor

Attest: 

City Clerk

Approved by 

City Attorney's Office 8-1-19

It was moved by Cole and seconded by Salih the Resolution be adopted, and upon roll call there were:

AYES:

- X
- X
- X
- X
- X
- X
- X

NAYS:

-
-
-
-
-
-
-

ABSENT:

- Cole
- Mims
- Salih
- Taylor
- Teague
- Thomas
- Throgmorton

Iowa City Community-wide Greenhouse Gas Emissions 2018

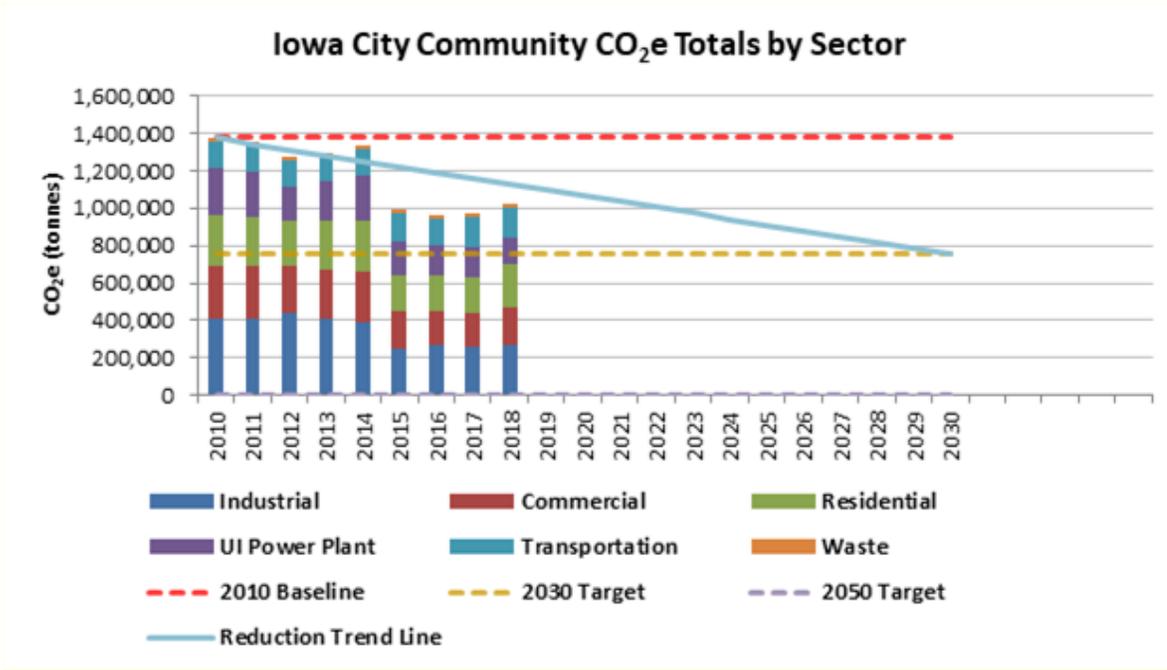
Iowa City has conducted annual greenhouse gas (GHG) inventories since 2008. As of 2018, eleven consecutive years of data have been analyzed. Initially, the software (CACP 2009) and methodology was provided by ICLEI (International Council for Local Environmental Initiatives), the national standard for that time. After the City joined the Compact of Mayors (now the Global Covenant of Mayors for Climate & Energy), the *Global Protocol for Community-Scale Greenhouse Gas* was used to report community-wide emissions. All previous years were re-calculated using this new standard. The protocol now used is the most up-to-date global protocol and Iowa City's annual emissions have been reported using this method platform since 2015.

With the August 2019 adoption of the Climate Crisis Resolution, emissions reduction targets in Iowa City's Climate Action and Adaption Plan have been raised and the baseline year changed from 2005 to 2010. The new targets include 45% reduction in emissions by 2030 and approaching net-zero emissions by 2050. Both the new targets and change in the baseline year align with the October 2018 Intergovernmental Panel on Climate Change (IPCC) report and recommended targets.

The City factors in community growth when completing annual GHG inventories. From 2010 to 2018, Iowa City has experienced a steady decline in emissions per capita from 20.3 to 13.4 metric tonnes. Iowa City expects to continue to grow over the next several decades and will need to be mindful of growth strategies in order to achieve our goals.

The chart on the following page shows Iowa City carbon emissions trends, baseline level (red dash), and 2030 and 2050 targets (gold and silver dashes). Since 2010, Iowa City has seen a downward trend in community carbon emissions, in part by a two-thirds reduction in coal usage at the University of Iowa's power plant since that date. The large drop between 2014 and 2015 is primarily a result of MidAmerican Energy's decision to invest heavily in wind energy. This action retained renewable energy credits in the MidAmerican service territory instead of selling it to users outside the state. Despite the reduction of community-wide emissions, much work lies ahead to meet both the 2030 and 2050 emission targets. An average annual emissions reduction between 2-2.5% annually should enable us to reach our 2030 target and stay on track to become carbon neutral in 2050. It is staff's hope and expectation that Iowa City will not simply meet, but exceed, the 2030 target and put ourselves in position to be a national leader in the effort to achieve net-zero status.

The majority of metric tonnes of CO₂e are generated by industrial (27%), residential (22%), and commercial (20%) users. In order to reach our 2030 goals, the City will need to partner extensively with these sectors over the next ten years. The balance of emissions are generated by the University of Iowa Power Plant (14%), all community transportation (15%) and waste (2%). While these sectors account for a smaller portion of the carbon emissions, all sectors must be engaged to achieve long-term emission reduction targets.

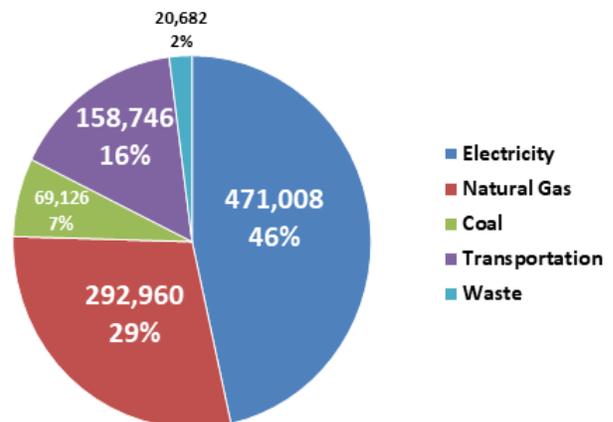


*Data for the inventory is carbon dioxide equivalent (CO₂e) produced from multiple sources used within Iowa City limits including electricity and natural gas used from MidAmerican Energy, electricity provided by Eastern Iowa Light and Power, and coal used by the University of Iowa Power Plant. Transportation contribution is calculated using vehicle miles travelled (VMT), provided annually by the Department of Transportation. Waste is calculated using the Iowa City portion of the waste collected at the Iowa City Landfill and Recycling Center.

Another way to dissect the community’s greenhouse gas emission data is to view it by source of production. Electricity, natural gas, and coal from the University of Iowa power plant all supply energy for heating, cooling, lighting, appliances and related functions making buildings the largest opportunity for meaningful progress to our goals. With the robust growth of MidAmerican’s renewable electricity, it will be important for the community to start looking for ways to offset natural gas using methods such as air-source heat pumps (that work for both heating and cooling), especially as technology improves and market demand increases.

Transportation is another sector that will need transformation, especially in the use of personal vehicles. Replacing personal vehicle use by biking, walking, and public transit is critical to our future success. Increasing public transit ridership will take significant investment in our current system. Electric vehicle adoption and technologies that will improve the efficiencies of larger vehicles will also be important for the community to embrace.

2018 Community-wide Emissions by Source (metric tonnes CO₂e)



Key Stakeholder Initiatives

As the GHG Inventory shows, the community is jointly responsible for emissions and all have a role to play. Indeed, individuals can collectively make a huge difference and are critical to our success. However, a few major stakeholders will necessarily be essential partners in reducing community-wide emissions. The City will actively partner and coordinate with all interested parties, but several entities will be especially important to work with, in order to reach our community's new emissions reduction targets.

Almost all electricity in Iowa City is provided by MidAmerican Energy, which has made a strong commitment to increase their renewable energy generation. In 2018, 51.4% of electricity delivered by MidAmerican came from renewable resources, primarily wind. With the completion of their Wind XII project, MidAmerican has announced that they will be positioned to deliver 100 percent renewable energy to their Iowa customers by 2021, based on annual electric usage. MidAmerican Energy will continue to use its natural gas, nuclear and coal-fueled plants to ensure reliable electric service even in times of low wind. With this strong commitment in place, Iowa City must focus efforts to not only reduce overall energy consumption, but also support as much electrification as possible. MidAmerican will be a strong partner going forward and will play a critical role in expanding renewable energy sources, electrification of our buildings, and enabling a more robust electric transportation network.

Eastern Iowa Light and Power provides a small percentage (0.5%) of electricity in the southern part of Iowa City. Eastern Iowa Light and Power reports that almost 60% of their sources of energy are carbon free. While they have a relatively small footprint in Iowa City, they do supply electricity to the City's Wastewater Treatment Facility, one of our largest municipal energy consuming facilities. Thus, an expanded partnership, particularly as we explore productive uses for the methane production at the plant, will have a meaningful impact on our success.

In 2017, the University of Iowa made a public commitment to eliminate the use of coal at its power plant by 2025. Over the last several years the University has been making noteworthy progress by increasing biofuels to replace coal. The University has an ongoing goal of achieving 40% renewable energy on campus by 2020. They have taken significant steps to increase energy efficiency in older buildings on campus and to ensure new buildings are built beyond state code standards. The University is currently exploring a public private partnership that would involve a long-term operating agreement of their utilities with a private entity. If this plan moves forward, they have indicated to City leadership that Iowa City will be a continued partner in ensuring community climate objectives are met.

The Iowa City Community School District passed a resolution in September 2019 to develop recommendations for taking more deliberate action on climate change. The District has begun by engaging the University of Northern Iowa to develop a baseline of current energy use. The District plans to develop their own Climate Action Plan with specific targets for educational programming, GHG emissions reduction, and renewable energy use within the upcoming months.

Finally, large industrial and commercial energy consumers in our community can potentially make excellent partners and exemplary models for environmental stewardship. Incremental movement towards electrification of buildings and equipment paired with renewable and efficient energy sourcing could substantially reduce current and future emissions. Our businesses are an appreciated, vital part of our community and their participation will keep Iowa City moving towards a sustainable future. To that end, the City looks forward to developing meaningful

partnerships with individual businesses, as well as organizations such as the Chamber of Commerce and the Iowa City Area Development Group to further our climate action efforts.

Climate Action and Adaptation Plan: Summary of Actions

The Climate Action and Adaptation Plan was created with the community to help chart a path toward previously established GHG emissions reduction goals. The strategies identified in the Plan provide the foundation for future actions that can be taken by the City, as well our residents and businesses to accelerate progress and achieve the newly adopted community goals.

A summary of the actions contained in the 2018 Climate Action and Adaptation Plan are listed below:

<p>Buildings</p> <ul style="list-style-type: none">1.1 Increase energy efficiency in residences1.2 Increase energy efficiency in businesses1.3 Increase energy efficiency in new buildings1.4 Increase on-site renewable energy systems and electrification1.5 Initiate community solar projects1.6 Support energy benchmarking tools1.7 Continue to increase energy efficiency in City-owned buildings <p>Transportation</p> <ul style="list-style-type: none">2.1 Increase use of public transit systems2.2 Embrace electric vehicles, alternative fuel vehicles, and other emerging technologies2.3 Increase bicycle and pedestrian transportation2.4 Increase compact and contiguous development2.5 Increase employee commuter options2.6 Manage parking options2.7 Reduce the City's vehicle emissions footprint <p>Waste</p> <ul style="list-style-type: none">3.1 Increase recycling at multi-family properties3.2 Increase composting of organics3.3 Reduce consumption of material goods3.4 Establish partnerships to divert construction waste from the Landfill3.5 Reduce waste at City facilities3.6 Create a comprehensive waste management plan3.7 Take action on a study to efficiently capture and use methane from wastewater operations3.8 Take action on a feasibility study on energy generation from Landfill methane	<p>Adaptation</p> <ul style="list-style-type: none">4.1 Conduct a vulnerable populations asset mapping exercise4.2 Develop communications and outreach plan to connect with vulnerable populations4.3 Analyze climate-related public health impacts in Iowa City4.4 Coordinate extreme weather preparedness planning with local agencies4.5 Assess Citywide and neighborhood stormwater management4.6 Expand Iowa City's tree canopy <p>Sustainable Lifestyle</p> <ul style="list-style-type: none">5.1 Encourage a plant-rich diet5.2 Expand community gardens and access to healthy, local foods5.3 Encourage the purchase of local products and responsible purchasing5.4 Create funding mechanisms to support community-wide climate action5.5 Incorporate this Climate Plan into the City's sustainability communications5.6 Initiate a green recognition program5.7 Develop internal City sustainability operations guide
--	--

Accelerating Iowa City's Actions

City staff has developed a list of specific actions that can be further explored and implemented in the near-term, which collectively would accelerate our progress toward our carbon emissions reduction goals. The actions are broken up into the Climate Action and Adaption Plan categories of Buildings, Transportation, Waste, Adaptation and Sustainable Lifestyle. Within each of these five key areas, staff has developed recommendations that encompass Education, Incentives, Regulation, City Policy, and Public Projects. Financial and human resources will be necessary to carry out the vast majority of the proposed actions. Those elements will be discussed in subsequent sections of this report.

Report actions have color-coded shading to provide a general sense of timeline as follows:

Green: Action can be initiated by end of 2020 but may be ongoing through 2030

Blue: Action can be initiated between 2021-2023 but may be ongoing through 2030

Orange: Action can be initiated between 2024-2025 but may be ongoing through 2030

Buildings

The Climate Action and Adaptation Plan states that existing buildings account for approximately 82% of community-wide emissions, making them the largest source of emissions. Thus, improving the performance of our existing building stock and ensuring new construction has the smallest carbon footprint possible is absolutely critical. These objectives are hindered by the fact that municipalities cannot regulate construction beyond what is permitted by the State of Iowa Energy Code. The community must be as creative and resourceful as possible when crafting our strategies. While reducing overall energy consumption and expanding renewables is important, we must recognize that our electric supply is becoming increasingly renewable (51.4% renewable in 2018 from MidAmerican Energy) requiring a large part of our strategy to focus on electrification and reduced dependency on natural gas for heating and other uses. This can be challenging with certain types of buildings, given cost and technological options that may be available.

Buildings: Education				
Action		Description	Plan Alignment	Required Resources
1	Promote Energy Efficiency and Performance Tips to the Public *(Next Step)	Through advertisements, social media, special event engagement, and the AmeriCorps program, provide the public with practical tips and strategies they can implement in their home or business.	1.1 – 1.2, 1.6	Financial, City Staff *(CMO, COM, OTH), Community Action
2	Partner with Stakeholders to Promote Green Building and Rehabilitation *(New)	Work with existing community organizations such as the Home Builders Association, Iowa City Area Association of Realtors, The Greater Iowa City Landlord Association, the Johnson Clean Energy District and the Chamber of Commerce to promote green building practices.	1.1-1.4	Financial, City Staff *(NDS, CMO, OTH), Community Action
3	Encourage the Local Realtor Community to Include Energy Performance in the Multiple Listing Services (MLS) Property Inventory *(New)	Homebuyers utilize MLS data to influence purchasing decisions. Energy performance is not currently a part of local MLS inventories but could help homebuyers make educated decisions and encourage sellers to proactively improve efficiency.	1.1 & 1.6	Financial *(CMO, OTH), Community Action
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Buildings: Incentives

Action		Description	Plan Alignment	Required Resources
1	Offer Free Home Energy Assessments through Green Iowa AmeriCorps *(Next Step)	Expand previously commenced efforts to offer free home energy testing and weatherization through AmeriCorps.	1.1	Financial *(CMO), Community Action
2	Enhance Energy Standards for City Rehabilitation Projects *(Next Step)	Ensure that City housing rehabilitation programs sufficiently incorporate energy efficiency measures, electrification, renewable energy, trees and stormwater quality improvements as budgets allow.	1.1	Financial *(CMO, PR, PW, NDS)
3	Coordinate Neighborhood Energy Blitz Events *(New)	Plan multi-day neighborhood blitzes that provide education to residents as well as practical home solutions including LED lights, weatherization improvements, trees and other climate action solutions.	1.1	Financial, City Staff *(CMO, COM, PR, NDS), Community Action
4	Launch a TIF-funded climate action incentive program aimed at reducing industrial energy consumption *(New)	Using district-wide TIF funding, create and launch an incentive program that emphasizes energy reduction, renewables, electrification and site improvements that will help reduce emissions in our industrial sector.	1.2 & 5.4	Financial, City Staff *(CMO), Community Action
5	Consider a Building Permit Fee Rebate Program for Enhanced Energy Standards *(New)	Consider rebating a portion of building permit fees in exchange for enhanced energy measures on construction projects.	1.3	Financial *(NDS), Community Action
6	Develop or Partner with Local Stakeholders on a Comprehensive Climate Action Rehabilitation Program *(New)	Iowa City currently offers housing rehabilitation funds that can be used for energy efficiency measure. This combination grant/loan program would bolster that effort and expand it to include all building types. External partners could include local financial institutions (attractive lending terms) and organizations like the Johnson Clean Energy District that offer expertise.	1.1 – 1.4	Financial, City Staff *(CMO, NDS), Community Action
7	Initiate a Net-Zero House Design Competition *(New)	Engage the local architect and building community to develop a series of net-zero house designs that can be accessed and utilized by local contractors and the public.	1.3	Financial *(CMO, NDS), Community Action

8	Complete a Net-Zero Demonstration Rehabilitation Project *(New)	Through our existing rehabilitation programs such as the UniverCity and South District Homeownership programs, complete a demonstration net-zero rehabilitation project.	1.1 & 1.4	Financial *(CMO, NDS)
9	Incentivize Energy Enhancements and Building Re- and Retro Commissioning for Participants in the Energy Bench-marking Program *(New)	To complement a proposed energy benchmarking program, this program would look to target specific improvements for those large properties that are significant contributors to our carbon footprint.	1.6	Financial, City Staff *(CMO), Community Action
10	Launch an Electrification Incentive Program *(New)	This program would provide financial incentives that offset the cost to convert appliances and heating equipment from natural gas to electric.	1.1 - 1.2 & 1.4	Financial *(CMO, NDS), Community Action
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Buildings: Regulation				
Action		Description	Plan Alignment	Required Resources
1	Create a More Robust Energy Code Inspection Program *(New)	Staff currently relies on contractor verification for compliance with the adopted energy code. Through staffing increases and training, all Building Inspectors can take a more proactive role enforcing the energy code.	1.1 - 1.2	City Staff *(NDS)
2	Incorporate Stricter Energy Standards into Tax Increment Financing Policies *(New)	Revise our Tax Increment Financing policy to include stricter energy standards.	1.3 – 1.4	Financial *(CMO)
3	Incorporate Strict Energy Standards into Height and Density Bonuses *(New)	Revise our density and height bonus Policies to include stricter energy standards.	1.3 – 1.4	No Additional *(CMO, NDS, OTH)
4	Initiate Energy Benchmarking Requirements *(New)	Require owners of a predetermined building size (example: 100,000 sq ft) to annually report energy performance metrics to the City.	1.6	City staff *(CMO), Community Action
5	Develop Climate Action Requirements for all Existing and Future Rental Permits *(New)	Adopt energy efficiency and tree planting requirements to ensure rental housing is contributing to public health concerns associated with climate change.	1.1 & 1.7	No Additional *(CMO, NDS)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Buildings: City Policy				
Action		Description	Plan Alignment	Required Resources
1	Advocate for Local Control of Energy Codes *(New)	Encourage the State Legislature to allow for local of energy codes.	1.1 – 1.4	No Additional *(CMO)
2	Advocate for Aggressive Energy Code Development and Adoption *(New)	Require staff to actively participate in the development of future international energy codes including advocating of the ‘glide path to net-zero’ and other similar nationwide and global efforts.	1.1 – 1.4	Financial *(NDS)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Buildings: Public Projects				
Action		Description	Plan Alignment	Required Resources
1	Solar Partnership with MidAmerican *(New)	Execute a land lease agreement with MidAmerican Energy for a utility-scale solar installation of 2 MW or greater.	1.5	City property *(CMO, PW)
2	Net-Zero Public Housing *(New)	Initiate a program to rehabilitate Iowa City owned public housing units into net-zero properties.	1.1 & 1.7	Financial, City Staff *(NDS)
3	Municipal Building Efficiency and Electrification *(New)	Accelerate energy efficiency efforts in city facilities and develop a plan for systematic electrification and implementation.	1.4 & 1.7	Financial, City Staff *(PR, CMO, PW)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Transportation

Along with significant change in our built environment, mobility and land-use planning will play a very large role in meeting emission reduction targets. The Climate Action Plan calls for replacement of over fifty-five percent of vehicle trips with sustainable transit, bike, and pedestrian options by 2050. City Council has established a goal to double transit ridership by 2028 which will jumpstart our community effort to reduce emissions generated by fossil-fueled transportation. Overarching targets in this area include conversion of the City’s municipal fleet to cleaner fuel vehicles and to increase community-wide adoption of electric and alternative-fuel vehicle technology. The City’s immediate strategy focuses upon enhanced education and incentive campaigns for public transportation and preparing for transition to a future with more electric vehicles.

Transportation: Education				
Action		Description	Plan Alignment	Required Resources
1	Significant Transportation Education and Outreach Campaigns *(New)	Education and outreach campaigns on use of non-fossil fuel vehicles, walkable neighborhoods, bicycling, car-sharing, and transit.	2.3	Financial, City Staff *(COM, TS, OTH), Community Action
2	Launch an Eco-Driving Campaign Alongside Employers *(New)	Promote Ride-Sharing, Transit, Alternative Work Schedules and Other Actions to Help Reduce Emissions from Single-Occupancy Vehicles.	2.5	Financial, City Staff *(CMO, COM), Community Action
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Transportation: Incentives				
Action		Description	Plan Alignment	Required Resources
1	Incentivize Public Transit Options *(New)	Based on recommendations in the forthcoming transit study, incentivize use of public transit with fare free service and/or discounted passes/rides.	2.2	Financial, City Staff *(TS, CMO), Community Action
2	Explore Electric Vehicle (EV) Incentives Based on the Readiness Plan *(New)	Plan suggestions are expected to include incentive options for the City to consider.	2.5	Financial *(CMO, TS)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Transportation: Regulation

Action		Description	Plan Alignment	Required Resources
1	Review Parking Regulations and Consider Innovative Ways to Encourage Alternative Modes of Travel *(New)	This review may include amenity prioritization for EV and efficient vehicle parking, maximum parking standards, and opportunities for private properties, ride sharing, and development of employer programs.	2.6	City Staff *(NDS, TS, CMO)
2	Require Climate Change Analysis for New Subdivisions and Rezoning *(New)	This extra layer of in-house review would accompany rezoning applications received by the City.	2.4	City staff *(NDS, CMO)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Transportation: City Policy

Action		Description	Plan Alignment	Required Resources
1	Establish an Electric and Fuel-Efficient Vehicle Purchasing Policy *(New)	Establish a City policy to mandate electric and alternative fuel and fuel-efficient vehicle purchases if viable options exists.	2.2	Financial *(CMO, PW)
2	Track Adherence to City Idling Policy *(Next Step)	An idling reduction policy was implemented in spring 2019. Data tracking and analysis will be required to ensure its effectiveness.	2.7	No Additional *(CMO, PW)
3	Review Transportation Subsidies, Work Schedules and Tele-Work Policies for City Employees *(New)	Ensure City transportation subsidies and work schedules for employees are crafted with climate action goals in mind.	2.1	City Staff *(CMO)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others; PUB – Public/Community				

Transportation: Projects

Action		Description	Plan Alignment	Required Resources
1	Complete the Transit Study and Implement Recommendations to Bolster Service and Increase Ridership *(Next Step)	The study will result in recommendations for optimizing the transit system including, days and hours of operation, fares, transfers, routes, stops, and other attributes that will increase ridership. Guidance from the completed plan will become new climate actions.	2.1	City Staff *(TS, CMO), Community Action

2	Complete Electric Vehicle (EV) Readiness Plan and Implement Recommendations *(Next Step)	A grant was awarded for the development of an Eastern Iowa Regional EV Plan. It will develop practical and specific guidance to prepare for increased electric vehicle use. The project, led by Iowa City, will begin in early 2020.	2.2	City Staff *(CMO, TS)
3	Achieve Gold Friendly Bicycle Friendly Community Status and Begin Work Toward Platinum Status *(Next Step)	Continue to implement the Bicycle Master Plan and meet the requirements to achieve the gold friendly status upon recertification in 2020-21.	2.3	Financial *(NDS, TS, PW, COM)

Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others; PUB – Public/Community

Waste

Although waste makes up only 2% of community emissions, shrinking the waste stream and managing methane emissions from the waste stream, are critical. Approximately 70% of the materials in the Iowa City Landfill have recyclable or reusable properties and about 35% of materials are compostable organics, the Landfill’s primary source of methane production. The City’s solid waste operations have taken regulatory steps and made program changes over the last few years resulting in increased recycling and composting rates; however, the Climate Action Plan calls for reducing the waste reaching our Landfill by 50% by 2025 and 80% by 2050. To hit this target, the City must increase public awareness, meaningfully engage community partners, and devise policies or regulations that encourage a culture of conservative consumption. Furthermore, methane generated at the City’s Landfill and Wastewater Treatment Plant contributes over 50% to the City’s own municipal GHG emissions. A consultant contract analyzing potential methane use will soon be recommended to the City Council.

Waste: Education				
Action		Description	Plan Alignment	Required Resources
1	Engage the Public to Compost Organic Waste *(Next Step)	Through advertisements, social media, special event engagement, and the AmeriCorps program, provide the public with practical tips and strategies they can implement in their home or business.	3.2	City Staff *(CMO, PW, COM, PR, OTH), Community Action
2	Education Campaigns for Neighborhoods to Reduce Waste/Consumption at the Source *(Next Step)	Work with and provide education opportunities for neighborhood organizations, tenant associations, and landlords.	3.3	City Staff *(CMO, PW, COM, EHR, PR, OTH), Community Action
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Waste: Incentives				
Action		Description	Plan Alignment	Required Resources
1	Incentivize Construction Waste Diversion *(Next Step)	Expand in-progress efforts to engage the local development and construction community, along with local commercial industry to divert materials from landfill by reuse or recycling.	3.4	Financial, City Staff *(PW, CMO, OTH), Community Action
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Waste: Regulation				
Action		Description	Plan Alignment	Required Resources
1	Develop a Policy/Ordinance Requiring Specific Demolition or Deconstruction Recycling Standards/Procedures *(New)	Projects above a certain threshold must submit a waste management plan before beginning construction.	3.4	Financial, City Staff *(NDS, CMO, PW)
2	Mandating Signage to Assist Waste Collection *(New)	Require basic standard signage posted at waste collection sites on multi-family properties to reduce recycling contamination.	3.1	Financial, City Staff *(PW, NDS)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Waste: City Policy				
Action		Description	Plan Alignment	Required Resources
1	Require All Park/Public Space Rentals to Recycle and Use "Green" Event Best Practices *(New)	Approval for events requiring an assembly or shelter rental permit will include adherence to future guidelines that reduce waste and energy consumption.	3.5	City Staff *(PW, PR, OTH), Community Action
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Waste: Projects				
Action		Description	Plan Alignment	Required Resources
1	Initiate a Methane Feasibility Study *(Next Step)	The selected consultant will study the GHG impacts, financial impacts, and opportunity for energy generation at the Landfill and Wastewater Treatment Facility.	3.7 – 3.8	Financial, City Staff *(PW)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Adaptation

As Midwestern weather is expected to become more volatile and extreme, daily life in Iowa City will change. Air quality, along with severe hot and cold temperatures and high rainfall can impact work commutes, business operations, and daily outdoor activity. Therefore, the Climate Action Plan’s section on Adaptation focuses upon environmental impacts that affect quality of life for our residents. Components of this work include education campaigns, care and nurturing of natural areas and urban tree canopy, as well as engagement with community members most susceptible to incidents of climate-induced extreme weather and public health hazards. It is extremely challenging to see immediate carbon emissions reductions from qualitative projects and programs, but establishing increased tree shade, healthy soils and root systems, and sound water management practices throughout the community will provide significant long-term benefits.

Adaptation: Education				
Action		Description	Plan Alignment	Required Resources
1	Develop a Climate Ambassador Team *(New)	Work with Climate Action Commission to define and develop a team of trained and passionate community members to assist with climate action outreach.	4.2	Financial, City Staff *(CMO, COM, OTH), Community Action
2	Establish "Resilience Hubs" *(New)	Identify public community spaces that can become a trusted resource for community engagement before acting as a gathering space during extreme weather events.	4.2	Financial, City Staff *(CMO, PR, PW, COM, NDS, EHR, OTH)
3	Educate and Coordinate with Local Agencies on Health Impacts *(Next Step)	Continue initiatives to improve indoor air quality, enhance outdoor gathering spaces and routes for pedestrian mobility, as well as vector-borne disease prevention.	4.3	City staff *(CMO, NDS, PR, OTH), Community Action
4	Concentrated Education Campaign for Private Properties about Native Plantings, Permeable Pavement, Rain Gardens, Soil Health, Rain Barrels and Cisterns *(Next Step)	Work with and provide education opportunities for individuals, neighborhood organizations, and business community.	4.5	Financial, City Staff *(CMO, COM, PW, PR, NDS, OTH)
5	Coordinated Efforts with Local Emergency Agencies *(Next Step)	Maximize public health and safety outcomes for inclement weather events by enhancing regular communication with emergency agencies.	4.3 - 4.4	City staff *(CMO, PW, PR, COM, OTH)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Adaptation: Incentives				
Action		Description	Plan Alignment	Required Resources
1	Partner with ProjectGreen on a Tree Planting Partnership; Incentives for Private Tree Planting *(New)	Partner with ProjectGreen to incentivize higher levels of community tree planting on private property through rebates and/or a community purchase program.	4.6	Financial, City Staff *(CMO, PR, COM, OTH), Community Action
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Adaptation: Regulation				
Action		Description	Plan Alignment	Required Resources
1	Street Tree Ordinance *(Next Step)	Enact a new street tree ordinance that will expand the City’s neighborhood tree canopies with development proposals.	4.6	City Staff *(NDS, PR)
2	Increase Tree Planting Requirements in Landscaping Standards, Parking Lot Standards and Upon Renewal of Rental Permits *(New)	Review and heighten development requirements for tree planting on private property including in parking lots and along with rental permits.	4.6	Financial, City Staff *(NDS, PR)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Adaptation: City Policy				
Action		Description	Plan Alignment	Required Resources
1	Develop Review Standards for New City Facility Construction and Major Rehabilitation that Accounts for Climate Adaptation Principles *(New)	In addition to energy efficiency and transportation, considerations may also include review of material usage, resilience against weather and pests, water efficiency and management, and resilience to power and resource disruptions.	5.7	Financial, City Staff *(NDS, PW, PR, TS, OTH)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Adaptation: Projects				
Action		Description	Plan Alignment	Required Resources
1	Flood Mitigation and Stormwater Management Programs/Projects; Buyouts *(Next Step)	Continue City’s residential stormwater management programs and flood residential buyout programs through federal, state and local funds. Further support non-residential flood control efforts with an added stormwater technician position in Engineering.	4.5	Financial, City Staff *(CMO, PW), Community Action
2	Continue Implementation of the Natural Areas Management Plan *(Next Step)	Work on Natural Areas Management has been undertaken by Parks Maintenance staff and community volunteers.	4.5-4.6	Financial, City Staff *(PR)
3	Expand Public Tree Planting *(Next Step)	Increase public tree planting through expansion of Forestry staff and dedicated funding for more trees.	4.6	Financial, City Staff *(CMO, FIN, PR, OTH)
4	Equity Review of Neighborhood and Population Outreach; Develop Outreach Plan for Populations Highly Impacted by Climate Change *(Next Step)	Complete the in-progress equity review and initiate plan development with newly created Climate Action Analyst position and the Climate Action Commission.	4.1-4.2	Financial, City Staff *(CMO, COM, EHR, OTH), Community Action
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Sustainable Lifestyle

The City’s sustainable lifestyle initiatives are focused upon enhancing connections between existing partners, producing new partnerships, developing marketing, and generating entrepreneurial or new project opportunities. Quite a few objectives have already been started since the Plan’s adoption, but this report aims to amplify programs and projects. These recommendations focus on local food and product sourcing, significant media and communication campaigns, and building upon human and financial capital in Iowa City. Like Adaptation initiatives, individual behavioral changes are nearly impossible to regulate or quantify immediate carbon emissions reduction. The success of measures in this area rely upon individual or organizational buy-in and acceptance, and then upon willingness to make environmental and personal changes. City staff, the Climate Action Commission, and community partners will need to focus heavily upon fostering relationships that benefit from climate action initiatives, and varying messaging to connect with a wide range of people.

Sustainable Lifestyle: Education				
Action		Description	Plan Alignment	Required Resources
1	Host Sustainability Forum and Events *(Next Step)	Expand opportunities for the public to engage on climate action through unique programs and festivals.	5.5	Financial, City Staff *(CMO, COM, PR, OTH), Community Action
2	Launch a Green Business Program: “Climate Action at Work” *(New)	Create an award program that highlights and reinforces the actions currently being taken by local businesses to combat climate change.	5.6	Financial, City Staff *(CMO, OTH), Community Action
3	Local Procurement Campaign - Buy-in from Local Commercial Groups *(New)	Initiate a campaign and projects to promote locally sourced and procured products, services, and food at organization and community scale.	5.3	Financial, City Staff *(CMO, FIN, COM, OTH), Community Action
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Sustainable Lifestyle: Incentives				
Action		Description	Plan Alignment	Required Resources
1	Expand Community Climate Action Grants *(Next Step)	Grants issued through this program highlight and reinforce current actions taken by local organizations to effectively manage resources and energy usage or educate and engage the public in climate action initiatives.	5.4	Financial, City Staff *(CMO, NDS, COM, EHR, OTH), Community Action

2	Incentives for the Public to Create and Maintain Local Food Production and Community Gardens *(Next Step)	Create opportunities through incentives, partnerships, and education to encourage businesses, organizations, and individuals to establish areas of food and flora production to be tended by community members and shared locally.	5.4	Financial, City Staff *(CMO, NDS, PR, EHR, OTH),
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Sustainable Lifestyle: City Policy				
Action		Description	Plan Alignment	Required Resources
1	Develop a Green Procurement Policy *(New)	City-developed procurement policy to guide climate-conscious purchases.	5.3	City Staff *(CMO, FIN)
2	Develop a City Sustainability Operations Guide and Make Available to Organizations Throughout Iowa City *(New)	Development of an operations guide used by the City will also assist community climate partners in focusing efforts to reduce energy use, consumption of resources, and waste.	5.7	City Staff *(CMO, FIN, NDS, PW, PR, TS, EHR, COM, OTH)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Sustainable Lifestyle: Projects				
Action		Description	Plan Alignment	Required Resources
1	Develop a Climate Action Strategic Communications Plan *(Next Step)	Hire a consultant to develop a comprehensive strategy, including advertising opportunities, media content, video, innovative technology use, in-person engagement and utilization of Climate Ambassadors Program.	5.5	Financial, City Staff *(CMO, COM, OTH)
2	Community Garden Expansions/Additions *(Next Step)	Continue City expansion of garden plots, community orchards.	5.1 – 5.2	Financial, City Staff *(CMO, PR)
Resource Key: CMO – City Manager’s Office; NDS – Neighborhood & Development Services; COM – Communications; PW – Public Works; EHR – Equity & Human Rights; TS – Transportation Services; PR – Parks and Recreation; FIN – Finance; OTH – Others				

Ensuring Equity in our Climate Action Response

Based upon the City Council’s continuing Strategic Plan goal to “Promote Social Justice and Racial Equity” and understanding that equity plays a comprehensive role in environmental justice and community sustainability, the City’s Climate Plan was developed with the goal of addressing equity throughout each action category. Using a “lens” of equity to frame issues, identify strategies, actions, and measures of success, and to evaluate impact is a key aspect of ensuring that our climate action work will be inclusive and support positive and neutral outcomes for all residents and visitors in Iowa City.

The City plans to address intersecting issues of equity and climate with an assortment of approaches. First, the Plan provides general descriptions of climate actions, allowing our stakeholders to develop specific actions. Ultimately, our community is responsible for helping develop and express preference for the options most beneficial and equitable to the people of Iowa City. Second, the Climate Action Commission has been charged with evaluating proposed actions and recommending ways to equitably distribute benefits and impacts. Finally, the City has initiated foundational analysis of *who* must be invited to participate in this equity work.

The Plan’s “Call to Action” section provides guidance for focused equity review of proposed climate actions. The Equity Sub-Committee, active during the Climate Action Plan’s development, identified the need to establish a standing group of individuals with the task of reviewing proposed climate actions to determine how each would impact a variety of populations. This means that as new ideas – such as the ones in this report – are proposed, an evaluation should be conducted to identify and if possible, address concerns of equity, should the idea move forward.

The new Climate Action Commission has been given the responsibility to, “research, analyze, and promote climate actions, with particular attention to equity.” The Commission can enlist a team of community members and establish rules for equity review. The Climate Action Plan calls for representative groups and individual community members to be involved in this effort, possibly encompassing veterans, persons who rent, senior adults, secondary and collegiate students, youth, persons with disabilities, immigrants, refugees, English-Language-Learners, persons who are homeless, households with low-incomes, and others characterized as a protected class.

As we further develop the concepts in this report, evaluation is needed to determine potential outcomes of equity for various groups or locations within the community. From geographic application, cost, accessibility of information or resources, and other matters, the development of projects and programs identified within this report will be guided by data, available information, and stakeholder feedback.

In order to help further equitable representation and impacts as they relate to climate change, the City has already initiated Actions 4.1 and 4.2. To begin to understand this work and the particular needs of Iowa City, we sought and received one of seven equity fellowship grants through the Urban Sustainability Director’s Network. In summer 2019, the full-time Equity Fellow undertook a variety of exercises to begin analysis of equity and climate in our community. They completed an initial investigation of the populations and needs within Iowa City through many hours of in-person meetings with the public, organizations, and staff. A report with these findings will be completed by the end of the year. This foundational work will be beneficial to our future equity efforts that actively engage and incorporate many more groups in our community in making decisions about climate action.

City Government Roles and Responsibilities

City government will necessarily play a critical leadership role in the effort to achieve the City Council's carbon emission reduction targets. Success will depend on sustained leadership from elected officials, advocacy and oversight on progress from the Council-appointed Climate Action Commission, and a strong commitment from City staff. Clarity of roles and responsibilities will help ensure that the City can effectively lead a coordinated effort to significantly reduce our carbon emissions in line with adopted goals.

City Council

In August of 2019, the City Council took the bold step to declare a climate crisis and further requested immediate actions to begin to meet newly adopted emission reduction targets. Those accelerated actions are detailed in this plan. However, many of the actions will not be achievable without further political support from the City Council. The Council will need to make difficult decisions on regulatory and policy matters. Additionally, they will have to provide financial resources needed to support additional staff, incentive programs, public projects and service enhancements, and general community education. This may include raising taxes and/or other revenues and prioritizing such action over competing needs in the community.

In the months and years ahead, the City Council will play a critical role in advancing climate action conversations and raising awareness both in the City organization itself and in the broader community. Similarly, climate action conversations will need elected champions at a regional and statewide level. With the Council's leadership on this topic, the Climate Action Commission and City staff will be empowered to engage and carry out the actions detailed in this report.

Climate Action Commission

On October 1, 2019, the City Council created the Iowa City Climate Action Commission (CAC). This eleven-member board will play a critical advisory role to the City Council, while simultaneously advocating for climate change activities in the community. The specific charges of the CAC include:

- I. advise the City Council on climate issues
- II. research, analyze, and promote climate actions, with particular attention to equity
- III. educate and engage with the public on climate action and the City's climate and sustainability goals
- IV. assist City staff, City Council, and members of the community with implementing approved initiatives that support the City's climate and sustainability goals, including the Climate Action and Adaptation Plan and any related or updated plan hereafter
- V. recommend to City Council updates to the Climate Action and Adaptation

One of the first key duties of the CAC will be to review the accelerated actions contained in this report and make recommendations to the City Council on any modifications needed to achieve the City Council's GHG emissions reduction goals. Once a final work plan is determined, the CAC will be asked to help shape those actions, promote our programs and messaging to the community, and track our progress toward our stated goals.

The Commission has already began meeting and will have a full slate of members by the end of the year. The Commission will be supported by the newly created Division of Climate Action and Outreach in the City Manager's Office as described in the following section.

City Staff

For Iowa City to meet the expectations that were established in the climate crisis declaration, climate action must become part of the culture of the entire organization. Building this culture is a long-term effort and work to accelerate climate awareness within the organization has already commenced. As this awareness builds and expectations are established, the City Council and public will notice shifts in project design, service delivery, procurement and other aspects of the operation.

While all employees will share a responsibility in this effort, it is important to build a dedicated team that can champion climate action both inside the organization and throughout the community. Thus, it is desired to create a formal Division of Climate Action and Outreach within the City Manager's Office. This office would join Equity/Human Rights, Human Resources, Communications, and Economic Development as standalone divisions in the City Manager's Office. Representatives of these offices will be empowered to work across City Departments and Divisions and will be also be represented in Department Head meetings and other strategic work groups in the city organization.

The Division of Climate Action and Outreach is intended to be fully staffed with three positions no later than July 1, 2020. Official titles and job descriptions will be developed in the coming months; however, a brief description of the expected duties is outlined below:

- Climate Action Coordinator (existing position):
 - Action plan implementation coordination
 - Climate Action Commission support
 - Strategic external / internal stakeholder relationships
 - Leading practice and policy research
 - Incentive program management
 - Grant writing
 - Outreach assistance
- Climate Action Engagement Specialist (re-imagined duties of a position to soon be vacated by retirement):
 - Community awareness, education and marketing
 - Neighborhood outreach
 - Volunteer event coordination
 - Climate festival planning
 - Oversight of the Green AmeriCorps program
- Climate Action Analyst (new position funded by previously allocated energy manager position):
 - Data collection and analysis
 - Reporting
 - Equity Analysis
 - Incentive program management
 - Grant writing
 - Outreach assistance

All three positions will report directly to the Assistant City Manager, who will be responsible for leading Climate Action efforts across the entire City organization. Other interns, work study students or seasonal hourly positions may supplement staffing throughout the year.

One challenge in creating a new division is that City Hall is currently at full occupancy. Thus, there are some space needs constraints that need to be considered. In the short-term, staff is confident we can find a temporary solution within the walls of City Hall. However, a more permanent solution will likely need to be pursued in the coming years. To that end, staff has initiated preliminary discussions with the University of Iowa about co-locating the Division of Climate Action and Outreach with the University of Iowa's Office of Sustainability and the Environment. Both the City and University recognize the potential benefits of co-locating these teams in office space that is easily accessible to both the campus and general community and we have agreed to continue those discussions and explore possibilities.

As existing staff capacity and future budgets allow, the City's climate action efforts can be greatly supplemented by redefining duties of existing staff and by making strategic additions throughout the organization. One example of shifting duties will take place immediately with our Economic Development Coordinator position. That position will assume responsibility for specific climate action related activities, including the building emission reduction incentive program in our industrial sector, as well as our soon to be proposed green business program. An example of new staff additions that can play an important role in accelerating our progress is in our Forestry operation. In order to increase community tree planting on public and private properties, new Forestry staff will be required. Other similar staff additions will be considered as we expand our efforts in the coming years and build off the momentum that the community and Council have created in the last several months.

Since last fall, City staff from nearly all departments and divisions have been meeting regularly to explore opportunities to implement Climate Action Plan objectives within City operations and facilities. The staff, led by the Sustainability Coordinator, agreed upon Climate Plan-inspired projects to initiate at a staff level. Some of these ideas, like an idling reduction policy and expansion of composting at City buildings, have been started. The staff committee is about to begin development of a sustainable operations guide and assist with creating a green procurement policy (Actions 5.3 and 5.7).

Public Funding

As indicated in the City Council August 2019 declaration of Climate Crisis, additional dollars will need to be dedicated to our climate efforts if we are to meet our goals. Local government funds will be needed to support public education/advocacy efforts, incentive programs, public projects and community-led carbon reduction efforts. In addition to funds that can support new efforts, the City Council should expect to see additional funding requests to support the climate enhancement efforts of existing city efforts. For example, housing rehabilitation projects will require additional funds to further energy efficiency and electrification goals. Similarly, public facility projects will require larger upfront dollar commitments if we are to push toward net-zero standards. Below is a review of available funding sources and a recommendation for the upcoming FY 2021 budget.

Local Option Sales Tax (LOST)

Iowa City is the lone metropolitan area in the State of Iowa without a Local Option Sales Tax (LOST). The community passed a four-year LOST after the 2008 flood that aided the City in completing the Gateway Project and expanding our South Wastewater Treatment Plant to allow for the creation of the new Riverfront Crossings Park. A LOST requires 50% voter approval and could generate upwards of \$8-\$10 million per year. State law requires that 50% of proceeds be dedicated to property tax relief. The remaining balance can be spent in accordance with the approved ballot language.

Utility Tax

State law allows City Council's to adopt up to a 5% tax on gas and electric utilities. Iowa City currently has a 1% utility tax that generates approximately \$900,000 per year. The City Council may designate these funds for any purpose. Iowa City uses current proceeds to support our Fire Department operations, as well as improvements to our roadways and rights-of-ways.

G.O. Bonds

The City can bond for climate action activities within parameters set by state law. Generally speaking, such bonds geared toward investment in private property (incentive programs) would be limited to \$750,000 before triggering the need for a referendum. Depending on specific uses, those bonds would likely be taxable and subject to higher interest rates. Given bond limitations and costs of borrowing, staff does not believe General Obligation (G.O.) bonds are the best path forward for these types of uses. Instead, G.O. bonds should be used to enhance future capital projects by supplementing project budgets so that appropriate climate action aspects can be incorporated. Examples may include additional tree planting and water quality measures, building improvements, enhanced bicycle, pedestrian and transit accommodations, etc.

Emergency Property Tax Levy

Cities in Iowa have the ability to raise property taxes through an Emergency Levy. The cap on the Emergency Levy is \$.27/per \$1,000 in property value. Iowa City has historically not used the Emergency Levy, but could do so and raise upwards of \$1 million in revenue annually for climate change initiatives.

Tax Increment Financing (TIF)

Tax Increment Financing (TIF) can support climate change activities in limited circumstances. In most instances, TIF is only a viable tool if the investment made increases property values and creates the 'increment' between the old property value and the new property value. However, in some cases natural growth in property taxes across an entire district can create increment. This increment could be used to create incentives programs that leverage private dollars and ultimately help reduce the city's overall emissions.

Other (Grants and Enterprise Funds)

The City operates a number of enterprise funds and has access to state and federal grants that could also contribute to our climate action initiatives. For example, stormwater, refuse/landfill and parking funds could be used to expand water quality, waste and transportation initiatives. Similarly, state and federal grants can be accessed for specific projects that improve neighborhoods and transportation networks. While none of these funding sources are likely to be significant in the overall revenue mix, they can play a key role in advancing some objectives. Staff will evaluate these in the upcoming and future budgets and make recommendations that will help support key initiatives in this report.

Recommendations for the upcoming FY 2021 Budget (July 1, 2020 through June 30, 2021)

City staff began the FY 2021 budget process back in August with a City Council work session discussion on priorities. Our final budget recommendations to the City Council will be published and made available to the Council and general public in mid to late December. While it is too early in the process to provide specific details on our recommendations, we have developed a general framework for funding our climate action activities in the coming fiscal year.

The staff in the Division of Climate Action and Outreach will be funded through the General Fund, thus ensuring stability in funding from year to year. However, staff will be recommending that the bulk of climate action activities (education, incentives, etc.) be funded through the use of the Emergency Levy. This property tax source will raise approximately \$1 million dollars annually to support the actions in this report. The majority, if not all of these actions, will be scalable in nature and could be supplemented in the future if proven successful or similarly, could be scaled back should future Councils determine the Emergency Levy is needed to address other pressing matters facing the community. Staff also is hopeful that the increase in the Emergency Levy can be offset by a continued reduction in our Debt Service Levy. Thus, the community's overall tax rate should decline slightly or at minimum remain status quo.

While the Emergency Levy will serve as the foundation for climate action funding, there are several other funding sources that will contribute directly to actions that need financial support. Specifically, staff will be recommending the use of stormwater utility funds for supplemental tree planting. Likewise, our recommendation will be to convert the Community Development Block Grant (CDBG) neighborhood set-aside to a low-to-moderate income neighborhood-based climate action set-aside (\$75,000). The FY 2021 budget will also supplement certain capital projects (G.O. Bonds) with extra resources to incorporate more climate conscious designs. Staff will be recommending the use of TIF dollars for a new/existing building incentive program targeting some of our industrial properties that account for a significant portion of our community emissions. If successful, this program can be

expanded to other building types. Finally, staff will outline how parking funds could be used to pay for enhancements in our public transit system that will help us reach our goal of doubling our ridership by 2028.

Specifics on all of these funding strategies will be outlined in the forthcoming budget recommendation this December.

Getting to 2030: Greenhouse Gas Emissions Scenarios

In the simplest terms, Iowa City must reduce community carbon emissions from 1,020,073 metric tonnes of CO₂e to 756,091 metric tonnes of CO₂e by the end of 2030. Annual emissions are calculated for the prior year, so the most current and complete information is from 2018, leaving us with just over a decade to continually and methodically reduce carbon emissions. This calculated reduction of 263,982 metric tonnes will require a minimum annual decrease of approximately 22,000 metric tonnes (2-2.5% of total emissions).

This report highlights the necessity of a comprehensive and immediate strategy to reduce emissions. All major sectors of buildings – residential, commercial, and industrial – must act to reduce CO₂e by approximately 20% over the next decade. Transportation options will need to expand and improve, in order for our residents to feel comfortable replacing 25% of their personal vehicle car miles with bus transit, bicycling, walking, or private adoption of electric vehicles.

The City of Iowa City will also target a 20% reduction in municipal operation emissions over the next decade. Advancing public and private tree plantings will play a small, but important role in continued reduction of emissions. The University of Iowa continues to aim to reduce use of coal at its power plant. Even if they implement no other solution but replacing coal with natural gas, this action brings our community closer to our goals. We note that although MidAmerican Energy's continued investment in renewable energy sources will help us make tremendous progress, our calculations below focus upon reductions proposed outside of their investment that will help us reach our goal.

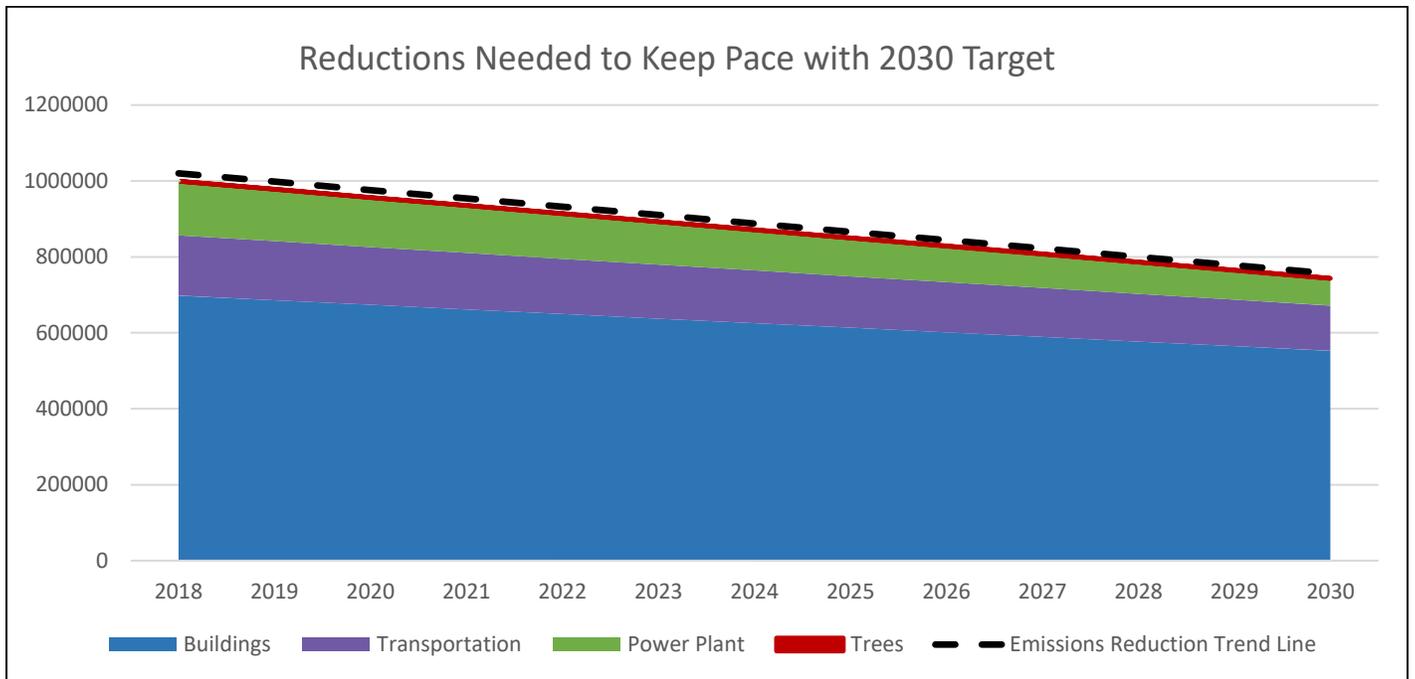
As illustrated in the chart on the next page, emissions are generated throughout the community and calculations show that without action from each of these areas, carbon emissions targets cannot be reached by 2030. A few points of emphasis include:

- Our primary focus needs to be on individual actions by community members, improvements to existing buildings, and in our transportation sector.
- Further, over time our community focus must zero in on the most impactful actions (replacing natural gas, improving alternative transportation options) and target the highest emitters (industry and commercial). While actions of all sizes will continue to be helpful, our community must now move beyond accomplishing only “low hanging fruit” such as lighting retrofits to significantly reduce carbon levels.
- Although we need a rapid transformation in this crisis, reduction targets are currently achievable at 2% increments. Over time, the City has seen reductions at these levels, and with a concentration upon accelerating these initiatives, increasing market demand for improved energy technology, and reducing overall energy usage, we should strive to exceed our 45% community-wide reduction target by the end of 2030.

A summary of how Iowa City could reach the targets for carbon emissions reduction is shown below.

2018 Emissions: 1,020,073		2030 Target Emissions: 756,091			
Total Reduction Needed: 263,982		21,999 (Annual)		<i>Includes an annual population growth of 1.5% through 2030</i>	
12 Year Projection:					
	2018 GHG	Reduction	Reduced GHG	Approximate number of energy accounts in Iowa City	Average Per Unit Metric Tonnes Reduction Needed by 2030
Buildings	697,955	20-22%	145,043		
Industrial Buildings	272,582	22%	59,968	20	2,998.4
Commercial Buildings	200,816	20%	40,163	2,000	20.1
Residential Buildings	224,557	20%	44,911	30,000	1.5
Transportation	158,746	25%	39,687	<i>Replace 25% of personal vehicle miles</i>	
Bus ridership doubled					
Electric vehicle adoption					
Increased walking					
Increased biking					
Increase in fuel-efficient vehicles					
U of I Power Plant Coal and Natural Gas	142,691	50%	71,346		
Municipal Operations	44,194	20%	8,839		
Plant trees residential, businesses, etc.		Plant 10,000 (1-2") trees	150	<i>(Resource cited CUFR Tree Carbon Calculator – US Department of Agriculture Forest Service)</i>	
*All CO ₂ e shown in Metric Tonnes		Total	265,063		

Note that energy usage slightly fluctuates each year, typically because of weather patterns but the goal is to continually demonstrate meaningful decreases in average carbon emissions over the next decade. The scenario above is intended to show the level of emissions generated by each major sector. If our community sees significant emissions reduction in one area, we can adjust the percentage reduction targets based on that success and refocus community efforts on decreasing carbon emissions in other areas.



Analysis and assumptions have been made for each of the major categories identified in the charts above. This report and suggested initiatives support this analysis:

Industrial and Commercial Buildings

- Iowa City buildings identified as Industrial have more than seven times more emissions from electricity than from natural gas and buildings identified as Commercial have more than 2.5 times emissions from electricity, than natural gas. Significant gains toward community goals can be made by incentivizing increased efficiency and pursuing electrification projects.
- Encouraging Iowa City Industrial and Commercial buildings to track or benchmark energy usage would also be a positive step towards emissions reduction.

Residential Buildings

- Residential buildings generate 1.5 more emissions from electricity usage than from natural gas, however reduction in natural gas use will be critical, in accelerating emissions reduction by 2030 and in reducing carbon emissions to net-zero by 2050.
- An emphasis on improved insulation and switching gas appliances to electric could improve energy efficiency by nearly 50% in many homes. Technology furthering these goals continues to improve over time.
- Rental and multi-family properties are the most challenging to track and reduce energy consumption, therefore establishing partnerships and creating programs to assist with these efforts will be needed.

Transportation

- The community (as a whole) must replace 1 out of every 4 personal vehicle miles with an alternative method (bus, walk, bike, EV); although the City's role will be to make it easier to access and provide transportation infrastructure, community partners can lead by encouraging their employees and customers to increasingly adopt alternative transportation options.
- If just 30 new electric cars replace aging or existing vehicles in Iowa City, or 30 people begin to ride the bus, bike, or walk for all trips, it would mean a reduction in 150 metric tonnes of emissions, equivalent to planting about 10,000 trees.
- National level data shows significant greenhouse gas emission savings by use of public transportation as an alternative to driving.

Municipal Operations

- Iowa City Landfill emissions are projected to be 65% of municipal operations in 2025, therefore finding a way to capture and/or reuse methane could be the City's most impactful project.
- Recycling and composting activities will also help reduce City-generated emissions but as the Landfill takes in materials from all over Johnson County, impacts may be limited.
- The City can lead the way by making our buildings and vehicles more efficient, but the City acting alone will not be enough to get us to our goal; the total of *all* City-generated emissions (buildings, transportation, landfill, and other sources) is about 6% of all emissions generated by residential, commercial, and industrial buildings combined.

Planting Trees

- Trees have many benefits, like establishing shade canopies and wind breaks, and are critical for our adaption goals, but sources vary greatly regarding the true GHG reductions from carbon sequestration. For example, if 10,000 trees were planted, the City's annual estimate of emissions reduction from carbon sequestration would start from approximately 150 metric tonnes or more, depending on the species planted.

Closing Summary and Acknowledgements

Through its August 6, 2019 declaration of a climate crisis and simultaneous establishment of goals to reduce citywide carbon emissions 45% by 2030 and approach net-zero by 2050, the City Council indicated a clear desire for Iowa City to be a nationwide leader in local climate action. This report briefly summarizes the City’s climate action planning in recent years and sets forth 64 actions that accelerate our path to meet the City’s carbon emissions reduction targets. Of these 64 actions, approximately half will be dedicated actions beginning in 2020. The table below summarizes the number and type of proposed actions:

Initiative Type	Buildings			Transportation			Waste			Adaptation			Sustainable Lifestyle			Total Initiatives
	2020	2021	2023	2020	2021	2023	2020	2021	2023	2020	2021	2023	2020	2021	2023	
Education	2	1		1		1	2			1	4		2	1		15
Incentives	4	4	2		1	1			1	1			1		1	16
Regulations	2	3			1	1		2		1	1					11
City Policy	2			2		1		1			1			2		9
Projects	1	1	1	1	2		1			3	1		2			13
<i>Key: Green - 2020 / Blue - 2021 - 2023 / Orange – 2024-2025</i>															64	
<i>Number Proposed in Each Start Year: 2020 – 29 / 2021 – 26 / 2024 – 9</i>																

In order to carryout these actions, the City will need strong political leadership, an engaged Climate Action Commission and dedicated staff that can work across all departments and create strong relationships with external stakeholders and the general public. In order to jump-start this effort, this report recommends the creation of an Office of Climate Action and Outreach that will reside in the City Manager’s Office. A core team of three staff members will be assembled to help focus on the implementation of the 64 actions in this report.

Prior to moving to implementation, it is important that the residents and businesses of Iowa City, the Climate Action Commission and the City Council all have ample opportunity to weigh in with their thoughts and ideas on how best to move forward. This report is intended to serve as a starting place for accelerated action, but community engagement is critical to our success. The public must feel that they have ownership in these actions if we expect to reach our long-term targets. It is recommended that the Climate Action Commission consider this report and that they initiate opportunities for public comment before sending their recommendations related to the report to the City Council.

In closing, staff would like to acknowledge the efforts of many in the community, including those on the Climate Action Commission, that have shared their ideas throughout the Climate Action and Adaptation Plan process, and in recent months as the City Council considered revised emission targets and accelerated actions. Your involvement has provided a strong foundation for our future work and will be critical in sustaining that effort in the years ahead.

Appendix

Actions by Type

Type	Description	Plan Area
Education	Promote Energy Efficiency and Performance Tips to the Public *(Next Step)	Buildings
Education	Partner with Stakeholders to Promote Green Building and Rehabilitation *(New)	Buildings
Education	Encourage the Local Realtor Community to Include Energy Performance in the Multiple Listing Services (MLS) Property Inventory *(New)	Buildings
Education	Significant Transportation Education and Outreach Campaigns *(New)	Transportation
Education	Launch an Eco-Driving Campaign Alongside Employers *(New)	Transportation
Education	Engage the Public to Compost Organic Waste *(Next Step)	Waste
Education	Education Campaigns for Neighborhoods to Reduce Waste/Consumption at the Source *(Next Step)	Waste
Education	Develop a Climate Ambassador Team *(New)	Adaptation
Education	Establish "Resilience Hubs" *(New)	Adaptation
Education	Educate and Coordinate with Local Agencies on Health Impacts *(Next Step)	Adaptation
Education	Concentrated Education Campaign for Private Properties about Native Plantings, Permeable Pavement, Rain Gardens, Soil Health, Rain Barrels and Cisterns *(Next Step)	Adaptation
Education	Coordinated Efforts with Local Emergency Agencies *(Next Step)	Adaptation
Education	Host Sustainability Forum and Events *(Next Step)	Sustainable Lifestyle
Education	Launch a Green Business Program: "Climate Action at Work" *(New)	Sustainable Lifestyle
Education	Local procurement campaign - buy-in from local commercial groups *(New)	Sustainable Lifestyle
Incentives	Offer Free Home Energy Tests through Green Iowa AmeriCorps *(Next Step)	Buildings
Incentives	Enhance Energy Standards for City Rehabilitation Projects *(Next Step)	Buildings
Incentives	Coordinate Neighborhood Energy Blitz Events *(New)	Buildings
Incentives	Launch a TIF-funded climate action incentive program aimed at reducing industrial energy consumption *(New)	Buildings
Incentives	Consider a Building Permit Fee Rebate Program for Enhanced Energy Standards *(New)	Buildings
Incentives	Develop or Partner with Local Stakeholders on a Comprehensive Climate Action Rehabilitation Program *(New)	Buildings
Incentives	Initiate a Net-Zero House Design Competition *(New)	Buildings
Incentives	Complete a Net-Zero Demonstration Rehabilitation Project *(New)	Buildings
Incentives	Incentivize Energy Enhancements and Building Re- and Retro-Commissioning for Participants in the Energy Benchmarking Program *(New)	Buildings
Incentives	Launch an Electrification Incentive Program *(New)	Buildings
Incentives	Incentivize Public Transit Options *(New)	Transportation
Incentives	Explore Electric Vehicle (EV) Incentives Based on the Readiness Plan *(New)	Transportation
Incentives	Incentivize Construction Waste Diversion *(Next Step)	Waste
Incentives	Partner with ProjectGreen on a Tree Planting Partnership; Incentives for Private Tree Planting *(New)	Adaptation
Incentives	Expand Community Climate Action Grants *(Next Step)	Sustainable Lifestyle
Incentives	Incentives for the Public to Create and Maintain Local Food Production and Community Gardens *(Next Step)	Sustainable Lifestyle

Regulation	Create a More Robust Energy Code Inspection Program *(New)	Buildings
Regulation	Incorporate Stricter Energy Standards into Tax Increment Financing Policies *(New)	Buildings
Regulation	Incorporate Strict Energy Standards into Height and Density Bonuses *(New)	Buildings
Regulation	Initiate Energy Benchmarking Requirements *(New)	Buildings
Regulation	Develop Climate Action Requirements for all Existing and Future Rental Permits *(New)	Buildings
Regulation	Review Parking Regulations and Consider Innovative Ways to Encourage Alternative Modes of Travel *(New)	Transportation
Regulation	Require Climate Change Analysis for New Subdivisions and Rezonings *(New)	Transportation
Regulation	Develop a Policy/Ordinance Requiring Specific Demolition or Deconstruction Recycling Standards/Procedures *(New)	Waste
Regulation	Mandating signage to assist waste collection *(New)	Waste
Regulation	Street Tree Ordinance *(Next Step)	Adaptation
Regulation	Increase Tree Planting Requirements in Landscaping Standards, Parking Lot Standards and Upon Renewal of Rental Permits *(New)	Adaptation
Policy	Advocate for Local Control of Energy Codes *(New)	Buildings
Policy	Advocate for Aggressive Energy Code Development and Adoption *(New)	Buildings
Policy	Establish an Electric and Fuel-Efficient Vehicle Purchasing Policy *(New)	Transportation
Policy	Track Adherence to City Idling Policy *(Next Step)	Transportation
Policy	Review Transportation Subsidies, Work Schedules and Tele-Work Policies for City Employees *(New)	Transportation
Policy	Require All Park/Public Space Rentals to Recycle and Use "Green" Event Best Practices *(New)	Waste
Policy	Develop Review Standards for New City Facility Construction and Major Rehabilitation that Accounts for Climate Adaptation Principles *(New)	Adaptation
Policy	Develop a Green Procurement Policy *(New)	Sustainable Lifestyle
Policy	Develop a City Sustainability Operations Guide and Make Available to Organizations Throughout Iowa City *(New)	Sustainable Lifestyle
Projects	Solar Partnership with MidAmerican *(New)	Buildings
Projects	Net-Zero Public Housing *(New)	Buildings
Projects	Municipal Building Efficiency and Electrification *(New)	Buildings
Projects	Complete the Transit Study and Implement Recommendations to Bolster Service and Increase Ridership *(Next Step)	Transportation
Projects	Complete Electric Vehicle (EV) Readiness Plan and Implement Recommendations *(Next Step)	Transportation
Projects	Achieve Gold Friendly Bicycle Friendly Community Status and Begin Work Toward Platinum Status *(Next Step)	Transportation
Projects	Initiate a Methane Feasibility Study *(Next Step)	Waste
Projects	Flood Mitigation and Stormwater Management Programs/Projects; Buyouts *(Next Step)	Adaptation
Projects	Continue Implementation of the Natural Areas Management Plan *(Next Step)	Adaptation
Projects	Expand Public Tree Planting *(Next Step)	Adaptation
Projects	Equity Review of Neighborhood and Population Outreach; Develop Outreach Plan for Populations Highly Impacted by Climate Change *(Next Step)	Adaptation
Projects	Develop a Climate Action Strategic Communications Plan *(Next Step)	Sustainable Lifestyle
Projects	Community Garden Expansions/Additions *(Next Step)	Sustainable Lifestyle