



To: Mayor and City Council
From: Nolan Sagan, Sustainability Coordinator
Date: November 12, 2024
Subject: FY 2024/25 Climate Action Plan Update

In August 2020, the City of Ames, with the help of a consultant, conducted a [community-wide greenhouse gas inventory](#). The inventory estimated the greenhouse gas emissions associated with the activities of people who live, work, learn, visit and recreate within the City's geographic boundaries. This results, in addition to a series of public engagement sessions, were then used to help develop the City's first [Climate Action Plan](#) that was accepted by the Ames City Council on June 13, 2023.

Since July 1, 2010, the City of Ames has entered annually into a contract with Iowa State University (ISU) to utilize the services of ISU's full-time Director of Sustainability. The contract covered a maximum of 480 hours annually (or no more than 25 percent of the Director of Sustainability's time). The initial scope of services focused on the reduction of electric consumption, and as additional opportunities and needs arose through the years, the scope of services expanded and diversified to meet the City's needs. After 14 years, in June 2024, the City entered into a two-month contract with ISU to extend the partnership to help with the transition of adding a new full-time Sustainability Coordinator position to the City. The Sustainability Coordinator role has been filled since July 2024, and a primary duty of this position is to coordinate the continued implementation of the Climate Action Plan.

Since the City's partnership began with ISU's full-time Director of Sustainability, an annual fiscal mid-year and year-end sustainability report has been provided to the Ames City Council, typically in the months of January and June. With the Sustainability Coordinator now hired, and given the amount of exciting work happening, the mid-year update is being provided sooner than January.

Following the acceptance of the Climate Action Plan, on January 9, 2024, staff issued a [report](#) outlining seven initial action steps from the Climate Action Plan in accordance with thorough evaluation criteria. These action steps have been the Sustainability Coordinator's main focus, as well as serving as a resource for staff and the community through education and outreach activities.

The presentation on November 12 will focus on the progress made to date in

relationship to the seven action steps.

ATTACHMENT(S):

[FY 2024-25 Climate Action Plan Update.pptx](#)



FY 2024/25 Climate Action Plan Update

November 12th, 2024

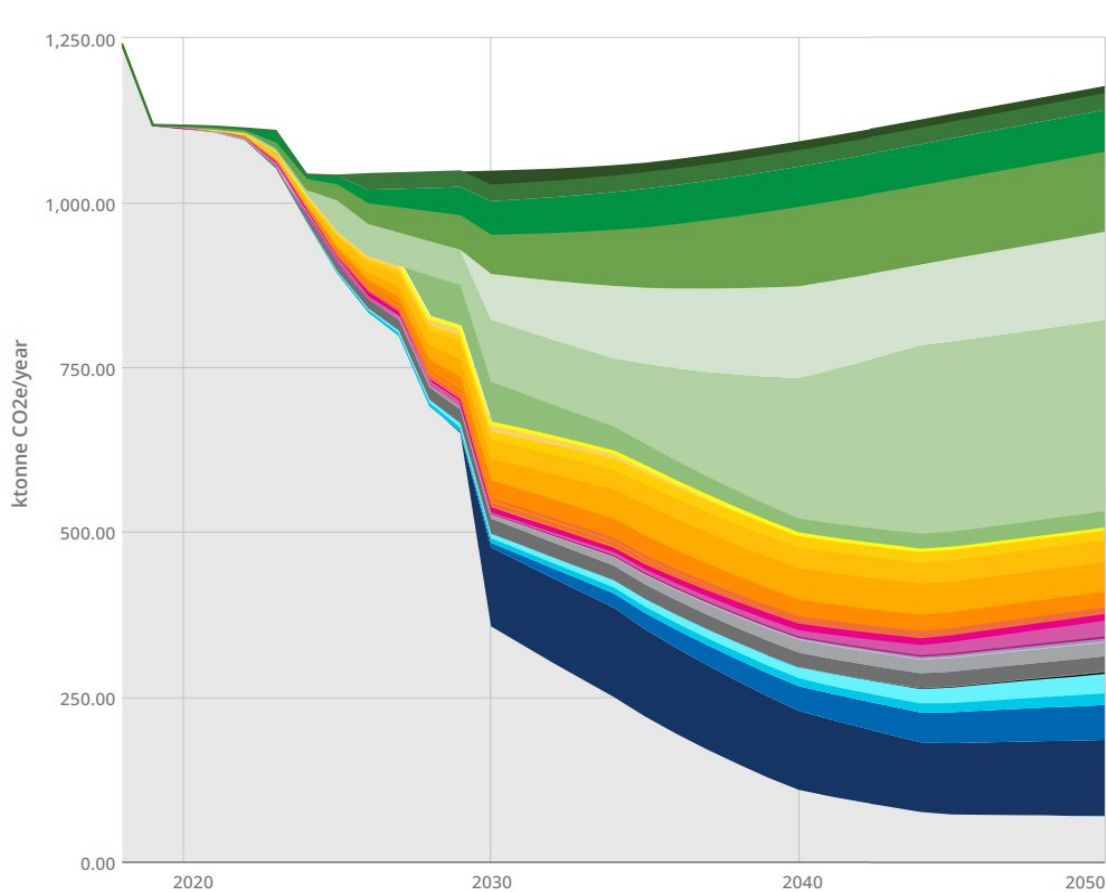
History

Long history of valuing sustainability

- 1975 – Ames opens first innovative waste-to-energy plant
- 2007 - Resolution approving the U.S. Mayors Climate Protection Agreement
- July 1, 2010 – City begins contracting with ISU Sustainability Director for 25% time
- August 2020 – Communitywide Greenhouse Gas Inventory
- August 2020 – June 2023 – Community involvement in developing the Climate Action Plan
 - 27 community member Supplemental Input Committee, 12 public meetings held
- June 2023 – City Council accepted the communitywide Climate Action Plan with the Six Big Moves
- January 2024 - Seven Initial Action Steps Identified
- July 2024 – City hired its first full-time Sustainability Coordinator



Climate Action Plan



Actions	BIG MOVE
<ul style="list-style-type: none"> 1.1 Renewable natural gas for district energy 1.2 Wind generation 1.3 Electric boilers for district energy 1.4 Solar PV on roofs 1.5 Decarbonisation of the MISO grid 1.6 Ground mount solar 1.7 Renewable natural gas in buildings 	1. Renewable energy generation
<ul style="list-style-type: none"> 2.1 Electrification of industrial processes 2.2 Retrofit of municipal buildings 2.3 High efficiency hot water in retrofit of homes 2.4 Enhanced industrial efficiency 2.5 Retrofits of homes 2.6 Retrofits of non-residential buildings 2.7 High efficiency hot water in retrofits of non-residential buildings 2.8 Heat pumps in non-residential retrofits 2.9 Heat pumps in residential retrofits 	2. Building retrofits program
<ul style="list-style-type: none"> 3.1 Heat pumps in new non-residential buildings 3.2 High performance new homes 3.3 High performance new non-residential buildings 3.4 Hot water heat pumps in new non-residential buildings 3.5 High performance new municipal buildings 3.6 Heat pumps in new homes 	3. Net zero new construction
<ul style="list-style-type: none"> 4.1 Electrify the municipal fleet 4.2 Electrify personal vehicles 4.3 Electrify commercial vehicles 4.4 Electrify transit 4.5 Net zero aviation fuels for local flights 	4. Reduce vehicle emissions
<ul style="list-style-type: none"> 5.1 Increased walking and cycling 5.2 Reduced driving 	5. Increase active transportation and transit use
<ul style="list-style-type: none"> 6.1 Increased waste diversion 6.2 New waste to energy facility 	6. Reduce waste emissions
Carbon liability	

6 Big Moves
31 Strategies



SEVEN INITIAL ACTION STEPS

Using the eight evaluation criteria, the City of Ames identified seven priority areas to focus resources on to reduce community carbon emissions

Eight evaluation criteria

1. Cost
2. Administrative effort needed
3. Feasibility of achievement
4. Legal feasibility
5. Available funding sources
6. Impact on property taxes and utility rates
7. Impact on inclusion
8. Cost compared to the tonnage of carbon reduced

- 1 Increase wind and solar generation as part of electric services renewable energy portfolio
- 2 Waste-to-energy improvements/reducing waste emissions
- 3 Net zero and net zero-ready new construction
- 4 Retrofitting existing buildings
- 5 Retrofit municipal buildings
- 6 Electrify the municipal fleet (non-CyRide)
- 7 Create a mayor's Climate Action Plan leadership task force

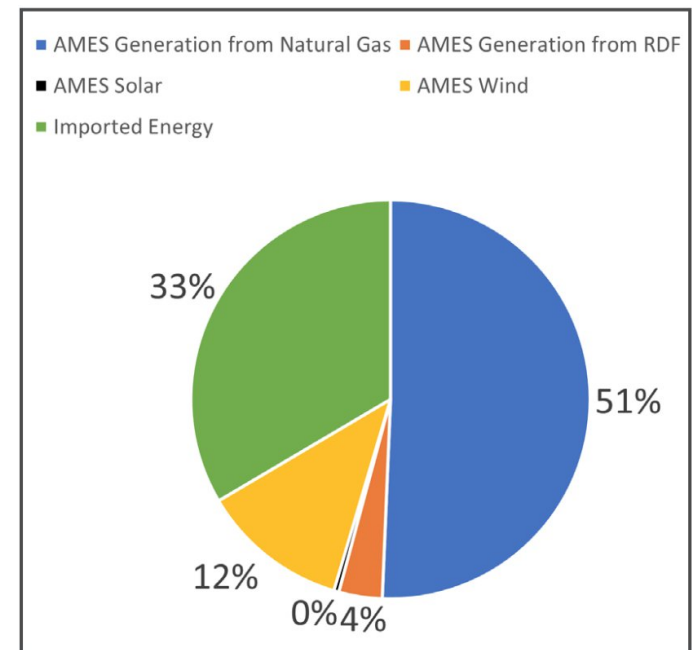


1. Increase Renewable Generation

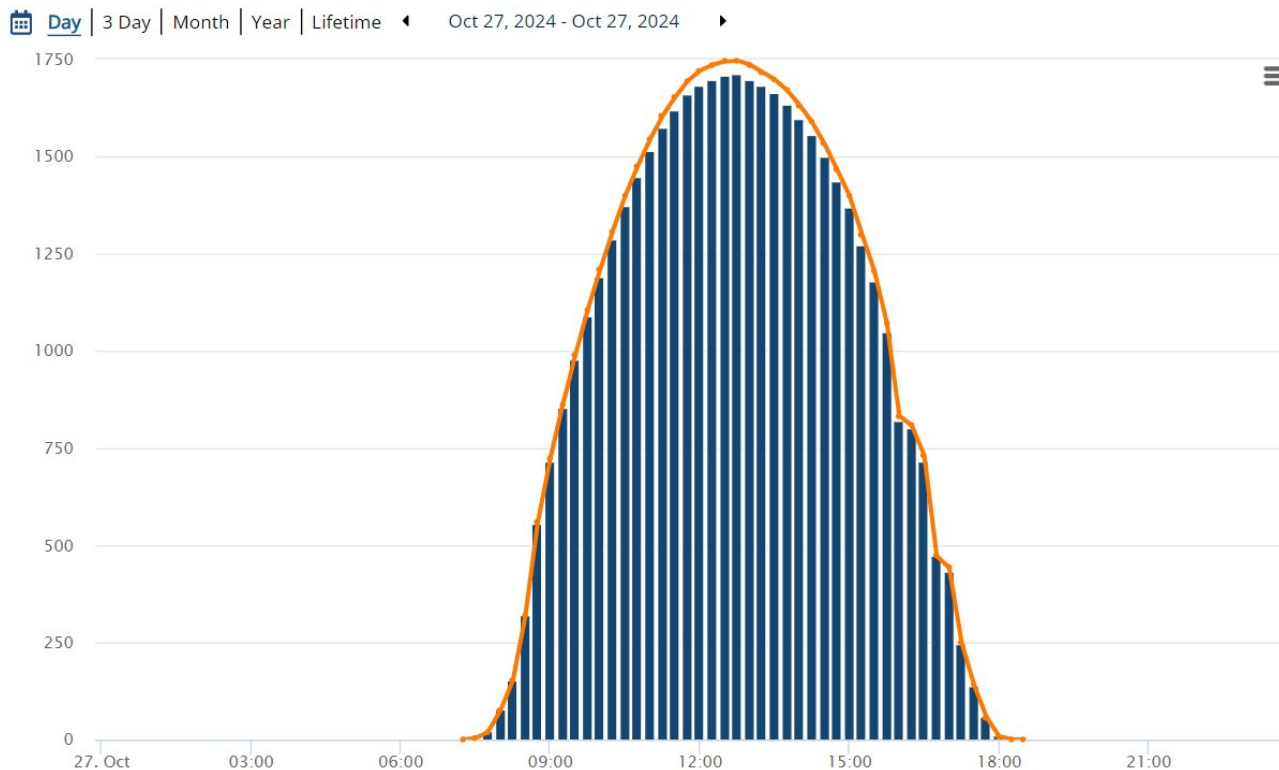
- Progress – Ames Municipal Electric System (AMES)
 - 2010 – 30 MW wind power purchase agreement (through 2030)
 - Enough to power almost 10,000 homes each year
 - 2016 – Transitioned AMES away from coal resulting in 40% emission reduction
 - Comparisons - coal and renewable generation

2023	AMES	Iowa	National
% Renewable	16%	60%	16%
% Coal	0%	24%	16%

2023 Generation Mix



IA City of Ames - Airport Road



814.58 kW

Power

450 kWh

Energy Today

450 kWh

Energy This Month

2.84 GWh

Energy This Year

12.35 GWh

Energy Lifetime

System Size: 2 MW

Operating Since: 10/31/2020, 10:45:00 AM CDT

Month

Lifetime



Trees

218,283

Trees planted



Gas

957,922

Gallons of gasoline



Energy

12.35 GWh

Generated



Water

6.17 Million

Gallons of water

- SunSmart – 2 MW, 10 acre community solar farm
 - ~75% of Power Packs sold
 - Cityofames.org/solar

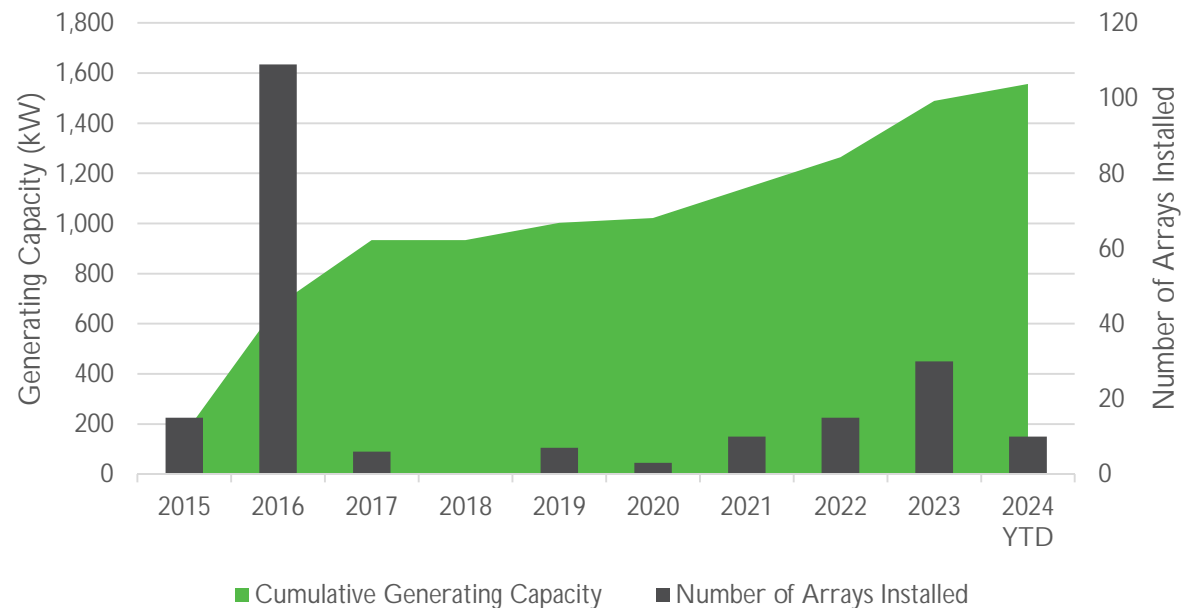


1. Increase Renewable Generation

Looking ahead

- Comprehensive planning – cost and reliability, technical considerations
 - Linked to Resource Recovery
- Competitive environment for utility-scale renewable projects
- Promoting private solar
 - 210 installations (AMES)
 - 11 commercial
 - SolSmart Silver certification in 2017, considering pursuing gold
- Solar on municipal buildings
 - Fitch Aquatic Center
 - Steven L. Schainker Plaza

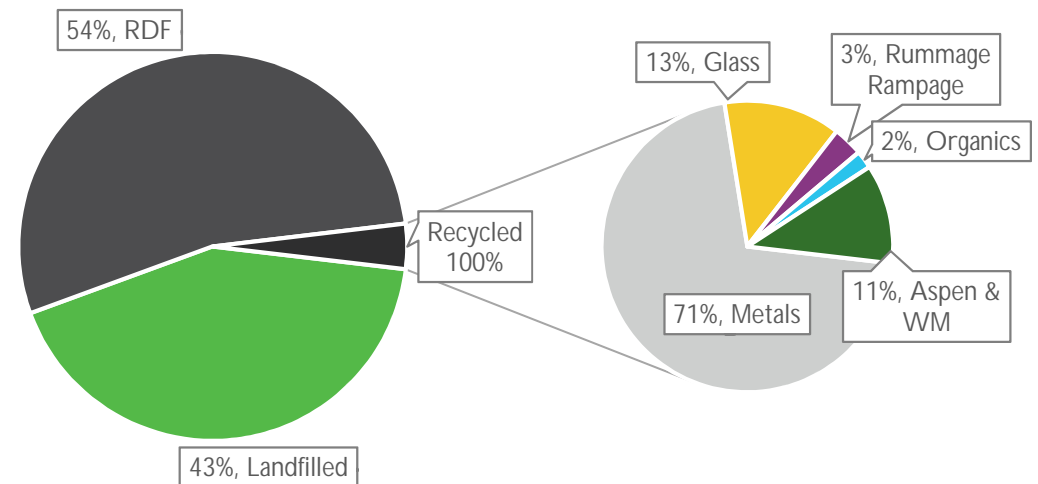
Private Solar



2. Reduce Waste Emissions

- Progress
 - Resource Recovery - 50th anniversary next year
 - Rummage Rampage – 433 tons diverted and \$285,000 raised over 8 years
 - Drop-off recycling
 - 2024 to date – 100+ tons of new recycling
- Looking ahead
 - Seeking landfill partner
 - Continue to expand recycling
 - Education & outreach
 - Recyclopedia map – partnership with ISU
- National Picture
 - Average diversion rate – 32%
 - ~75% of waste is recyclable/compostable

2023 Ames Solid Waste & Recycling



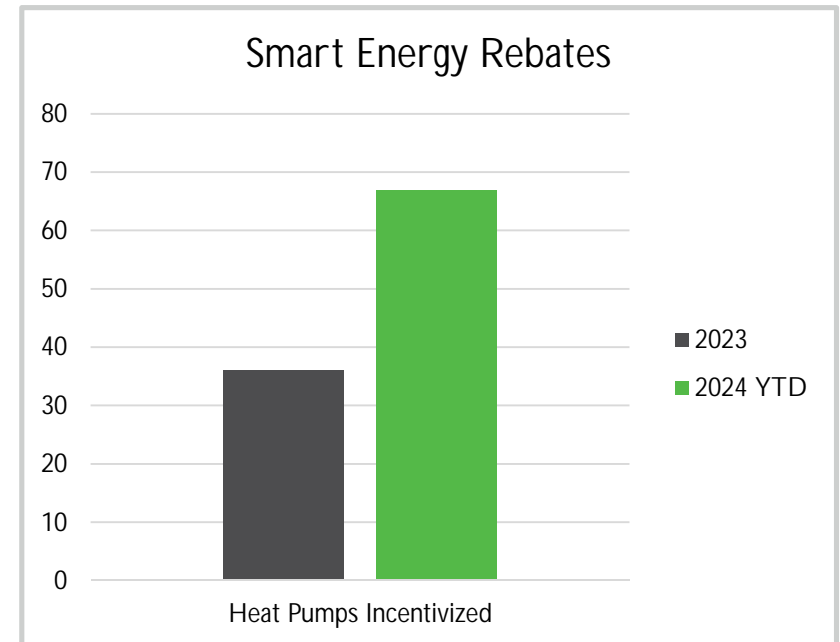
3. Net Zero Ready New Construction

- Progress
 - Smart Energy Rebates - 9 net zero ready new homes this year
 - Enhanced tax abatement program for new construction single-family homes
- Looking ahead
 - Pilot project, in partnership with builder



4. Building Retrofits

- Progress
 - Smart Energy rebates for Electric customers
- Looking ahead
 - Exploring different financial incentive structures and funding sources
 - EPA Community Change Grant Opportunity
 - Education on home efficiency upgrades



Heat Pumps Open House

- Education and outreach event
- Learn about Smart Energy rebates and federal incentives
- City staff, contractors, and homeowners available to answer questions

heat pumps

**OPEN
HOUSE**



Join heating and cooling experts for an open house at the Ames Public Library. This event will provide participants the opportunity to ask questions and get information about energy-efficient heat pumps.

WHEN

Tuesday, Nov. 19, 4-6 p.m.

WHERE

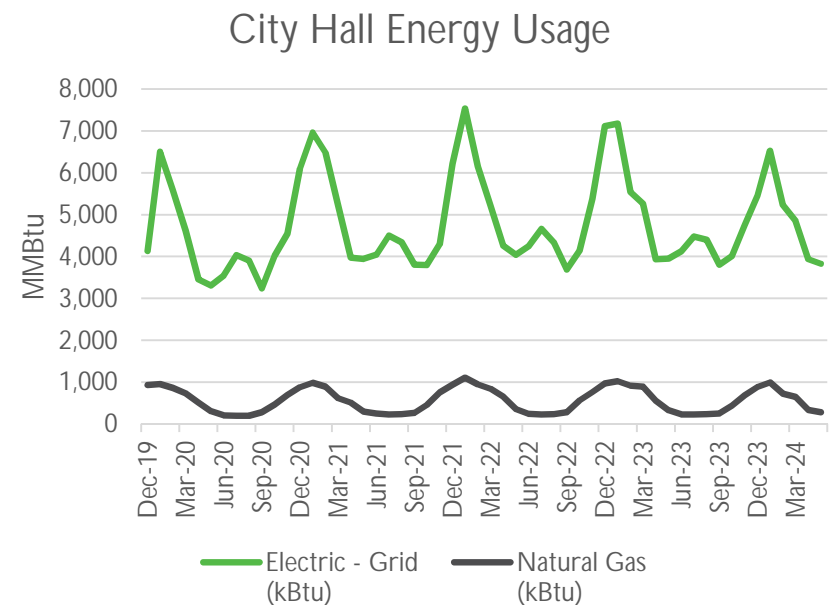
**Ames Public Library
Danfoss Room
515 Douglas Ave.**



**Ames Electric Services, 502 Carroll Ave.
515.239.5170
www.CityOfAmes.org/SmartEnergy**

5. Municipal Building Retrofits

- Progress
 - Clean Energy to Communities (C2C) – Department of Energy peer-learning cohort
 - Facility energy audits project – RFP currently out
 - Engineering analysis of buildings and energy systems
 - Recommend comprehensive set of specific, cost-effective energy conservation measures
 - Benchmarking energy and water usage of each municipal building
- Looking ahead
 - Use energy audits to prioritize retrofit projects (Spring 2025)
 - Solar at municipal facilities
 - Evaluate net-zero ready for all new municipal buildings

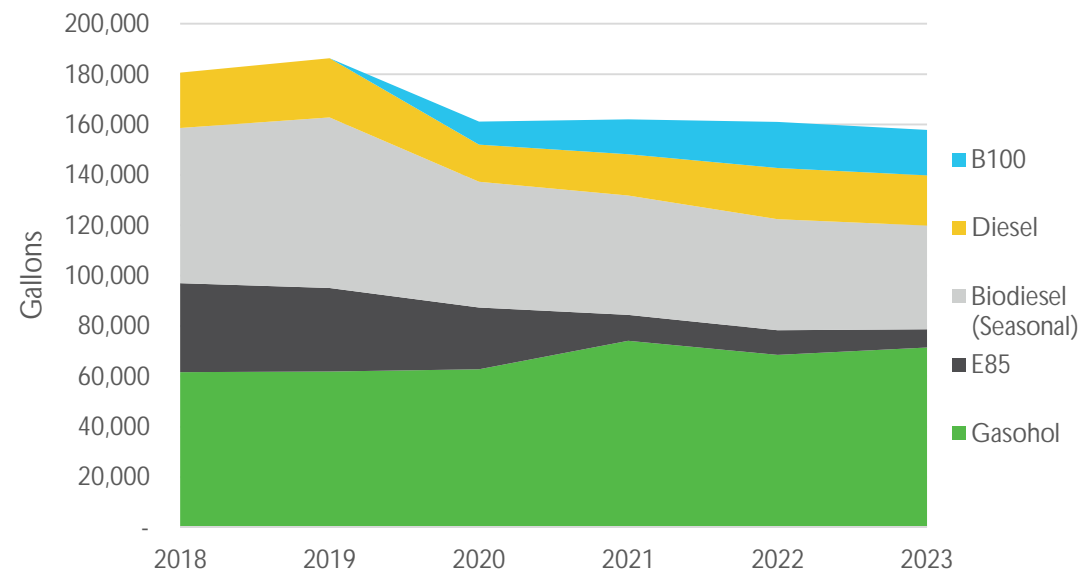


6. Electrify the Municipal Fleet (non-CyRide)

- Progress
 - 6 EVs, 4 on order
 - 2 sedans, 2 SUVs, and 6 pickups
 - 14 hybrids
 - B100 program – 11 snowplow trucks, seasonal use in construction equipment
- Looking ahead
 - Continue to assess the viability of purchasing an EV when vehicles are due for replacement



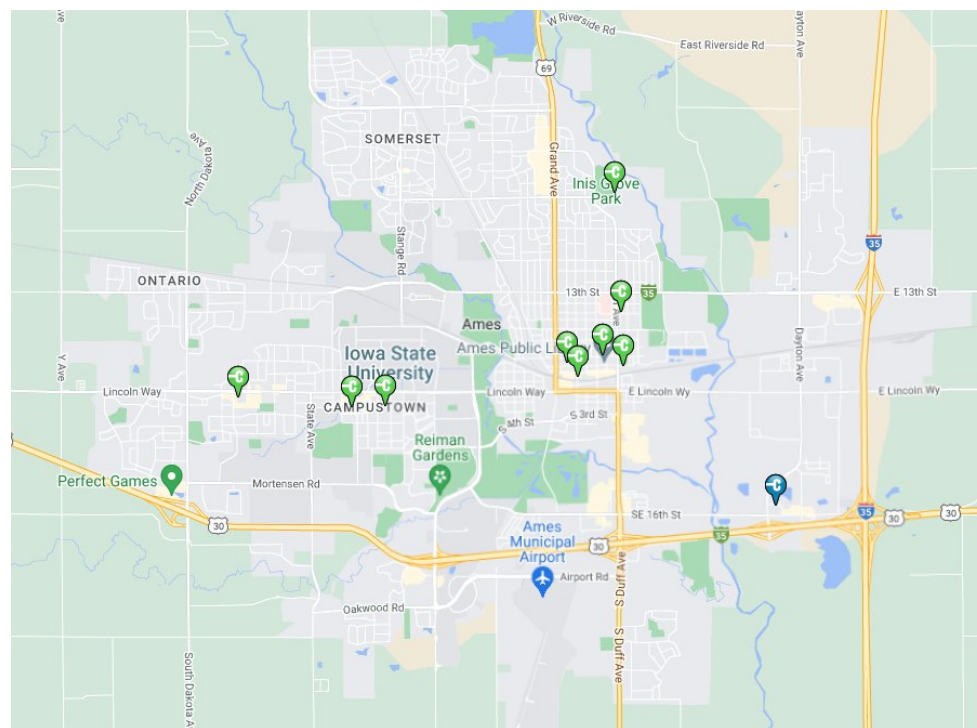
Municipal Fleet Fuel Use



6. Electrify the Municipal Fleet (non-CyRide)

Electric Vehicle Charging

- Progress
 - 20 public charging ports
 - 130 MWh delivered this year
 - Equivalent to 468,000 EV passenger miles
- Looking ahead
 - Adding additional EV charging stations to municipal buildings that don't currently have one



7. Establish Mayor's Leadership Task Force

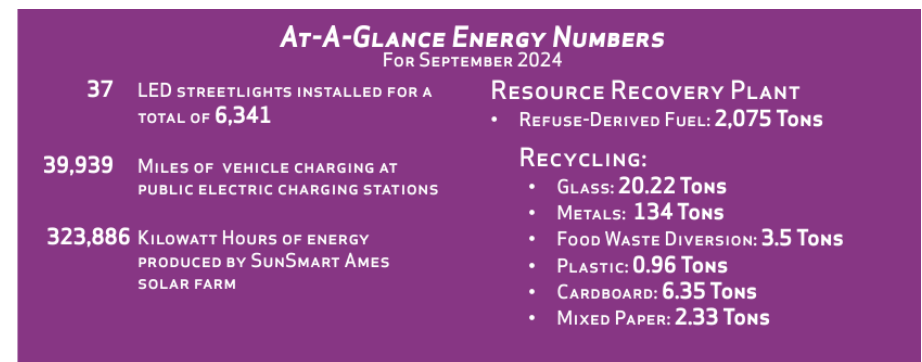
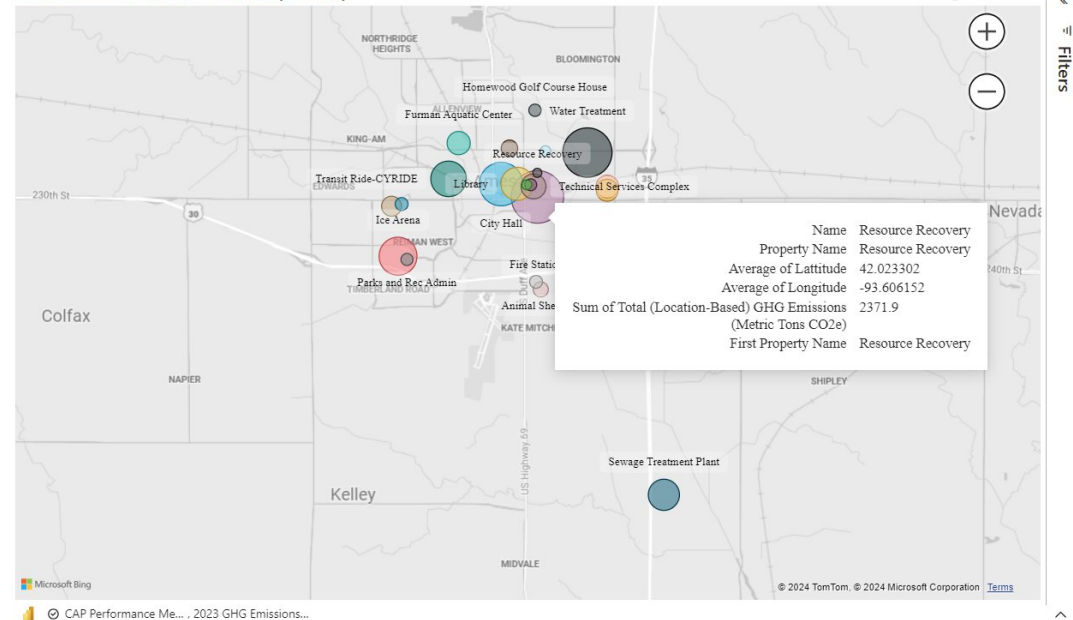
- Progress
 - Mayor's Sustainable Business Luncheon – August 2024
 - Recognized business accomplishments in sustainability
 - Understand barriers businesses are facing
 - Identify opportunities for the City to support
- Looking ahead
 - Outreach targeted towards large businesses
 - Planning additional engagements open to all businesses



Outreach & Communications

- Engagement and events
 - EcoFair, Mayor's Sustainable Business Luncheon, ISU Campus Sustainability Month
 - Invited to speak at: Season of Creation, ISU Planning Class, Audubon Society
- Monthly internal Sustainability Team meetings
- Reporting
 - Biannual Council updates
 - Cityside metrics
 - Dashboard

2023 GHG Emissions (MT CO2e) by Facility



Looking Ahead

- Electric comprehensive planning for more renewables
- Expand community-wide recycling
- Invest in municipal building upgrades
 - Energy efficiency and solar
- Continue transition to EVs and expand charging network
- Engage more businesses on sustainability
- Update GHG Inventory – spring 2025
- Next CAP update – June 2025



SUSTAINABLE
AMES

