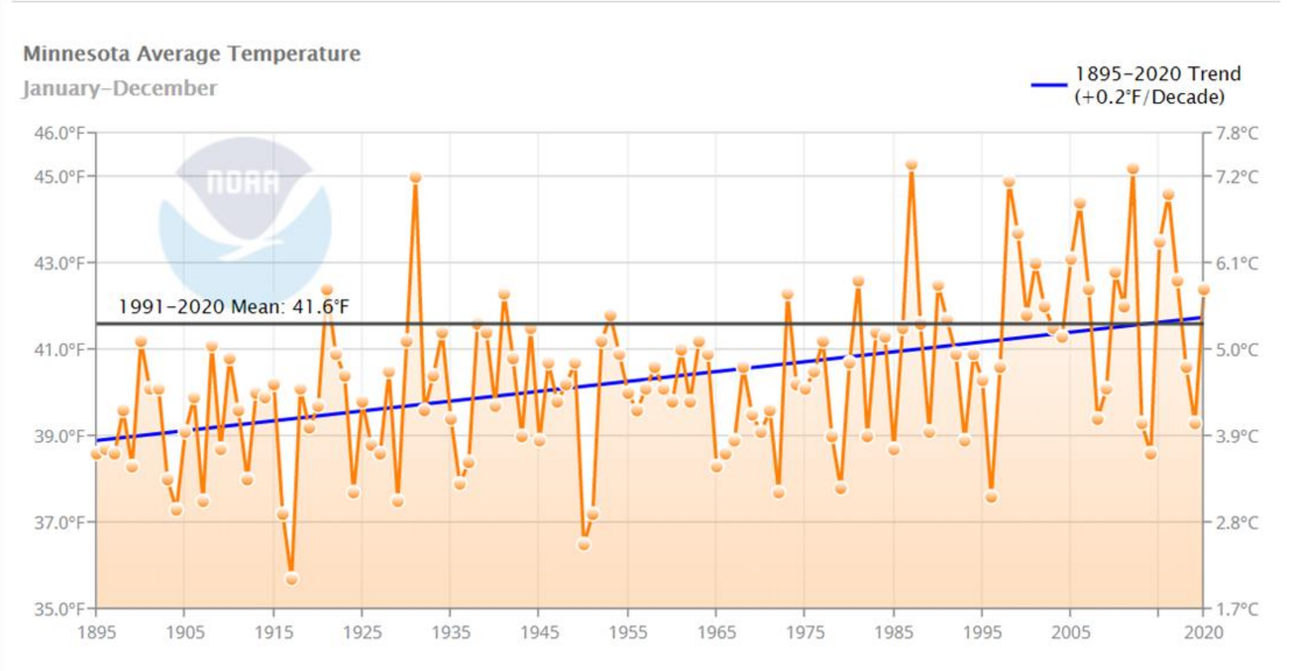
Climate Change in Bloomington

Emma Struss, Sustainability Coordinator

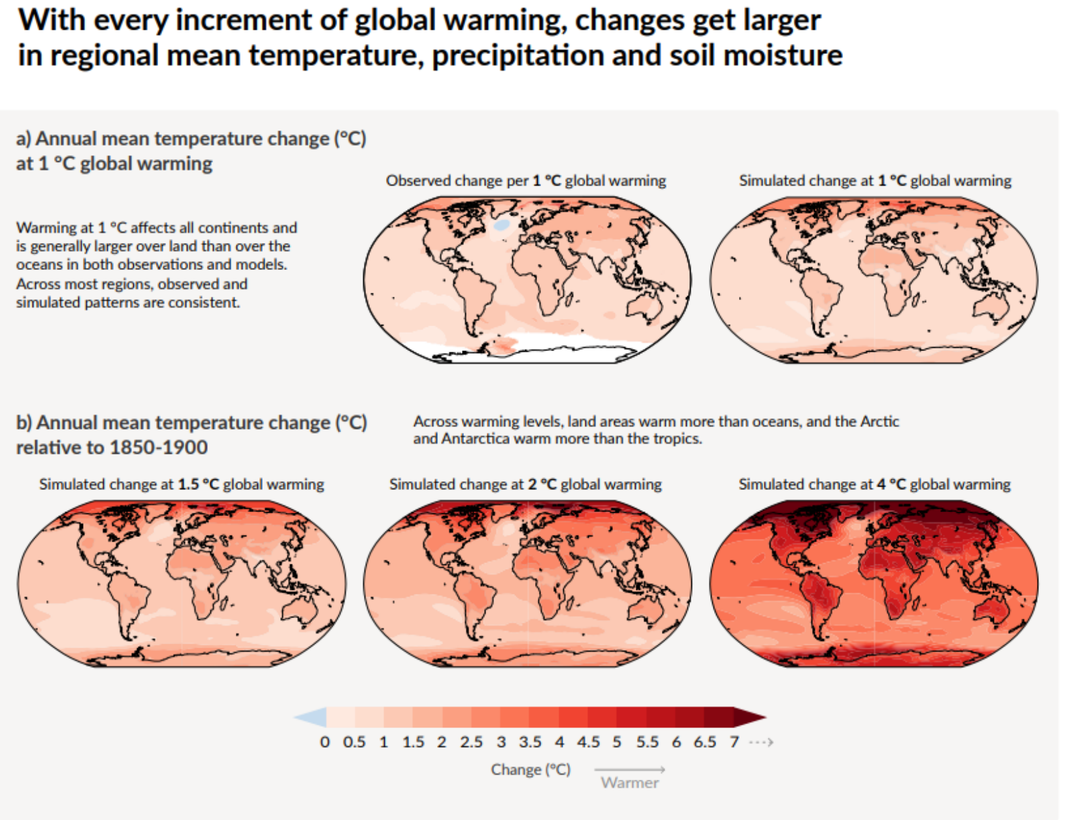
Minnesota is warming faster than other states.



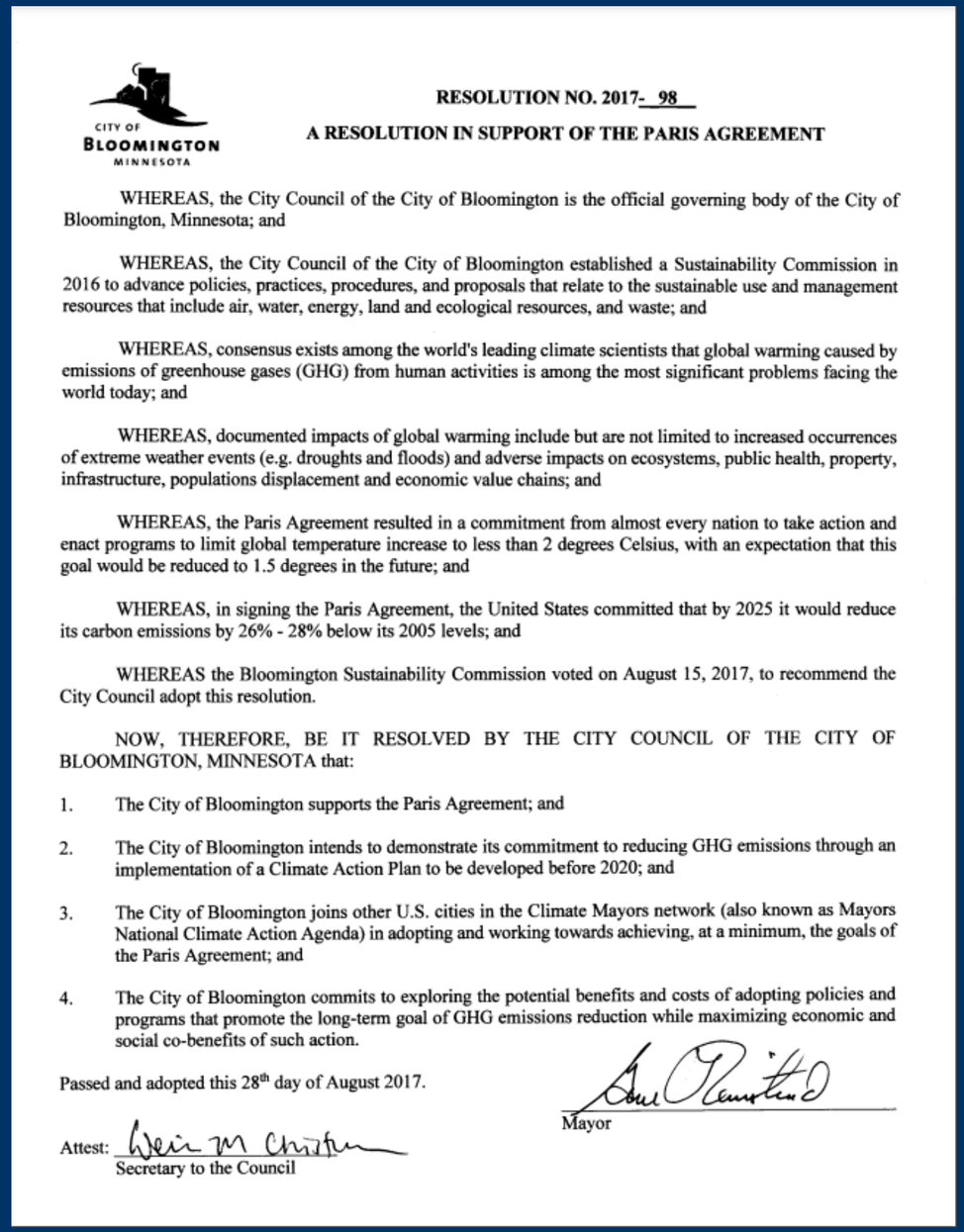
Source: National Atmospheric and Oceanic Administration

- "Global surface temperature will continue to increase until at least the mid-century under all emissions scenarios considered."

- "Unless there are immediate, rapid and large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5 degrees Celsius or even 2 degrees Celsius will be beyond reach,"



Source: Intergovernmental Panel on Climate Change



CITY OF BLOOMINGTON MINNESOTA

RESOLUTION NO. 2017- 98

A RESOLUTION IN SUPPORT OF THE PARIS AGREEMENT

WHEREAS, the City Council of the City of Bloomington is the official governing body of the City of Bloomington, Minnesota; and

WHEREAS, the City Council of the City of Bloomington established a Sustainability Commission in 2016 to advance policies, practices, procedures, and proposals that relate to the sustainable use and management resources that include air, water, energy, land and ecological resources, and waste; and

WHEREAS, consensus exists among the world's leading climate scientists that global warming caused by emissions of greenhouse gases (GHG) from human activities is among the most significant problems facing the world today; and

WHEREAS, documented impacts of global warming include but are not limited to increased occurrences of extreme weather events (e.g. droughts and floods) and adverse impacts on ecosystems, public health, property, infrastructure, populations displacement and economic value chains; and

WHEREAS, the Paris Agreement resulted in a commitment from almost every nation to take action and enact programs to limit global temperature increase to less than 2 degrees Celsius, with an expectation that this goal would be reduced to 1.5 degrees in the future; and

WHEREAS, in signing the Paris Agreement, the United States committed that by 2025 it would reduce its carbon emissions by 26% - 28% below its 2005 levels; and

WHEREAS the Bloomington Sustainability Commission voted on August 15, 2017, to recommend the City Council adopt this resolution.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLOOMINGTON, MINNESOTA that:

1. The City of Bloomington supports the Paris Agreement; and
2. The City of Bloomington intends to demonstrate its commitment to reducing GHG emissions through an implementation of a Climate Action Plan to be developed before 2020; and
3. The City of Bloomington joins other U.S. cities in the Climate Mayors network (also known as Mayors National Climate Action Agenda) in adopting and working towards achieving, at a minimum, the goals of the Paris Agreement; and
4. The City of Bloomington commits to exploring the potential benefits and costs of adopting policies and programs that promote the long-term goal of GHG emissions reduction while maximizing economic and social co-benefits of such action.

Passed and adopted this 28th day of August 2017.

Mayor

Attest:
Secretary to the Council

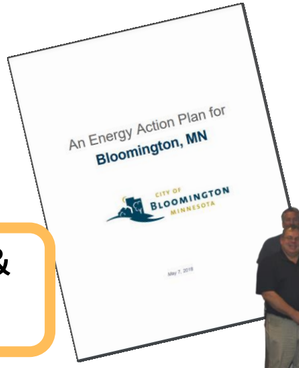
To limit warming to 1.5 degrees Celsius, carbon emissions must be halved by 2030 (from 2005 levels).

2017

- Sustainability Commission formed.
- Council passed resolution in support of the Paris Agreement.

2018

- **Council adopted Energy Action Plan & first city-wide GHG reduction goals.**
- Full-time recycling, organics, and solid waste staff member hired.

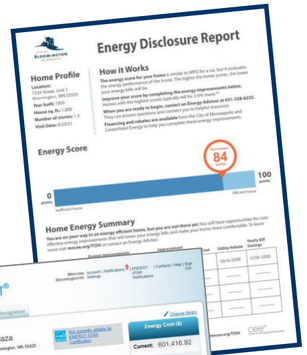


2019

- Full-time sustainability coordinator hired.
- City started receiving annual energy data from both utilities.

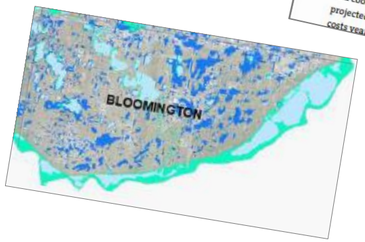
2020

- City completed recommended upgrades from 2018 municipal facility energy efficiency study.
- City started researching connections between equity and climate change.



2021

- City Council adopted two energy disclosure ordinances, Time of Sale Energy Disclosure and Large Building Benchmarking.
- City completed research project on staff commuting habits.



Largest sources of greenhouse gas emissions in Bloomington

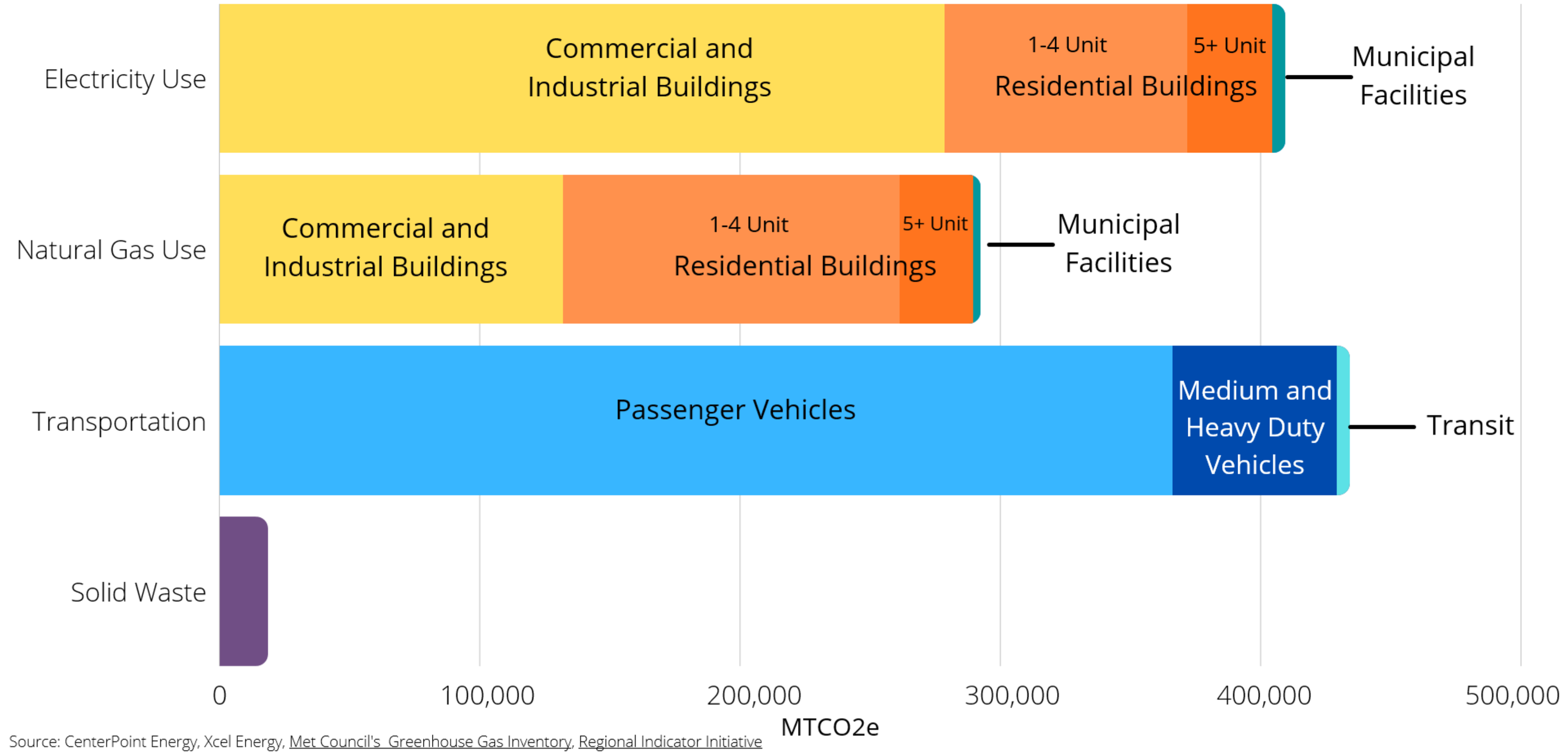
Energy

Using natural gas and electricity in buildings

Transportation

Driving passenger, medium, and heavy duty vehicles

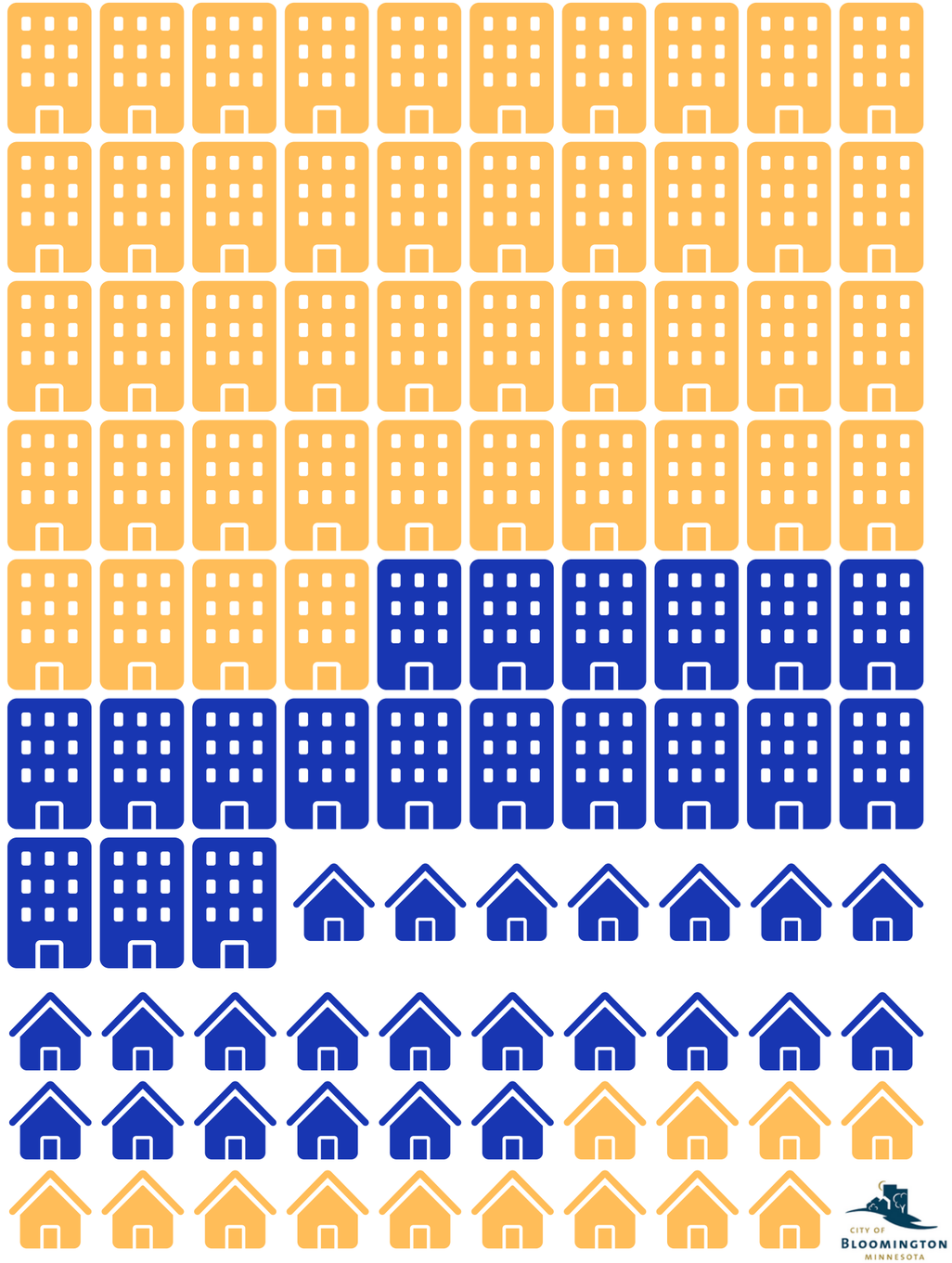
Sources of Bloomington's Greenhouse Gas Emissions



Source: CenterPoint Energy, Xcel Energy, Met Council's Greenhouse Gas Inventory, Regional Indicator Initiative

2021 Energy Update

Sources of Bloomington's Energy-Related GHG Emissions



Commercial/ Industrial

1-4 Unit Residential

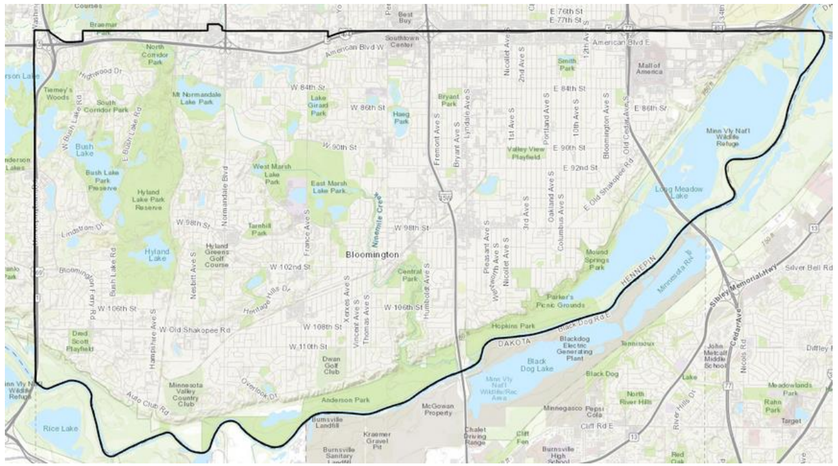
City Facilities

Natural Gas

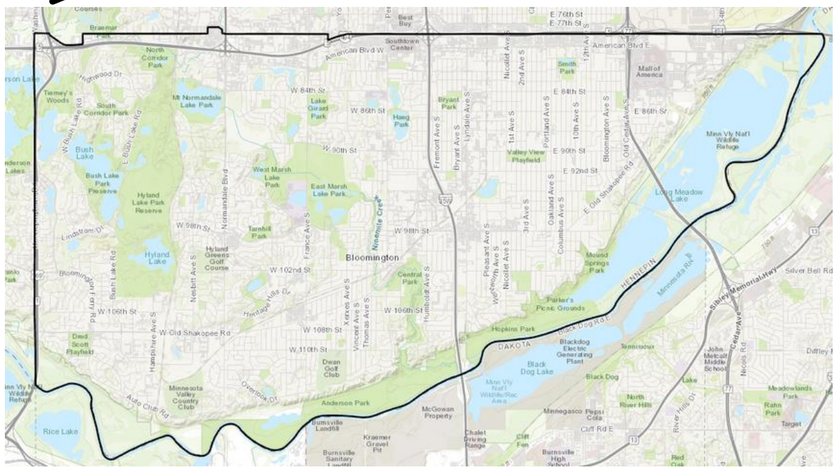
Electricity

1 Icon = 1% of energy-related GHG emissions

~43,000 Xcel Energy Customers in Bloomington (2020)


Bloomington
Normandale Blvd
West Bush Lake Rd
Bush Lake Rd
Nine Mile Creek
Penn Ave S
Nicollet Ave S
Portland Ave S
Bryant Ave S
Fremont Ave S
Lyndale Ave S
1st Ave S
2nd Ave S
3rd Ave S
Oakland Ave S
Columbus Ave S
Bloomington Ave S
Old Cedar Ave S
American Blvd W
American Blvd E
W 84th St
W 86th St
W 90th St
E 90th St
E 92nd St
E 84th St
E 86th St
W 98th St
W 102nd St
W 106th St
W 108th St
W 110th St
W Old Shakopee Rd
Hyland Lake Park Reserve
Bush Lake Park Preserve
Hyland Greens Golf Course
West Marsh Lake Park
East Marsh Lake Park
Tarnhill Park
Central Park
Mound Springs Park
Parker's Picnic Grounds
Hopkins Park
Valley View Playfield
Smith Park
Haeg Park
Lake Orand Park
Mall of America
Long Meadow Lake
Minn Vly Nat'l Wildlife Refuge
Minnesota Valley County Club
Dwan Golf Club
David Scott Playfield
Anderson Park
McGowan Property
Burnsville Landfill
Kraemer Gravel Pit
Chalet Driving Range
Cliff Fen
Burnsville High School
Minnegasco Pipps Cdte
Cliff Rd E
Black Dog Lake
Blackdog Electric Generating Plant
Black Dog
Minnesota River
Long Lake
North River Hills
Rice Lake
Meadowlands Park
Rahn Park
Target
John Metcalf Middle School
Dutley
Nicols Rd
Silver Bell Rd
Richardson Rd
Old Shakopee Rd
Aldrich Ave S
Humboldt Ave S
Knox Ave S
Vincent Ave S
Thomas Ave S
Hamilton Ave S
Nesbit Ave S
Girard Ave S
Fernbrook Ln
Tamarack Rd
Bloomington Ferry Rd
Creek Valley Dr
Aldrich Ct S
Ave S
Ave S
Ave

~30,475 CenterPoint Energy Customers in Bloomington (2020)



= 100 natural gas customers

= Business customers

= Residential customers

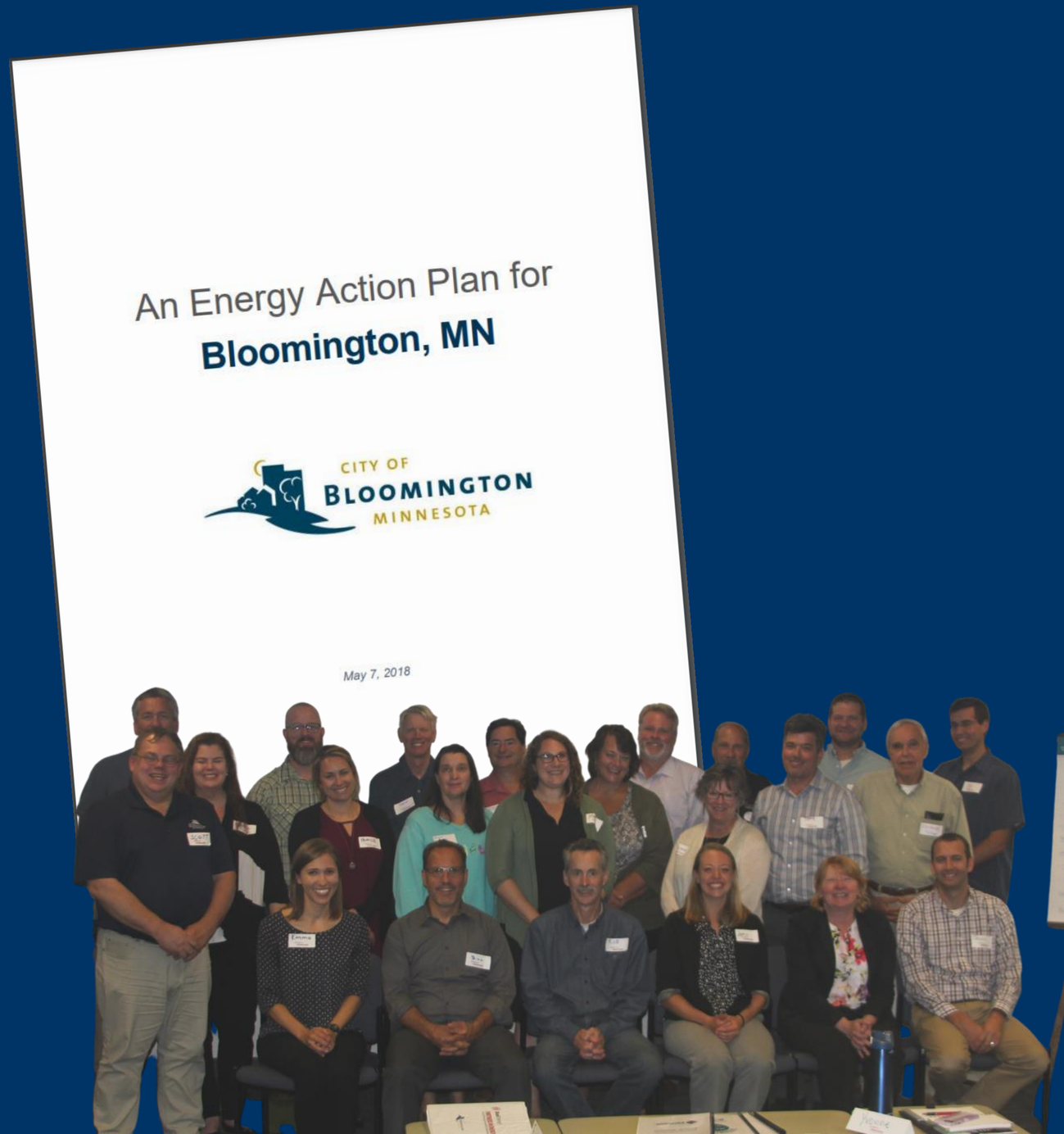
Goals

Energy

75% reduction in city-wide energy-related greenhouse gas emissions by 2035, relative to 2016 levels.

Transportation

Pursue all viable opportunities for promoting the elimination of vehicle emissions, including support for electric vehicles, increased public transportation, higher-density and mixed-use zoning, additional biking and pedestrian infrastructure, and telecommuting.

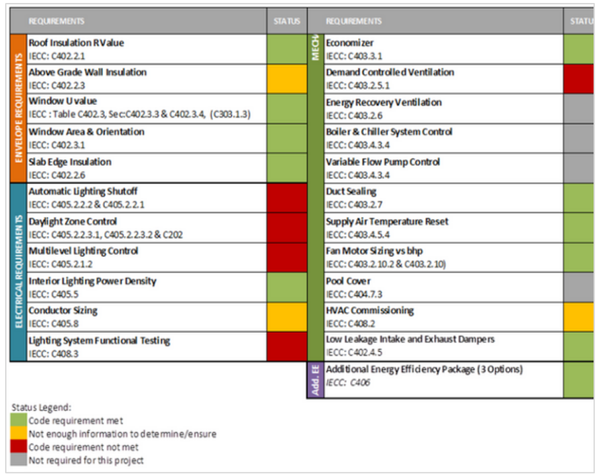


Energy Efficiency

Renewable Energy

Commercial, Industrial, 5+ Unit Multifamily

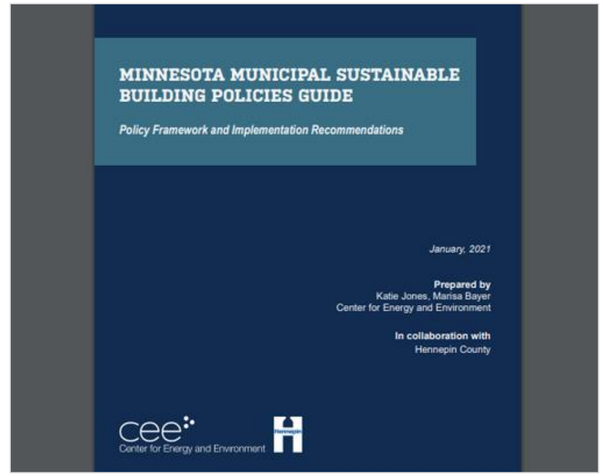
Large Building Benchmarking



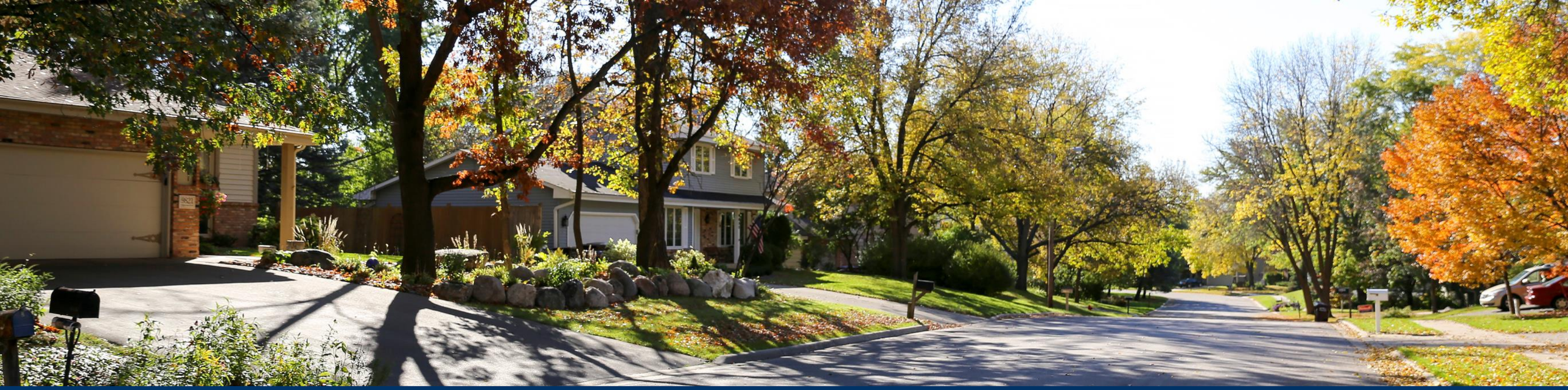
REQUIREMENTS	STATUS	REQUIREMENTS	STATUS
ENVELOPE REQUIREMENTS		MECH	
Roof Insulation R Value IECC: C402.2.1		Economizer IECC: C403.3.1	
Above Grade Wall Insulation IECC: C402.2.3		Demand Controlled Ventilation IECC: C403.2.5.1	
Window U value IECC : Table C402.3, Sec:C402.3.3 & C402.3.4, (C303.1.3)		Energy Recovery Ventilation IECC: C403.2.6	
Window Area & Orientation IECC: C402.3.1		Boiler & Chiller System Control IECC: C403.4.3.4	
Slab Edge Insulation IECC: C402.2.6		Variable Flow Pump Control IECC: C403.4.3.4	
ELECTRICAL REQUIREMENTS			
Automatic Lighting Shutoff IECC: C405.2.2.2 & C405.2.2.1		Duct Sealing IECC: C403.2.7	
Daylight Zone Control IECC: C405.2.2.3.1, C405.2.2.3.2 & C202		Supply Air Temperature Reset IECC: C403.4.5.4	
Multilevel Lighting Control IECC: C405.2.1.2		Fan Motor Sizing vs bhp IECC: C403.2.10.2 & C403.2.10)	
Interior Lighting Power Density IECC: C405.5		Pool Cover IECC: C404.7.3	
Conductor Sizing IECC: C405.8		HVAC Commissioning IECC: C408.2	
Lighting System Functional Testing IECC: C408.3		Low Leakage Intake and Exhaust Dampers IECC: C402.4.5	
		Add. EE Additional Energy Efficiency Package (3 Options) IECC: C406	

Status Legend:
Code requirement met
Not enough information to determine/ensure
Code requirement not met
Not required for this project

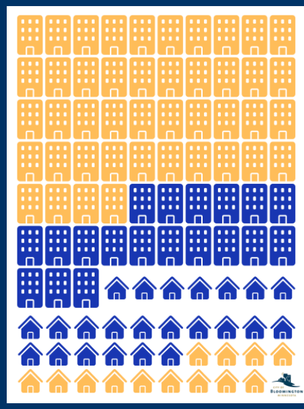
Community Codes Support Program

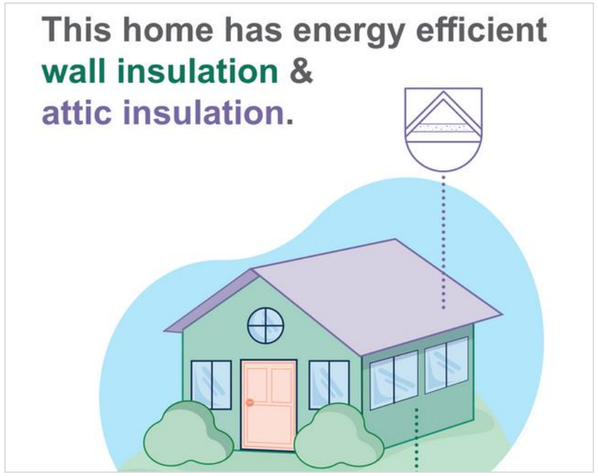


Sustainable Building Design Research



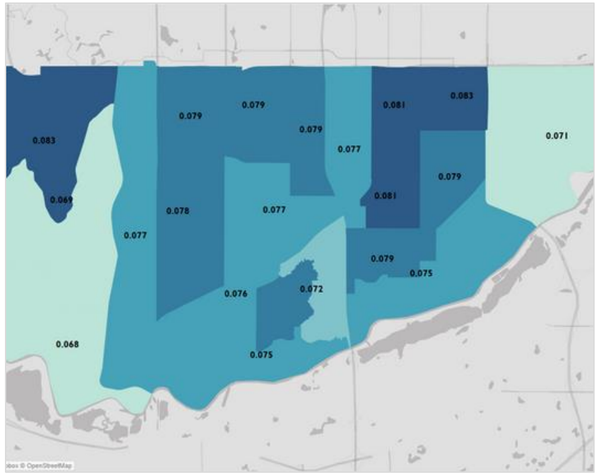
1-4 Unit Residential





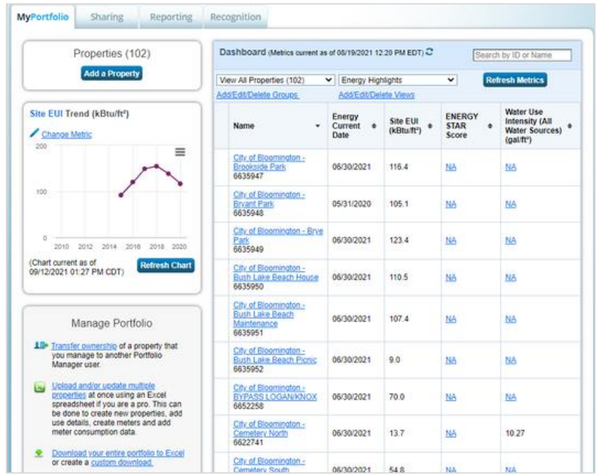
Time of Sale Energy Disclosure

Energy Program Promotion



Energy Burden Research

City Facilities



Energy Benchmarking

Energy Design Assistance Program

Researching Renewable Energy Options

Implementation Support

2021 Service Projects

Clara von Dohlen

2020-2021 Minnesota GreenCorps Member

Yanyan Zeng

Summer 2021 Harvard SPARK Public Service Internship

2021 Free Technical Assistance

Center for Energy and Environment

- Time of Sale Energy Disclosure

Hennepin County

- Efficient Buildings Collaborative (Large Building Benchmarking)
- Sustainable Building Policy Research

Xcel Energy

- Partners in Energy
- Community Codes Support Program

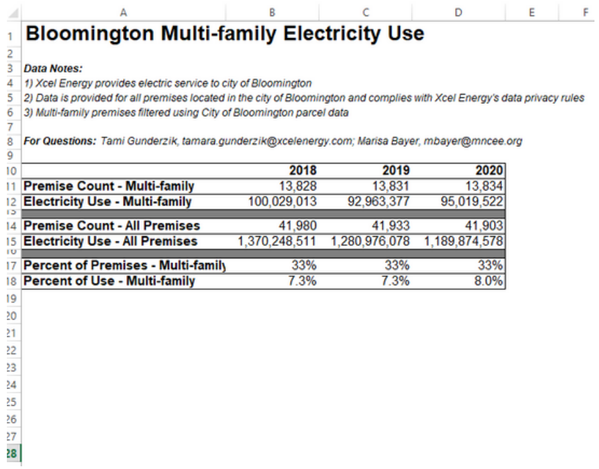
CenterPoint Energy

- Data Requests
- Energy Advisor Service

Great Plains Institute

- Renewable Energy Research

2021 Data Requests



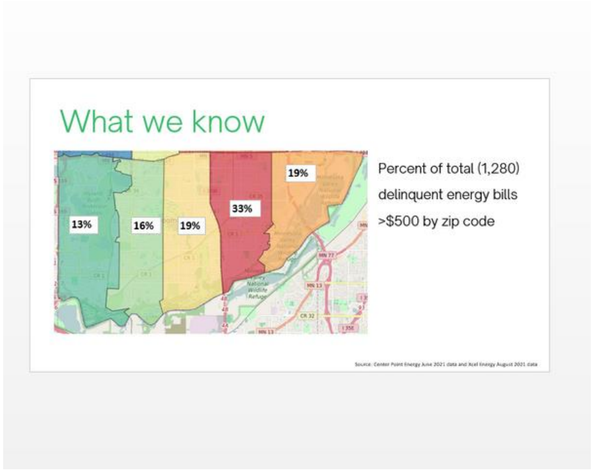
Bloomington Multi-family Electricity Use

Data Notes:
1) Xcel Energy provides electric service to city of Bloomington
2) Data is provided for all premises located in the city of Bloomington and complies with Xcel Energy's data privacy rules
3) Multi-family premises filtered using City of Bloomington parcel data

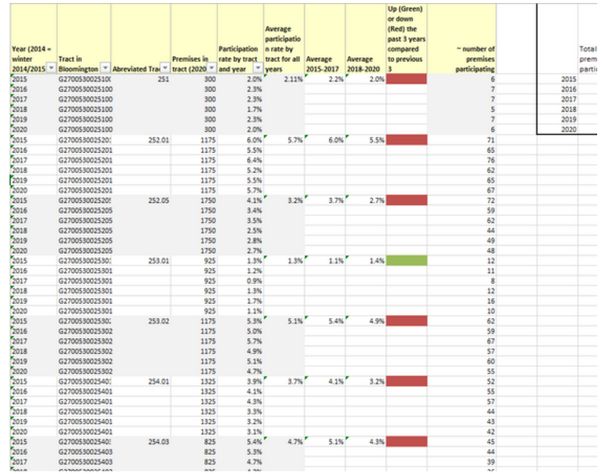
For Questions: *Tami Gunderzik, tamara.gunderzik@xcelenergy.com; Marisa Bayer, mbayer@mncee.org*

	2018	2019	2020
Premise Count - Multi-family	13,828	13,831	13,834
Electricity Use - Multi-family	100,029,013	92,963,377	95,019,522
Premise Count - All Premises	41,980	41,933	41,903
Electricity Use - All Premises	1,370,248,511	1,280,976,078	1,189,874,578
Percent of Premises - Multi-family	33%	33%	33%
Percent of Use - Multi-family	7.3%	7.3%	8.0%

5+ Unit Multifamily Energy Use



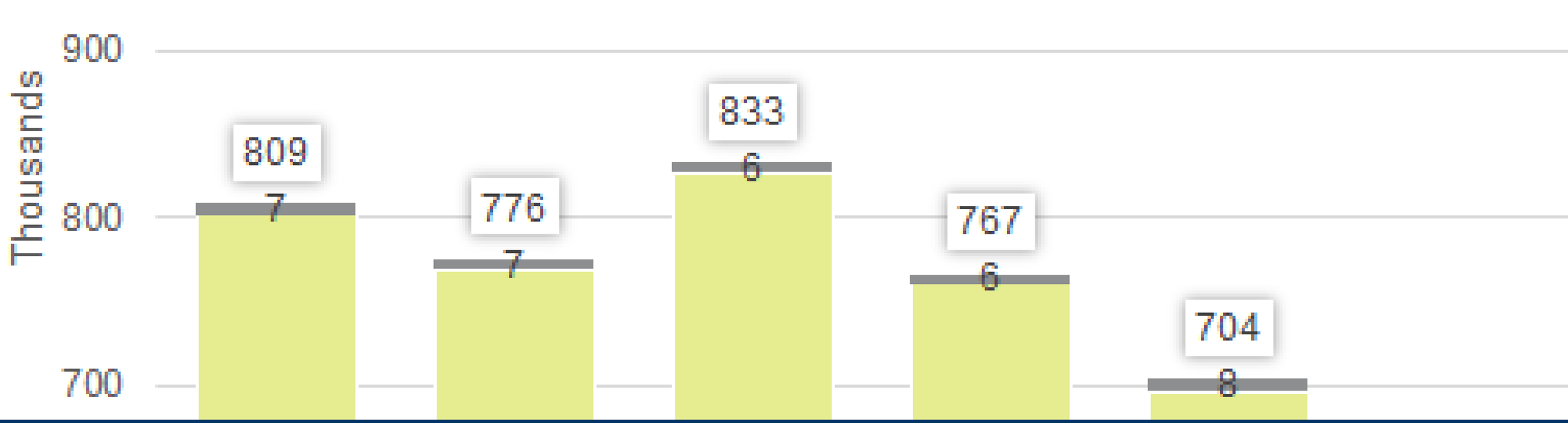
Energy Bill Delinquency



Year (2014 = winter 2014/2015	Tract in Bloomington	Abreviated Trac	Premises in tract (2020	Participation rate by tract and year	Average participation rate by tract for all years	Average 2015-2017	Average 2018-2020	Up (Green) or down (Red) the past 3 years compared to previous 3	~ number of premises participating
2015	G2700530025100	251	300	2.0%	2.11%	2.2%	2.0%		6
2016	G2700530025100		300	2.3%					7
2017	G2700530025100		300	2.3%					7
2018	G2700530025100		300	1.7%					5
2019	G2700530025100		300	2.3%					7
2020	G2700530025100		300	2.0%					6
2015	G2700530025201	252.01	1175	6.0%	5.7%	6.0%	5.5%		71
2016	G2700530025201		1175	5.5%					65
2017	G2700530025201		1175	6.4%					76
2018	G2700530025201		1175	5.2%					62
2019	G2700530025201		1175	5.5%					65
2020	G2700530025201		1175	5.7%					67
2015	G2700530025205	252.05	1750	4.1%	3.2%	3.7%	2.7%		72
2016	G2700530025205		1750	3.4%					59
2017	G2700530025205		1750	3.5%					62
2018	G2700530025205		1750	2.5%					44
2019	G2700530025205		1750	2.8%					49
2020	G2700530025205		1750	2.7%					48
2015	G2700530025301	253.01	925	1.3%	1.3%	1.1%	1.4%		12
2016	G2700530025301		925	1.2%					11
2017	G2700530025301		925	0.9%					8
2018	G2700530025301		925	1.3%					12
2019	G2700530025301		925	1.7%					16
2020	G2700530025301		925	1.1%					10
2015	G2700530025302	253.02	1175	5.3%	5.1%	5.4%	4.9%		62
2016	G2700530025302		1175	5.0%					59
2017	G2700530025302		1175	5.7%					67
2018	G2700530025302		1175	4.9%					57
2019	G2700530025302		1175	5.1%					60
2020	G2700530025302		1175	4.7%					55
2015	G2700530025401	254.01	1325	3.9%	3.7%	4.1%	3.2%		52
2016	G2700530025401		1325	4.1%					55
2017	G2700530025401		1325	4.3%					57
2018	G2700530025401		1325	3.3%					44
2019	G2700530025401		1325	3.2%					43
2020	G2700530025401		1325	3.1%					42
2015	G2700530025403	254.03	825	5.4%	4.7%	5.1%	4.3%		45
2016	G2700530025403		825	5.3%					44
2017	G2700530025403		825	4.7%					39

	Total prem parti
2015	
2016	
2017	
2018	
2019	
2020	

Energy Assistance Program Participation



Progress towards Goal

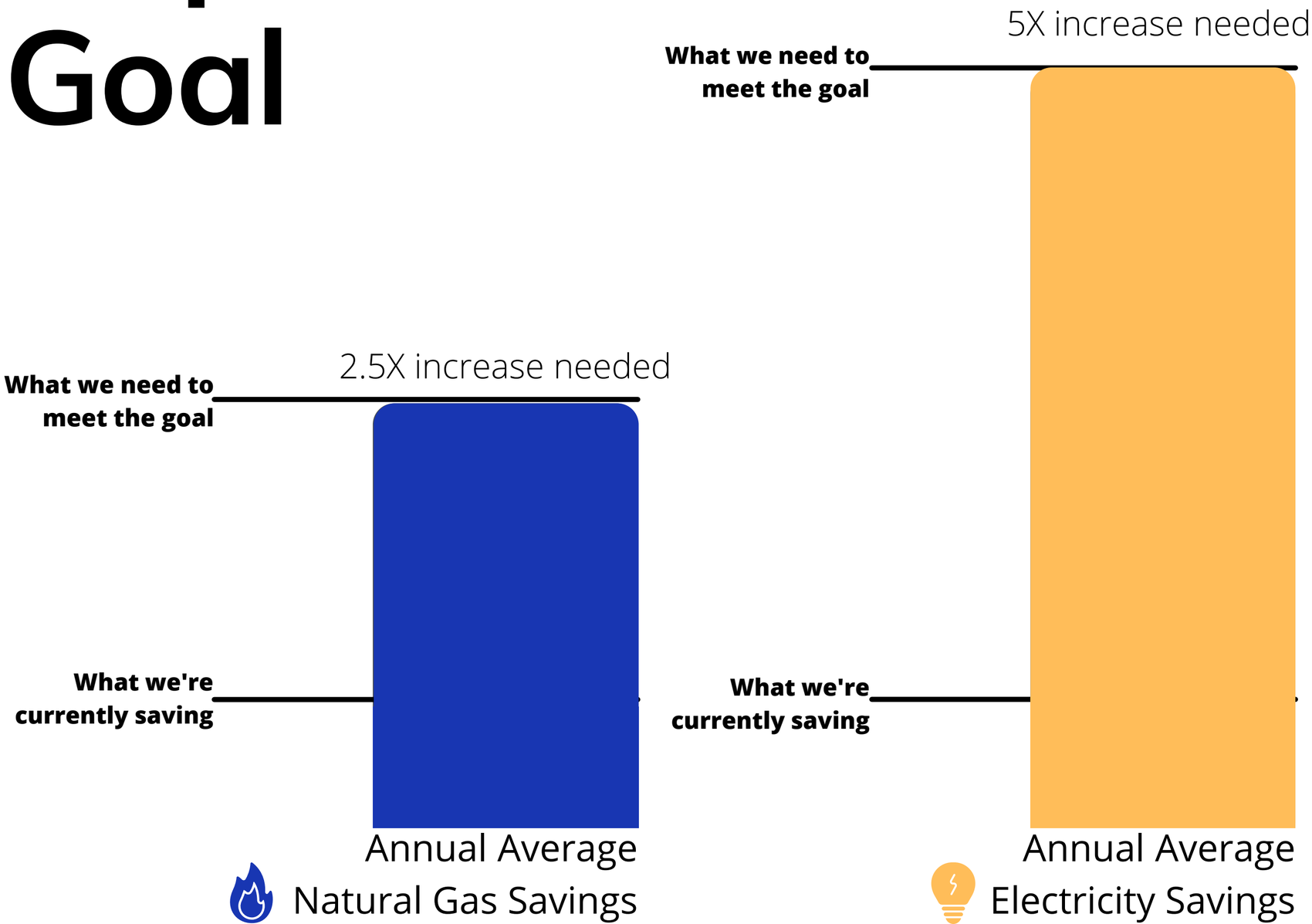
18	2019	Avg (2017-2019)	2020	% change (3yrAvg-2020)	2017	2018	2019
,176	2,502	2,062	1,718	-17%	115,220	136,060	174,580
637	602	544	371	-32%	9,440	15,300	14,700
105	143	104	145	39%	8,810	18,850	21,510
,699	6,344	6,556	6,848	4%	69,109	69,871	66,167
226	394	263	188	-29%	7,050	9,570	12,770
5	2	4	4	-8%	2,030	1,152	495
10	13	17	2	-88%	1,410	380	570
			127				
,858	10,000	9,552	9,403	-2%	213,069	251,183	290,792
33	33	26	36	37%	2,690	7,700	5,100
-	3	2	4	140%	650	-	270
38	40	45	9	-80%	1,210	830	867
5	2	3	2	-25%	250	1,200	1,110
-	-	-	-	-	-	-	-
76	78	76	51	-33%	4,800	9,730	7,347
9	12	14	8	-41%	13,790	12,320	15,140
243	871	442	154	-65%	205,950	275,160	########
-	1	0	-	-100%	-	-	9,300
2	3	2	15	650%	50	480	5,260
-	1	2	5	200%	61,610	-	4,010
-	-	-	1	-	-	-	-
-	-	-	-	-	-	-	-
10	8	7	8	20%	-	-	-
2	-	2	2	0%	-	9,150	-
1	13	7	4	-40%	8,650	460	13,805
-	-	-	-	-	-	-	-
267	909	475	197	-58%	290,050	297,570	########
,201	10,987	10,102	9,651	-4%	507,919	558,483	########

2018	2019	2016	2017	2018	2019
700	660	236,847	199,343	202,675	198,215
473	521	256,572	348,514	314,062	347,894
207	398	116,827	230,831	284,542	301,574
1,855	337	1,824	2,320	3,731	682
254	151	142,956	127,740	206,479	120,672
55	92	30,463	3,085	31,148	38,826
-	62	28,809	90,641	-	23,825
124	57	-	451	3,523	3,921
11	38	-	6,531	14,559	26,291
3	25	-	-	-	-
4	2	536	3,147	2,955	1,992
1	-	-	-	12,256	-
-	-		-	-	-
3,687	2,343	874,834	1,013,269	1,075,930	1,063,692
104%	30%		16%	23%	22%
		324	*378*	*333*	*366*

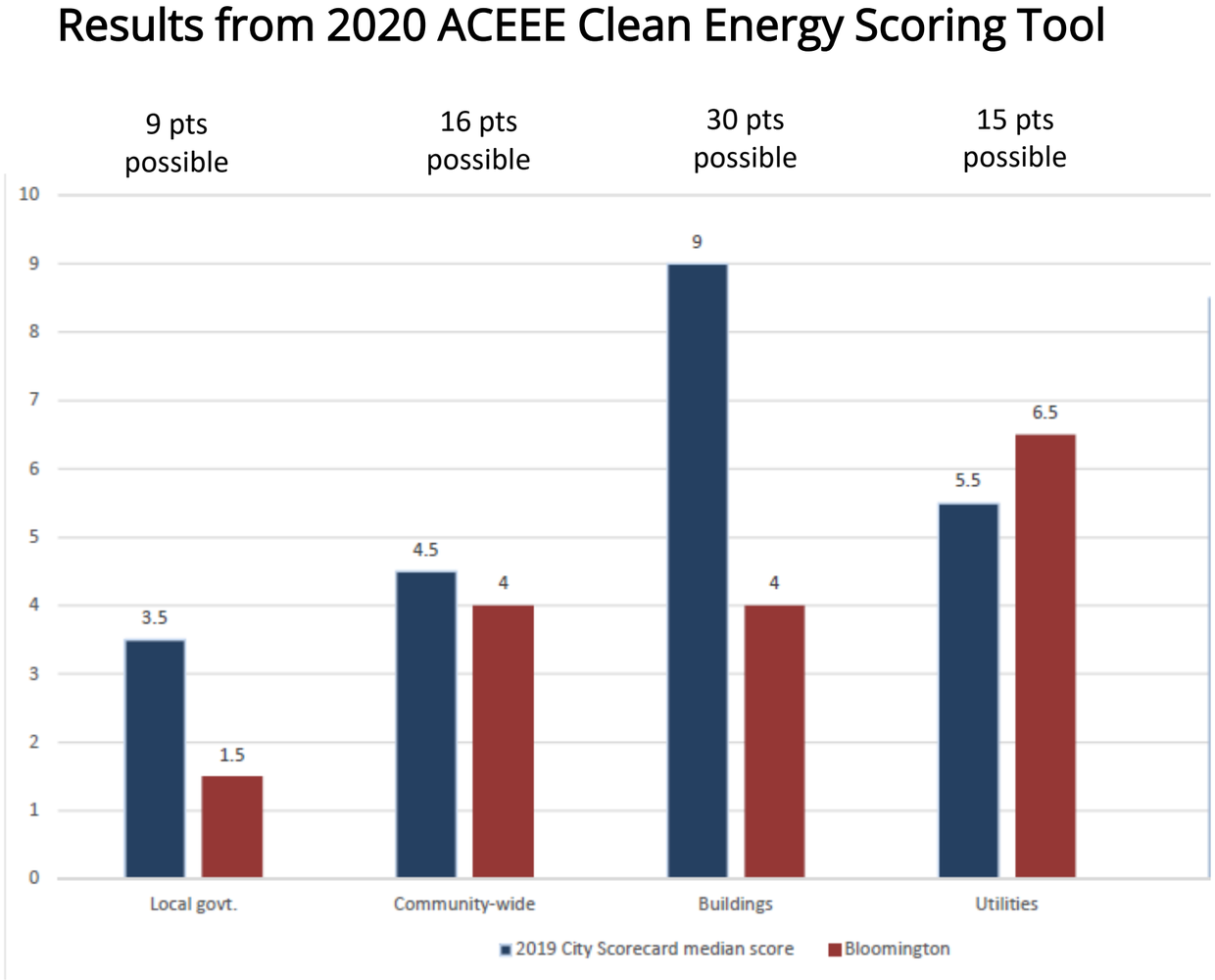
Counts		Electric kWh Savings			
2018	2019	2016	2017	2018	2019
248	208	3,138,604	6,948,324	13,812,535	7,925,151
98	65	4,297,413	2,119,410	1,952,351	1,637,771
27	27	90,155	430,120	1,900,243	246,283
4	26	43,205	235,736	18,373	222,597
25	20	541,039	859,834	2,528,138	2,421,115
7	11	722,487	539,572	186,507	1,124,685
4	5	-	-	-	545,500
19	5	715	353	156	24
2	5	-	-	-	-
-	4	-	-	-	11,457
2	3	(130,060)	6,160	3,611	(6,302)
4	2	644,226	720,316	774,886	68,557
-	2	2,033,245	67,251	-	11,396
-	2	-	5,062	-	5,897
-	2	-	-	-	-
-	1	5,019	-	-	6,379
5	-	181,522	612,072	4,646,167	-
1	-	4,160,745	1,180,200	448,999	-
-	-	1,018,175	-	-	-
-	-	14,143	-	-	-
446	388	16,760,633	13,725,010	26,271,966	14,220,510
15%	0%		-18%	57%	-15%
		6,211	*5,117*	*3,533*	*4,898*
4,133	2,731	17,635,467	14,738,279	27,347,896	15,284,402
		6,536	*5,495*	*3,966*	*5,264*

Counts		Electric kWh Subscribed			
2018	2019	2016	2017	2018	2019

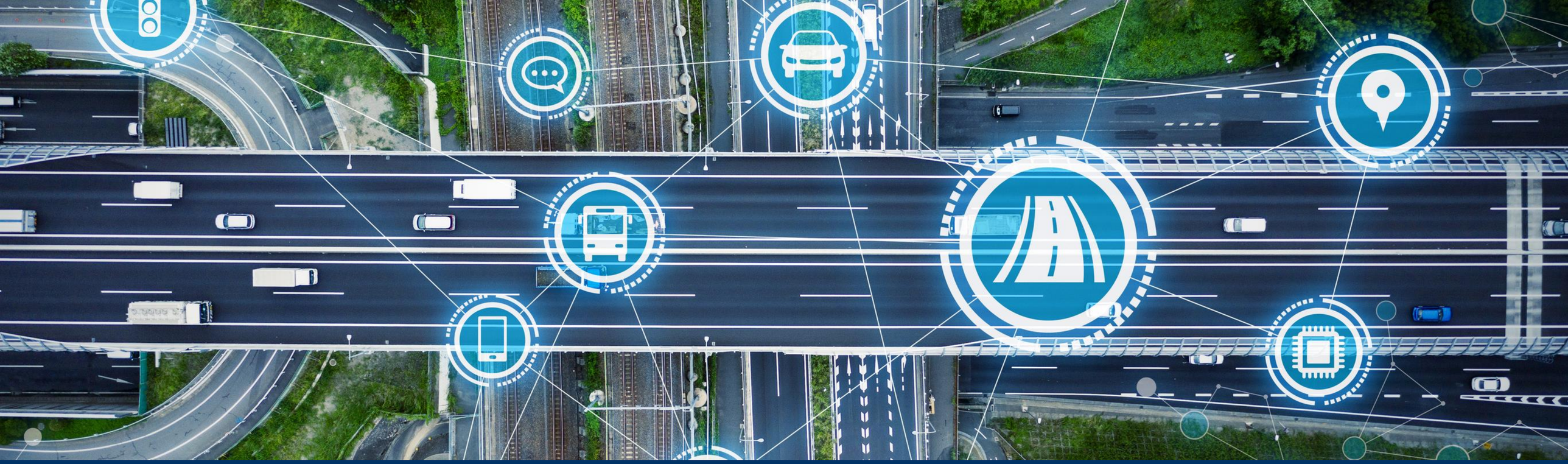
Gap to Goal



How do we compare to other U.S. cities?



Source: American Council for an Energy Efficient Economy (ACEEE)



2021 Transportation Update

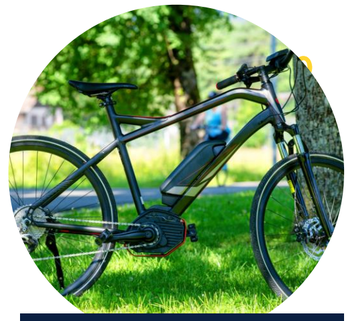
Walking

Scooters

Bicycle

Ride Sharing Service
e.g. Lyft, Uber

Electric Motorcycle



Electric Bike

Bus

Telework

Light rail

Car Share
e.g. Hour Car

Electric Vehicle

Carpooling

Freight

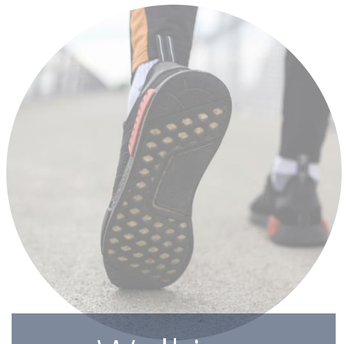
City Fleet

Cargo Bike

Wheelchair

Internal Combustion
Engine (ICE) Vehicle

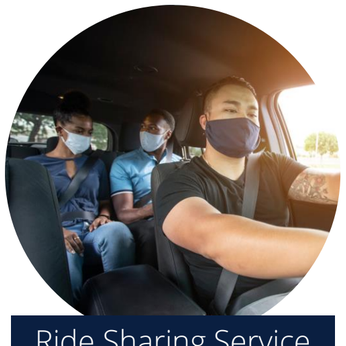
Metro Mobility



Walking

Scooters

Bicycle



Ride Sharing Service
e.g. Lyft, Uber

Electric Motorcycle

Electric Bike

Bus

Telework

Light rail

Car Share
e.g. Hour Car

Electric Vehicle

Carpooling

Freight

City Fleet

Cargo Bike

Wheelchair

Internal Combustion
Engine (ICE) Vehicle

Metro Mobility

Transportation is the largest source of GHG emissions in Minnesota.

- Transportation emissions increased by 30.5% since 1990.

- VMT in Minnesota in 2018 was 60.4 billion up over 44% since 1992 while population grew only at 26%.

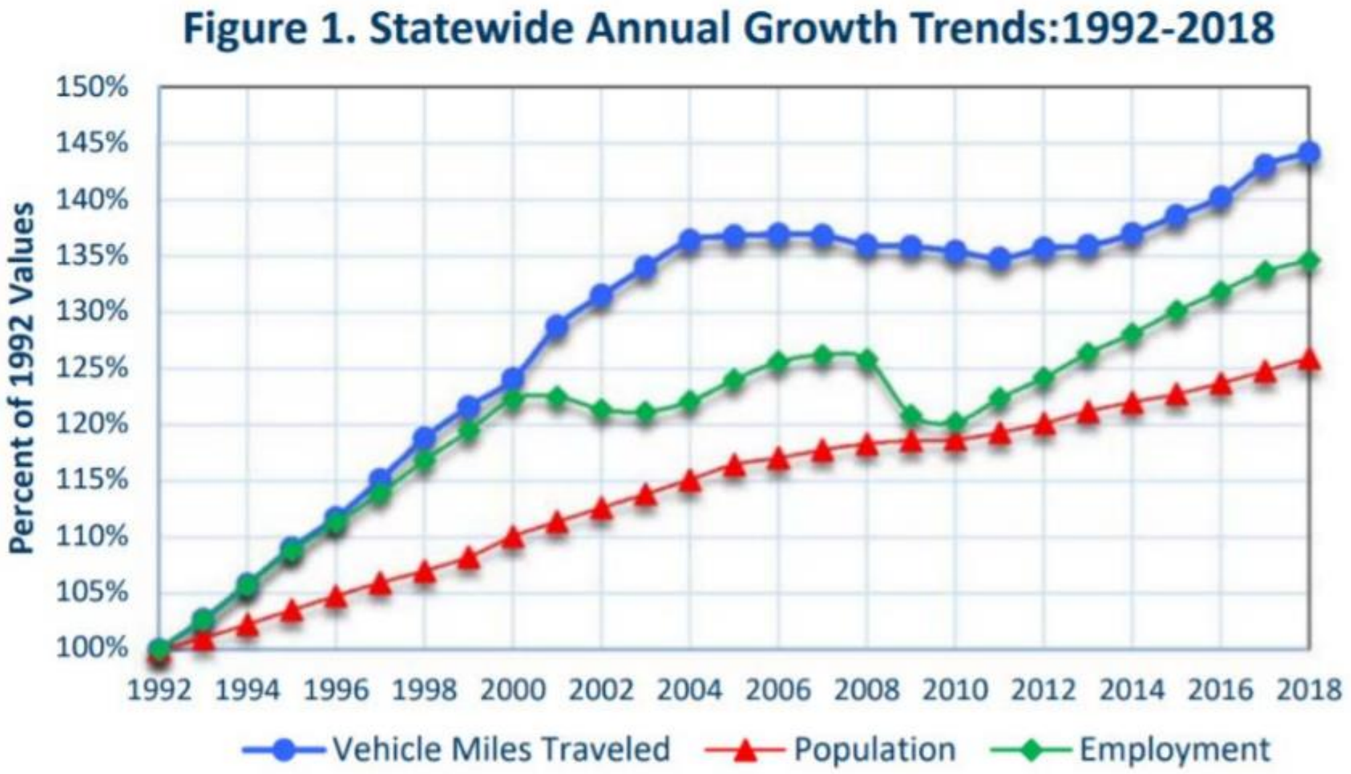
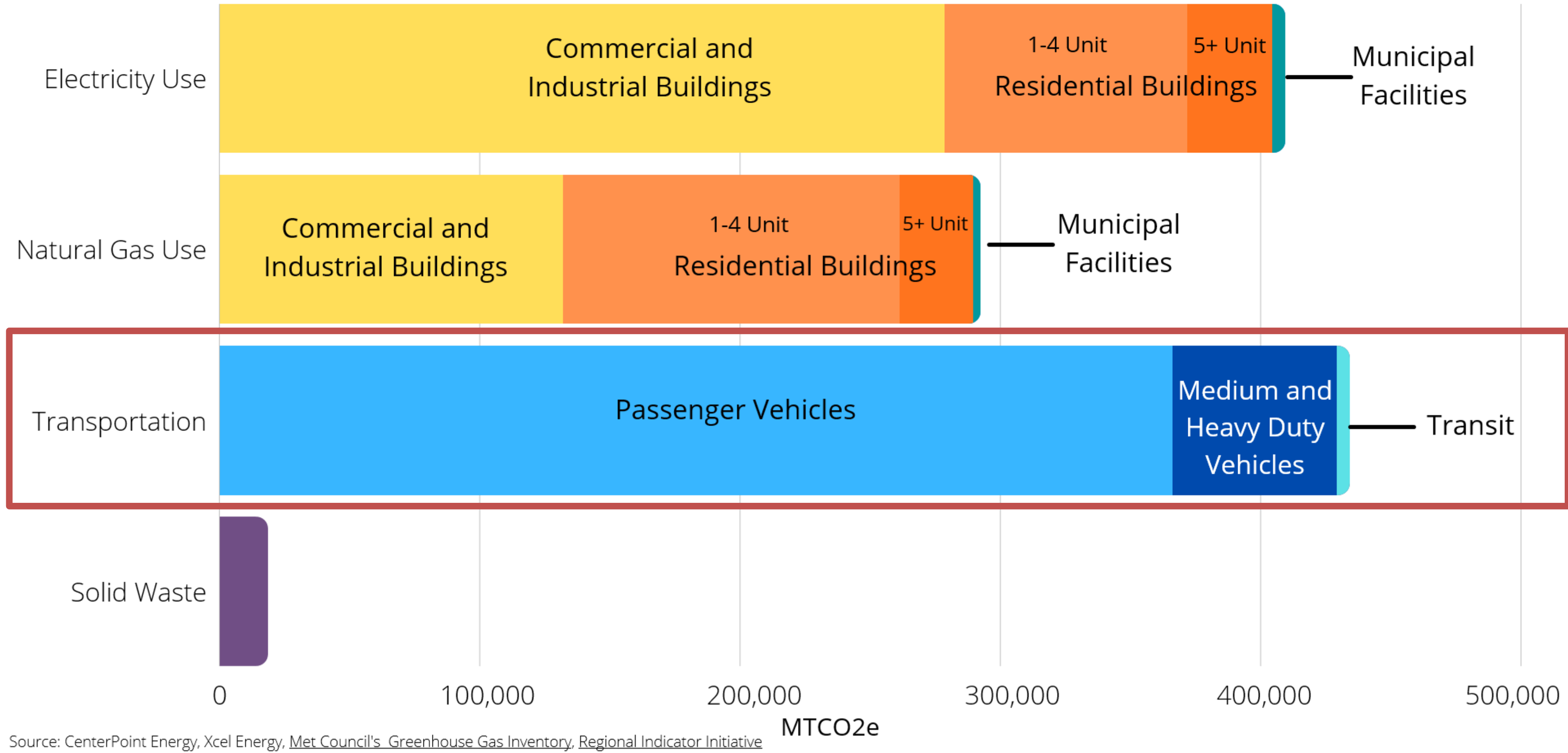


Figure 7. VMT trends, 1992-2018 (MnDOT)

Source: [MnDOT Vehicle Miles of Travel Trends in Minnesota 1992-2018]

Sources of Bloomington's Greenhouse Gas Emissions



Source: CenterPoint Energy, Xcel Energy, Met Council's Greenhouse Gas Inventory, Regional Indicator Initiative

Bloomington's Transportation-Related GHG Emissions

Transit

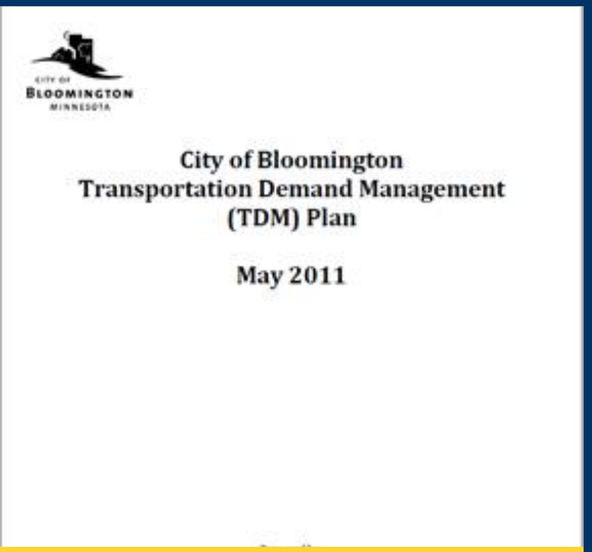
Freight/Service Trucks

Passenger Vehicles

1 vehicle = 1%

Source: Metropolitan Council Greenhouse Gas Inventory (2018)

City Transportation Plans



2011

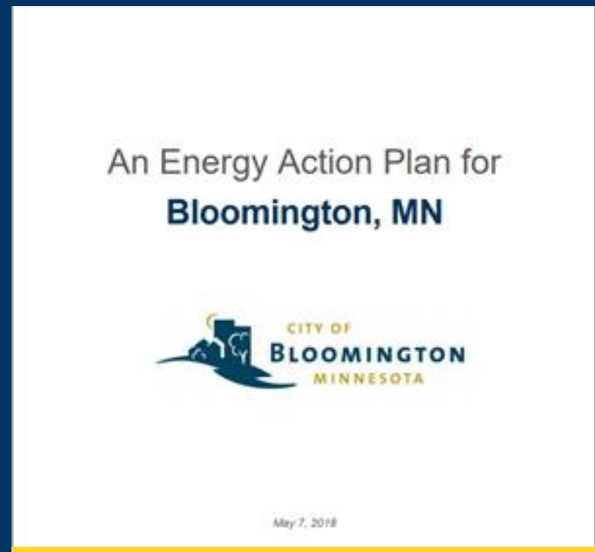
Transportation Demand Management Plan

2012

South Loop Plan

2016

Alternative Transportation Plan



2018

Bloomington Energy Action Plan

City Sustainability Transportation Goals

South Loop District:

- Over 50 percent more streets will have bicycle routes.
- One third more residents will be within walking distance (1/2 mile) of a transit stop.
- Over 23 percent decrease in the distance residents walk to reach transit.
- Over 32 percent decrease in the distance employees walk to reach transit.

Transportation: Pursue all viable opportunities for promoting the elimination of vehicle emissions, including support for electric vehicles, increased public transportation, higher-density and mixed-use zoning, additional biking and pedestrian infrastructure, and telecommuting.

2011 Transportation Demand Management Plan

2012 South Loop Plan

2016 Alternative Transportation Plan

2018 Bloomington Energy Action Plan

City Transportation Plans

2019

Forward 2040

City Ordinances

The purpose of Transportation Demand Management (TDM) is to promote more efficient utilization of existing transportation facilities, reduce traffic congestion and mobile source pollution, and to ensure that new developments are designed in ways to maximize the potential for alternative transportation usage. TDM is a combination of services, incentives, facilities and actions that reduce single occupancy vehicle (SOV) trips to help relieve traffic congestion, allow parking flexibility and reduce air pollution.

2009 § 21.301.09 TRANSPORTATION DEMAND MANAGEMENT (TDM)

(a) Purpose. To accommodate and promote electric vehicle charging throughout the city promoting the health, safety and general welfare of the community and preventing adverse impacts in the installation and use of electric vehicle chargers.

2019 § 21.302.14 ELECTRIC VEHICLE CHARGING STANDARDS

a) Purpose and intent. The city recognizes the health, safety, welfare and aesthetic value of providing parking standards in the community. The provisions of this section are intended to:
(Note: it lists 11 items)

2019 § 21.301.06 PARKING AND LOADING

(h) Shared vehicles. that are not rented or loaned are prohibited from the right-of-way and subject to removal by the city unless located in a dock or designated area. Commercial providers must obtain an obstruction permit for docked or dockless subject to the requirements of this section and following conditions of approval.

2020 UPDATE TO: § 17.68 PERMIT REQUIRED.

Climate Goals

There are no quantitative goals for reducing transportation-related greenhouse gas emissions, VMT reduction, electrification, etc.

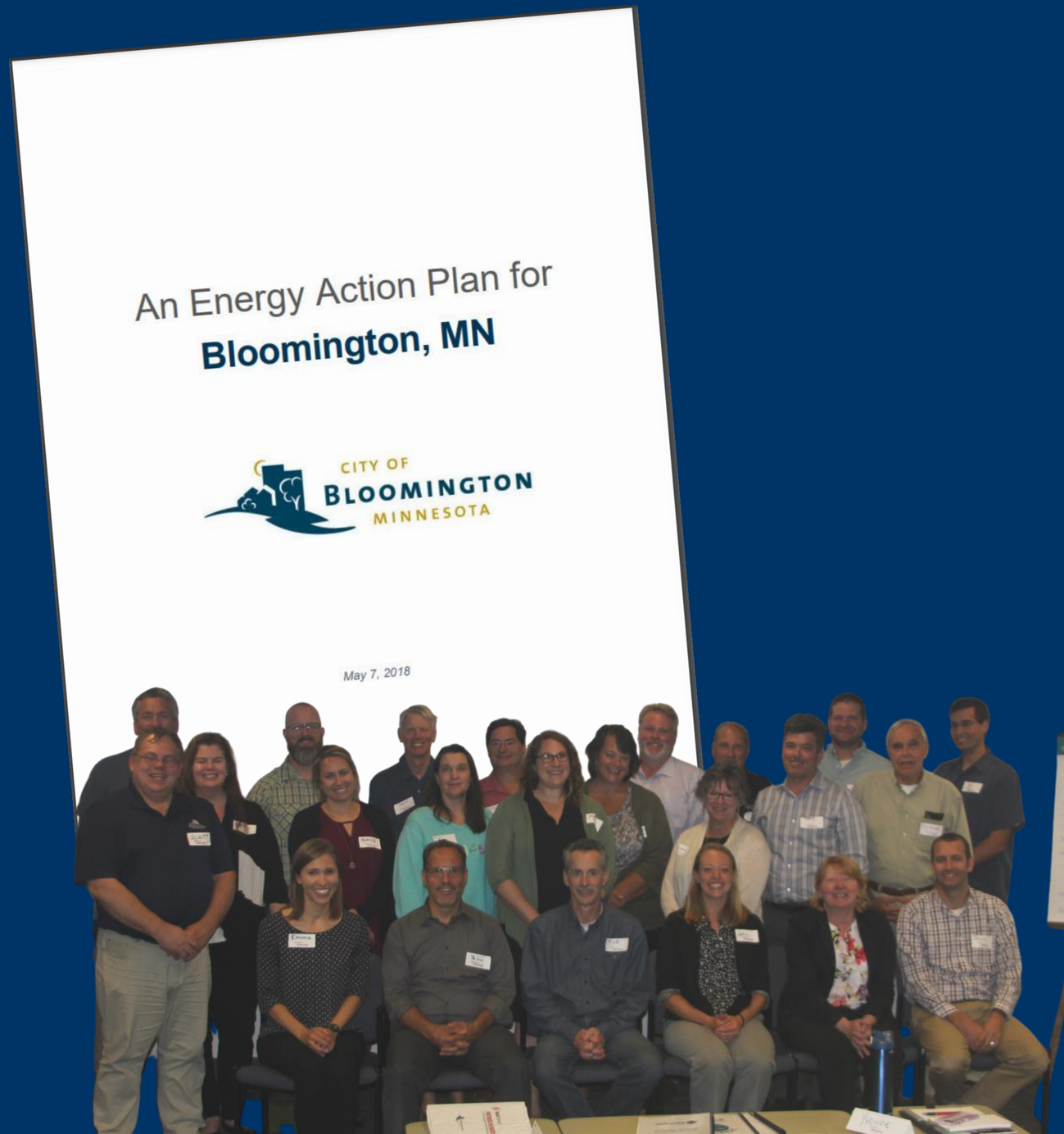
Goals

Energy

75% reduction in city-wide energy-related greenhouse gas emissions by 2035, relative to 2016 levels.

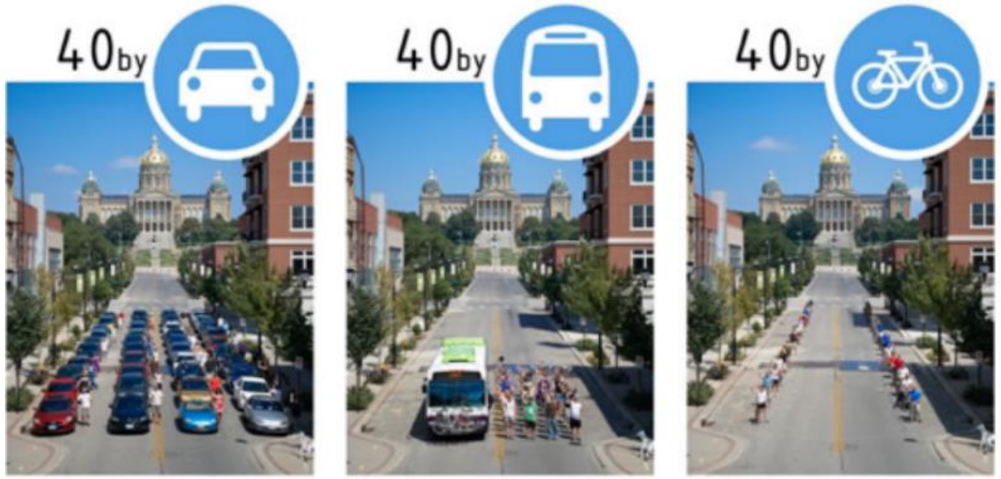
Transportation

Pursue all viable opportunities for promoting the elimination of vehicle emissions, including support for electric vehicles, increased public transportation, higher-density and mixed-use zoning, additional biking and pedestrian infrastructure, and telecommuting.



Electrification

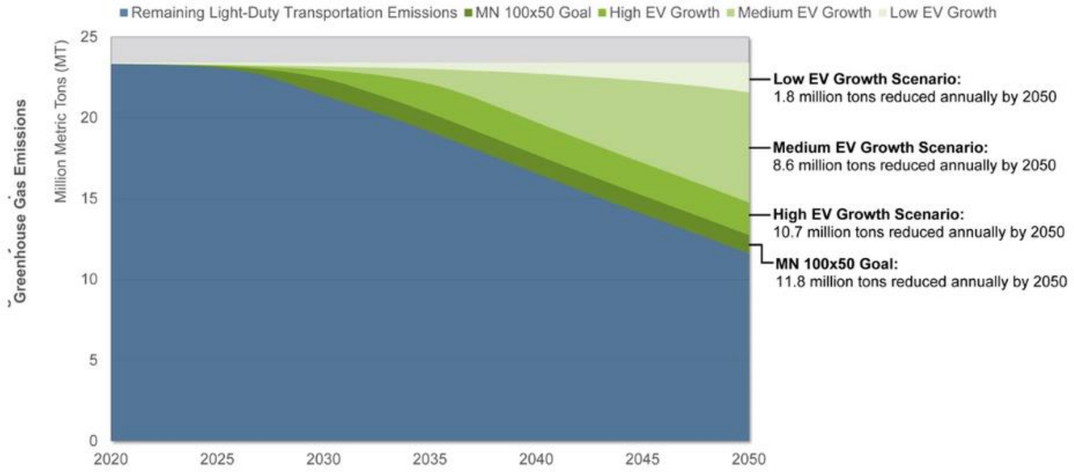
Providing Alternatives to Driving Alone



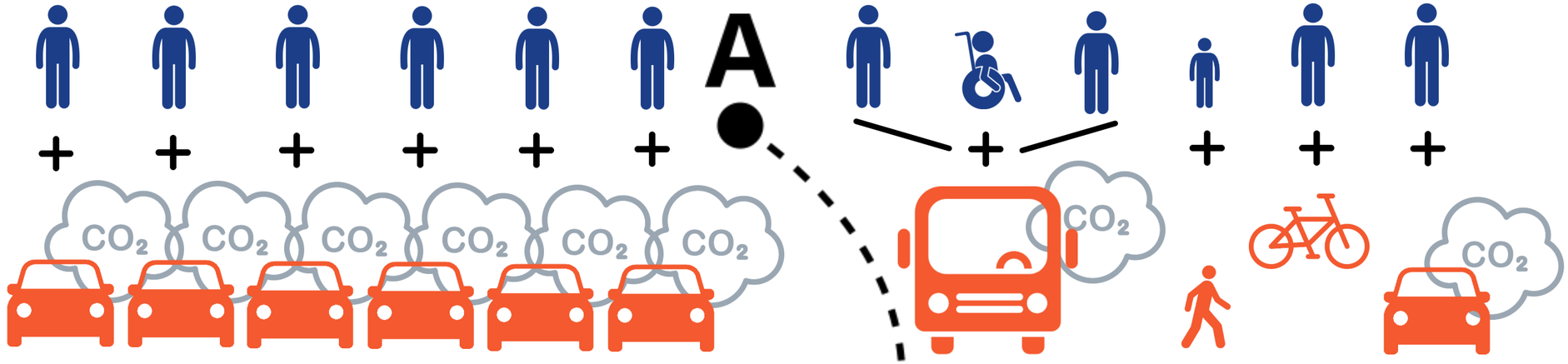
Amount of space required to transport the same number of passengers by car, bus, or bicycle.
Event info at www.facebook.com/Urban.Ambassadors - Photos by www.tobinbennett.com
(Des Moines, Iowa - August 2010)

Both electric vehicles and increasing low-carbon transportation options are needed.

Annual Emissions Reductions by EV Sales Growth Scenario under Minnesota Average Grid Mix

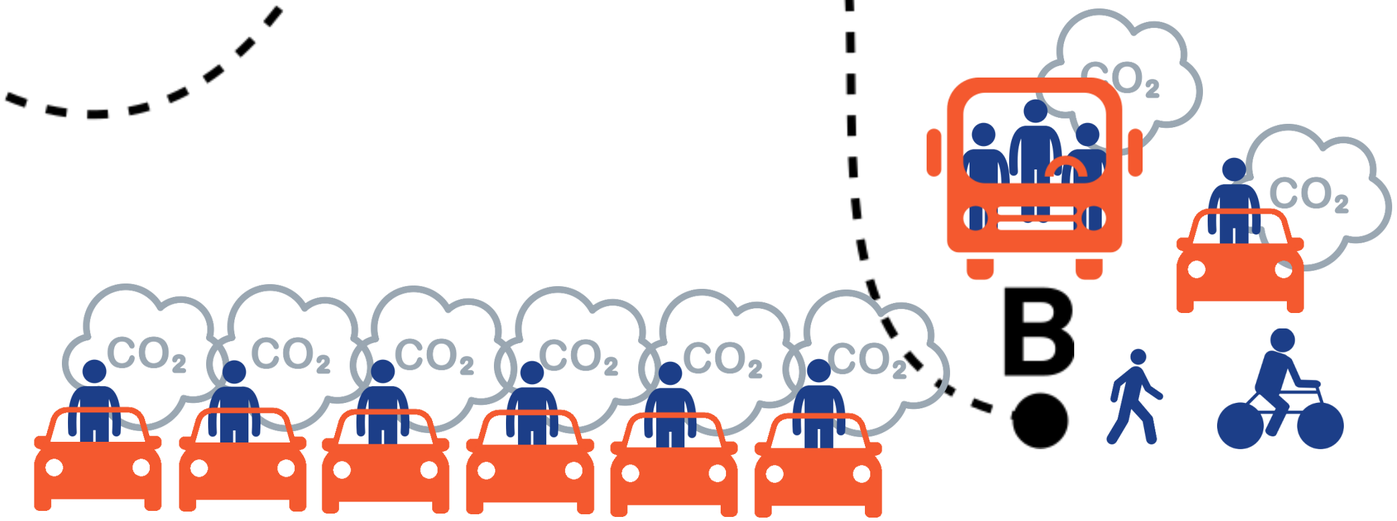


Source: Modeled greenhouse gas emission reduction at various degrees of EV adoption, calculated by the Great Plains Institute. Scenario EV sales forecasts are based on both historic sales trends and the "Annual Energy Outlook 2020 | Table 2. Energy Consumption by Sector and Source," US Energy Information Administration, https://www.eia.gov/outlooks/aeo/data/browser/#/?id=2-AEO2020&cases=ref2020&sourcekey=0, which forecasts electricity consumption in the transportation sector.



Reducing vehicle miles traveled, not people miles traveled.

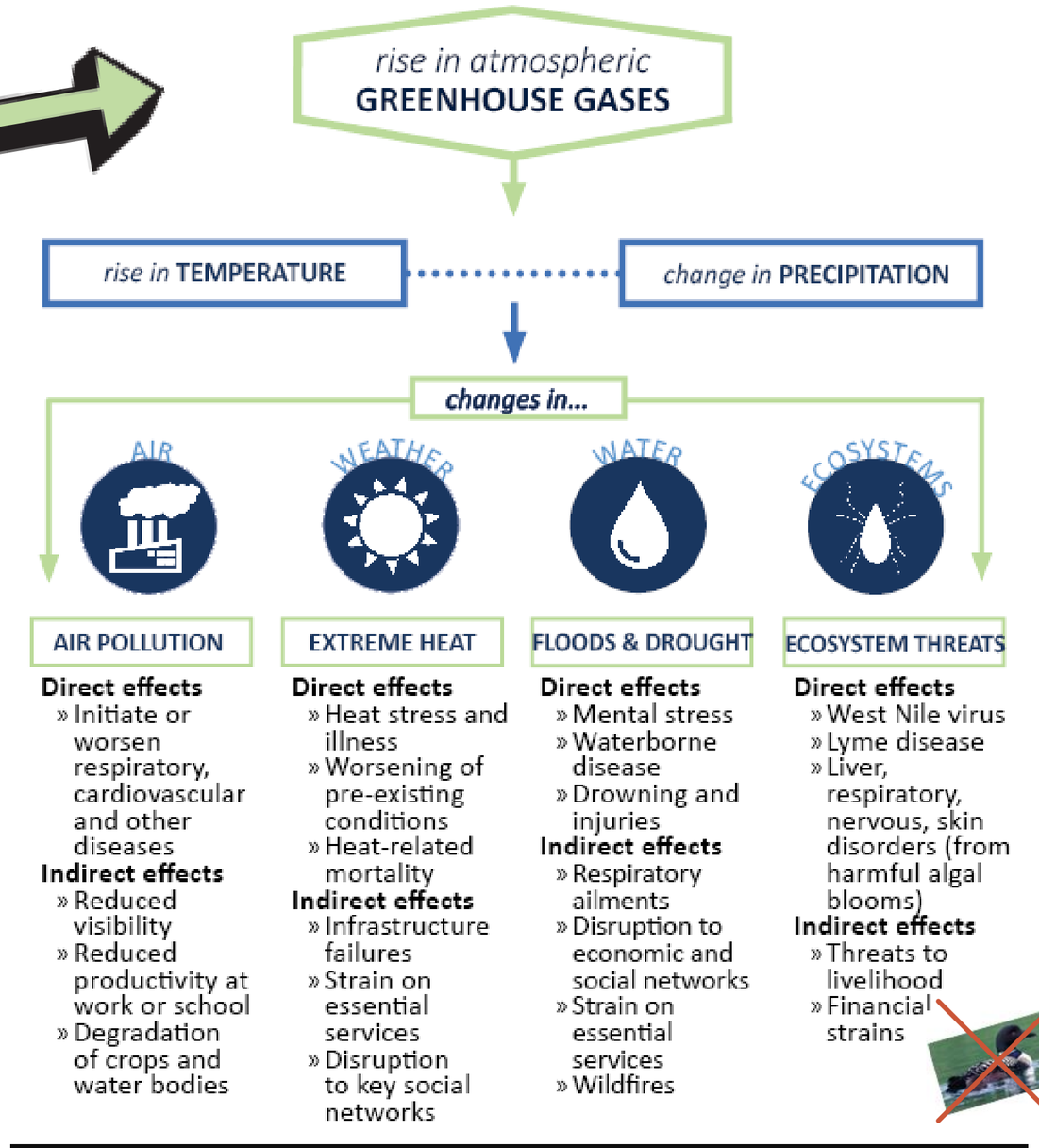
- Increase mobility options & accessibility
- Reduce GHG emissions
- Improve community health



Health

Using Energy

Driving

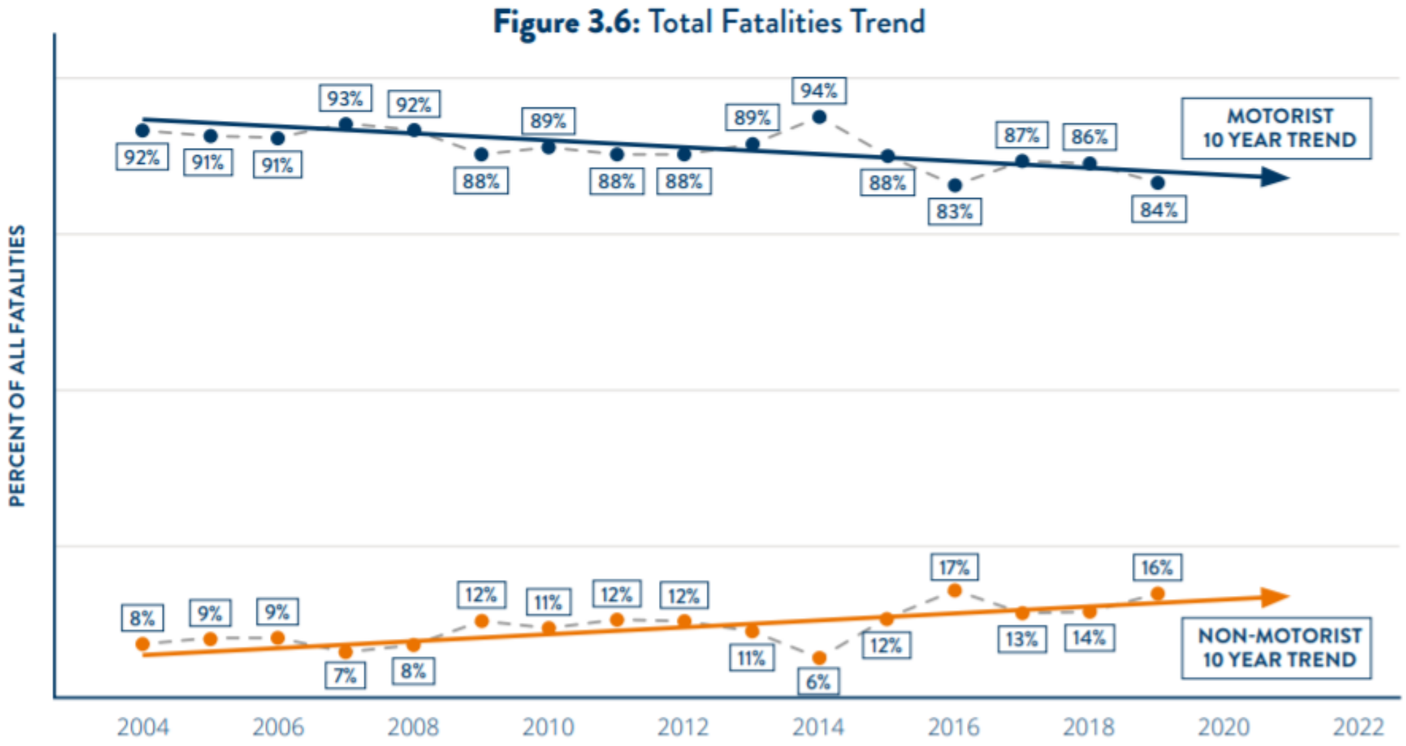


Source: [Minnesota Department of Health]

Health

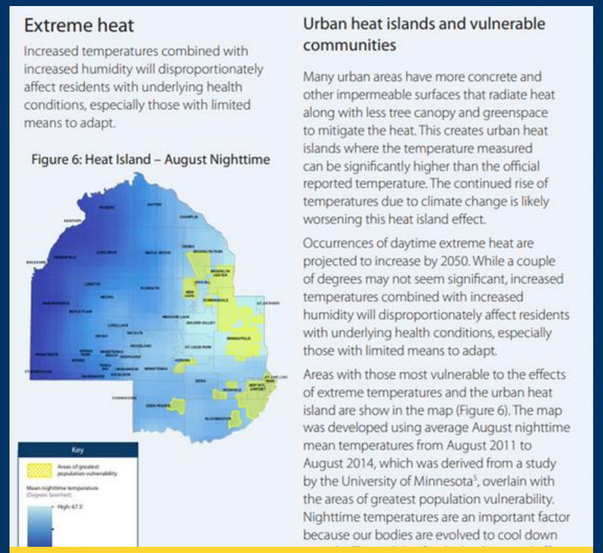
State-wide

- The share of motorist traffic fatalities is trending down, while the share of non-motorist traffic fatalities is trending up.



Source: [MnDOT 2020 Sustainability Report]

Equity



Extreme heat

Increased temperatures combined with increased humidity will disproportionately affect residents with underlying health conditions, especially those with limited means to adapt.

Figure 6: Heat Island – August Nighttime

Urban heat islands and vulnerable communities

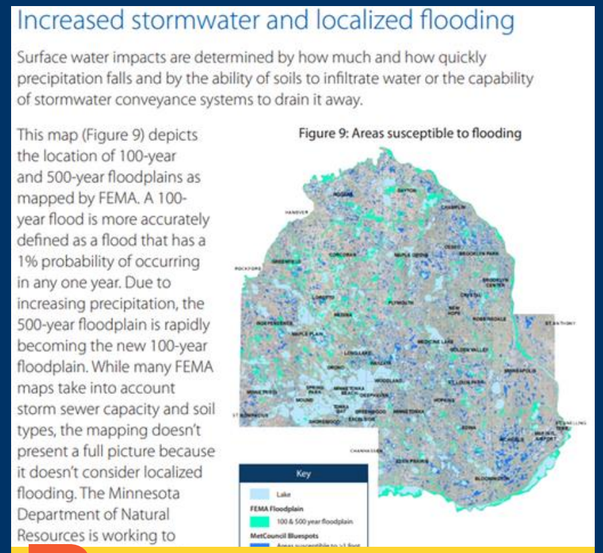
Many urban areas have more concrete and other impermeable surfaces that radiate heat along with less tree canopy and greenspace to mitigate the heat. This creates urban heat islands where the temperature measured can be significantly higher than the official reported temperature. The continued rise of temperatures due to climate change is likely worsening this heat island effect.

Occurrences of daytime extreme heat are projected to increase by 2050. While a couple of degrees may not seem significant, increased temperatures combined with increased humidity will disproportionately affect residents with underlying health conditions, especially those with limited means to adapt.

Areas with those most vulnerable to the effects of extreme temperatures and the urban heat island are show in the map (Figure 6). The map was developed using average August nighttime mean temperatures from August 2011 to August 2014, which was derived from a study by the University of Minnesota[5], overlain with the areas of greatest population vulnerability. Nighttime temperatures are an important factor because our bodies are evolved to cool down

Extreme Heat

Urban areas with less tree canopy and greenspace and more impervious surfaces that radiate heat create heat islands



Increased stormwater and localized flooding

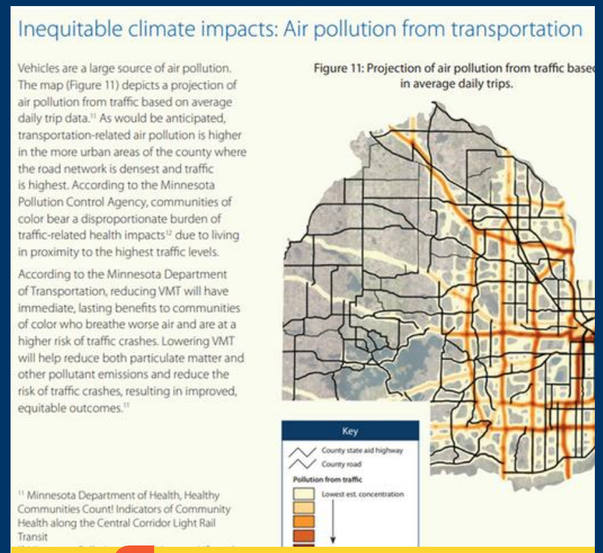
Surface water impacts are determined by how much and how quickly precipitation falls and by the ability of soils to infiltrate water or the capability of stormwater conveyance systems to drain it away.

This map (Figure 9) depicts the location of 100-year and 500-year floodplains as mapped by FEMA. A 100-year flood is more accurately defined as a flood that has a 1% probability of occurring in any one year. Due to increasing precipitation, the 500-year floodplain is rapidly becoming the new 100-year floodplain. While many FEMA maps take into account storm sewer capacity and soil types, the mapping doesn't present a full picture because it doesn't consider localized flooding. The Minnesota Department of Natural Resources is working to

Figure 9: Areas susceptible to flooding

Flooding

The eastern side of Bloomington has a higher percentage of BIPOC residents and has more areas susceptible to >1 ft of flooding



Inequitable climate impacts: Air pollution from transportation

Vehicles are a large source of air pollution. The map (Figure 11) depicts a projection of air pollution from traffic based on average daily trip data.[11] As would be anticipated, transportation-related air pollution is higher in the more urban areas of the county where the road network is densest and traffic is highest. According to the Minnesota Pollution Control Agency, communities of color bear a disproportionate burden of traffic-related health impacts[12] due to living in proximity to the highest traffic levels.

According to the Minnesota Department of Transportation, reducing VMT will have immediate, lasting benefits to communities of color who breathe worse air and are at a higher risk of traffic crashes. Lowering VMT will help reduce both particulate matter and other pollutant emissions and reduce the risk of traffic crashes, resulting in improved, equitable outcomes.[13]

[11] Minnesota Department of Health, Healthy Communities Count! Indicators of Community Health along the Central Corridor Light Rail Transit

Figure 11: Projection of air pollution from traffic base
in average daily trips.

Air Pollution

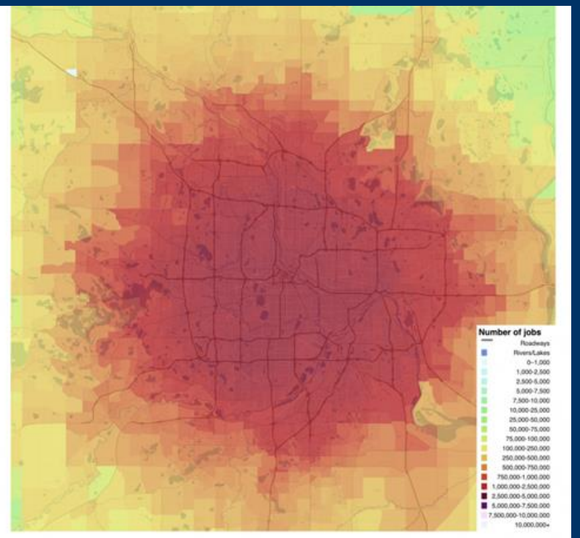
Vehicles are a large source of air pollution

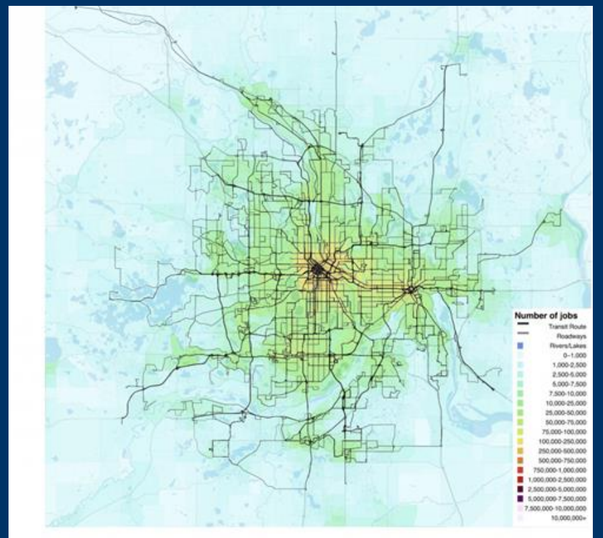
Quality of life

- Community Severance
- Noise Pollution
- Decreased Property Values

Sources: Hennepin County Climate Action Plan and Minnesota Historical Society

Equity





Access to Opportunity

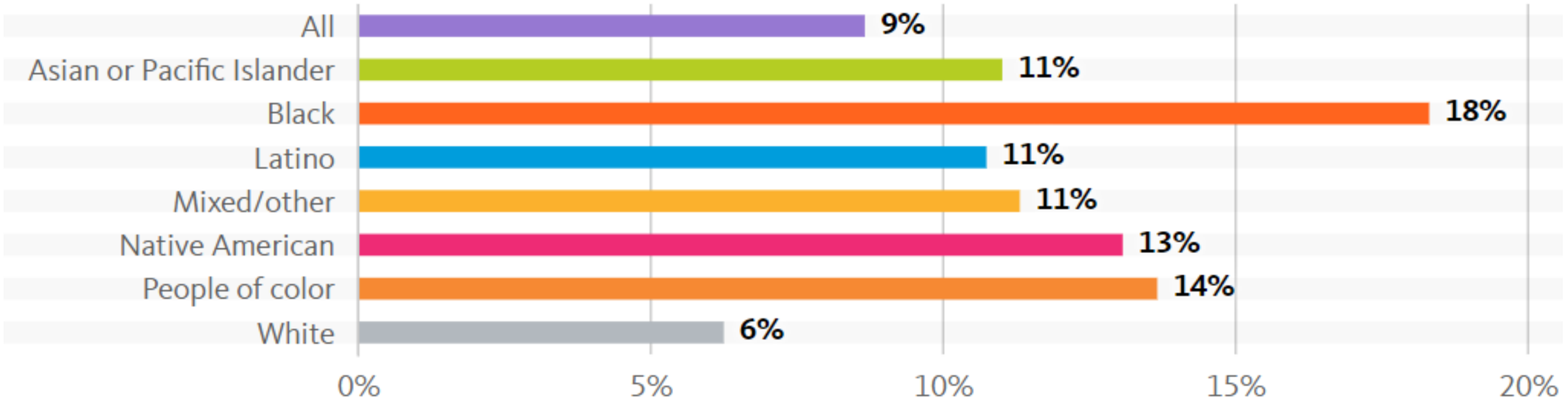
Automobile job accessibility within 30-minutes of travel in the Minneapolis-Saint Paul metropolitan area is much greater than walk-up transit job accessibility within 30-minutes of travel in the Minneapolis-Saint Paul metropolitan area.

40% of Minnesotans don't have access to a car or can't drive

Sources: Move Minnesota and Our Streets MPLS

Equity

Percent of households without a vehicle by race/ethnicity: United States, 2019



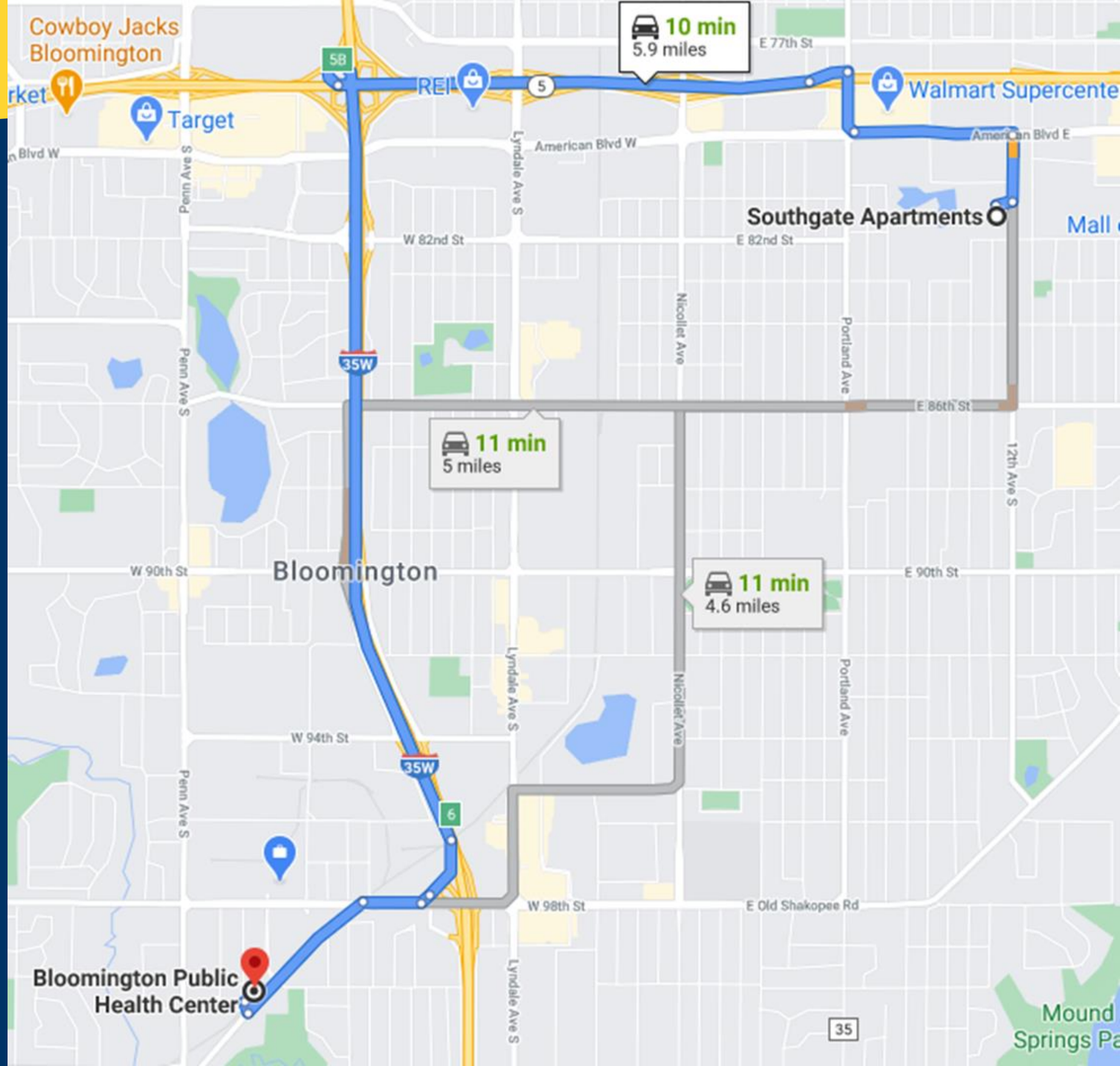
In most communities, convenient and reliable transportation access requires a vehicle

Black households are least likely to have access to a vehicle

Source: National Equity Atlas

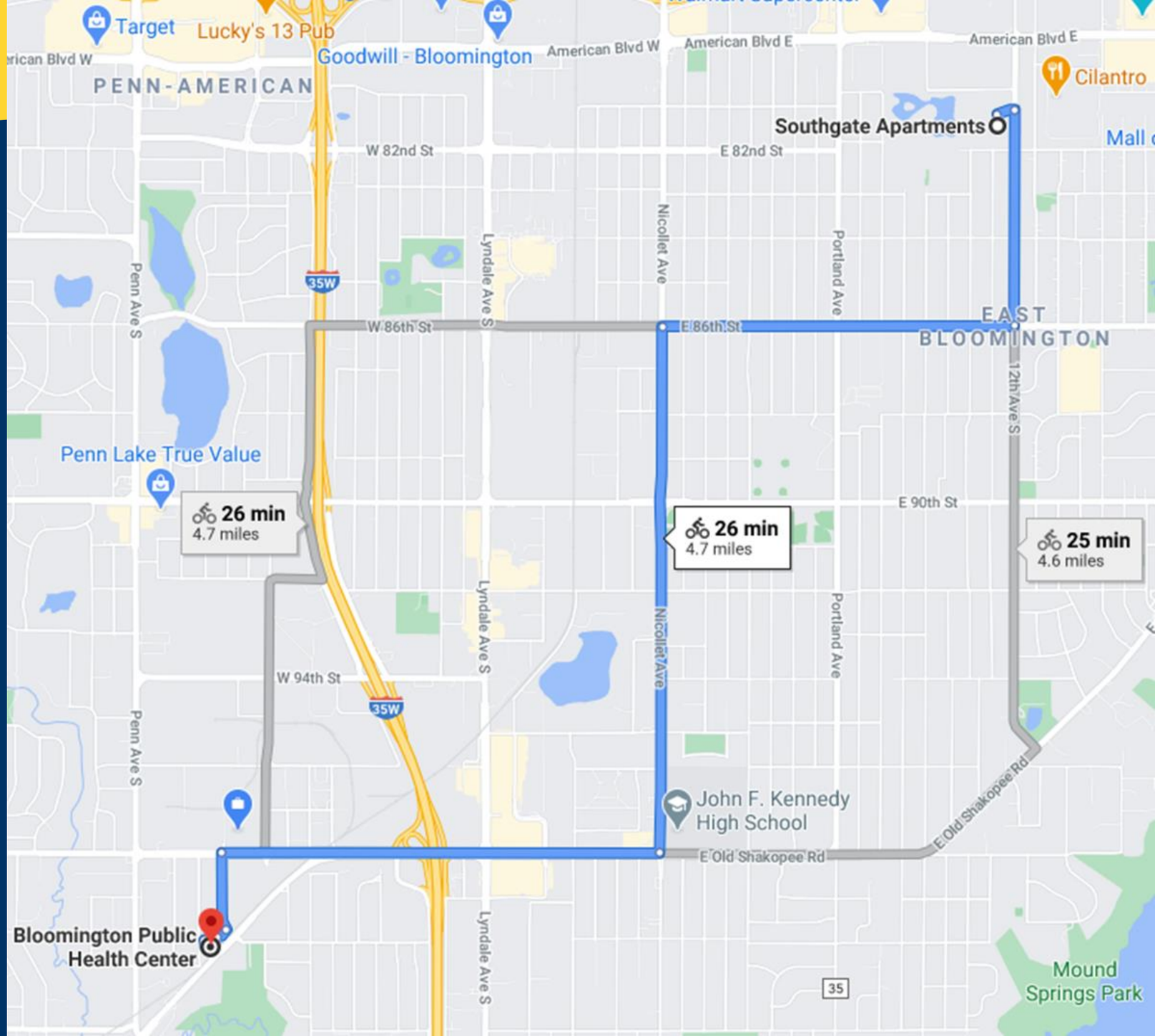
Equity

~10 minutes



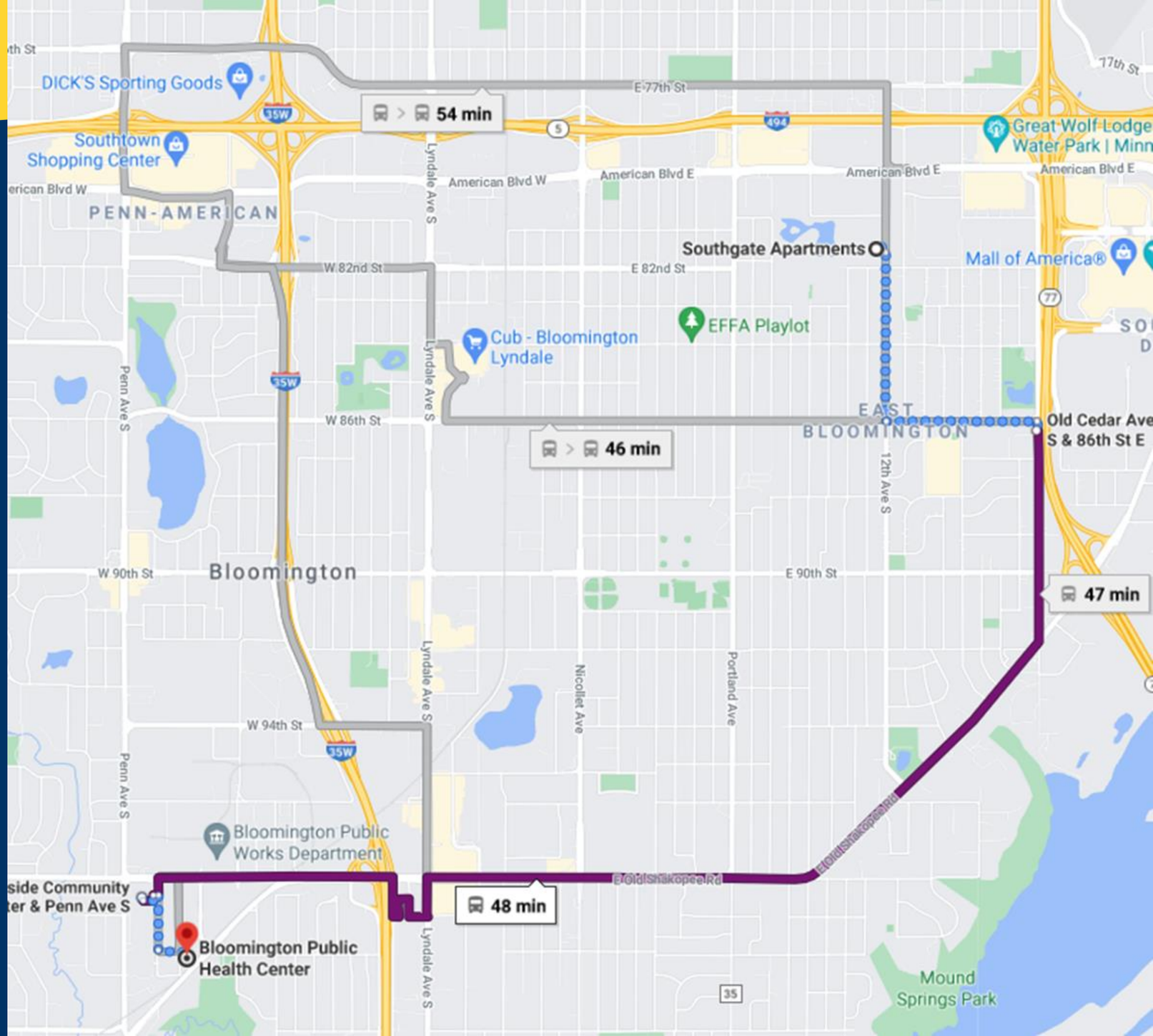
Equity

~25 minutes



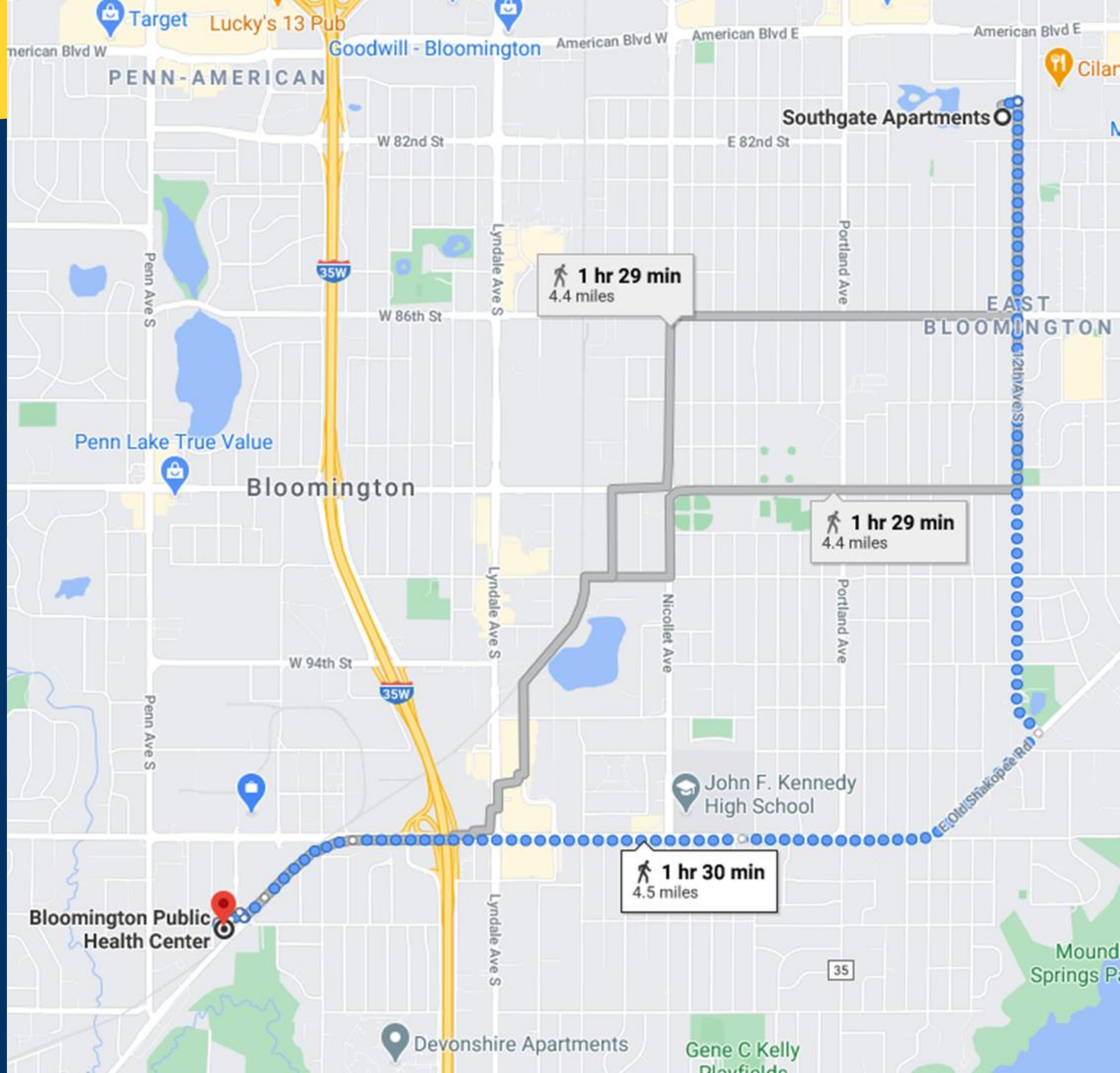
Equity

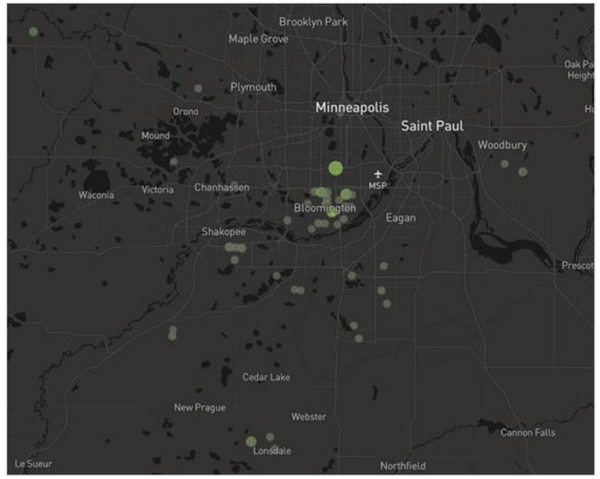
~50 minutes



Equity

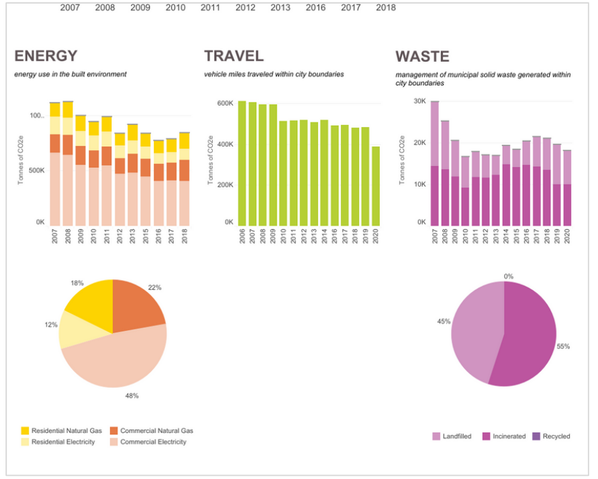
~90 minutes





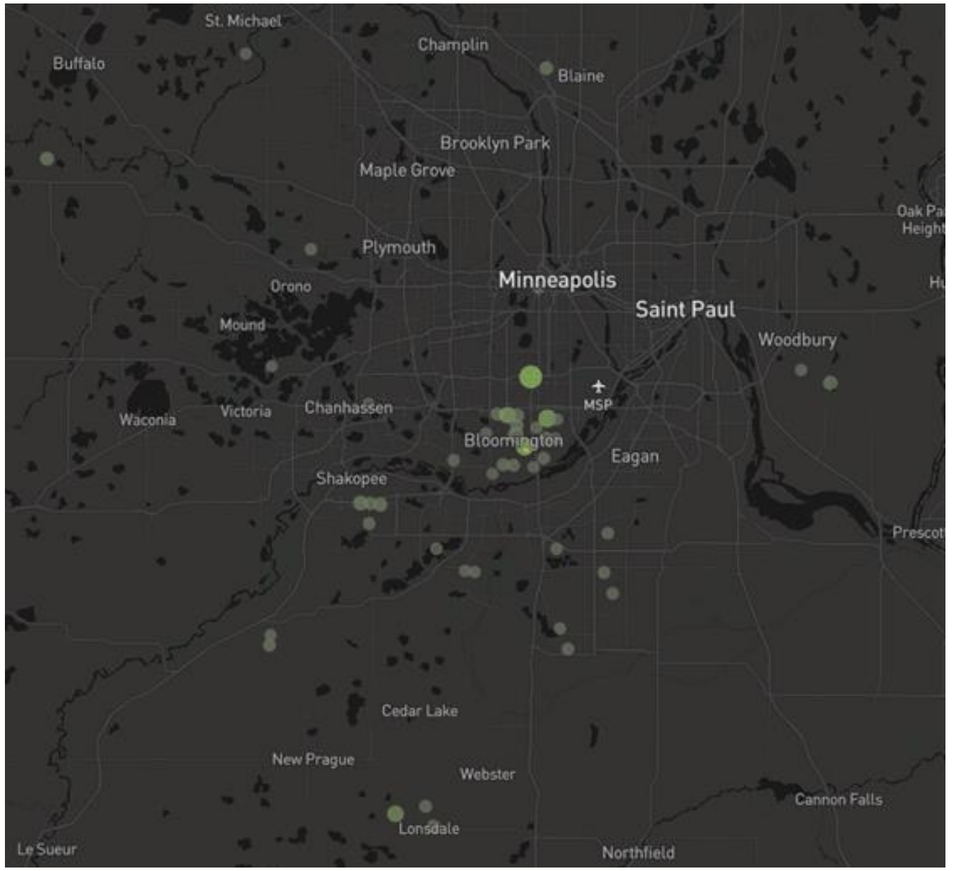
City Staff Commuting Research

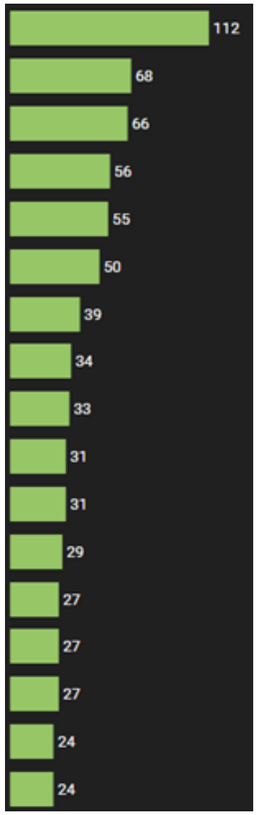
Transportation Listening Sessions



Starting Process to Set Quantitative Goals

91% of Bloomington employees drive alone to work.





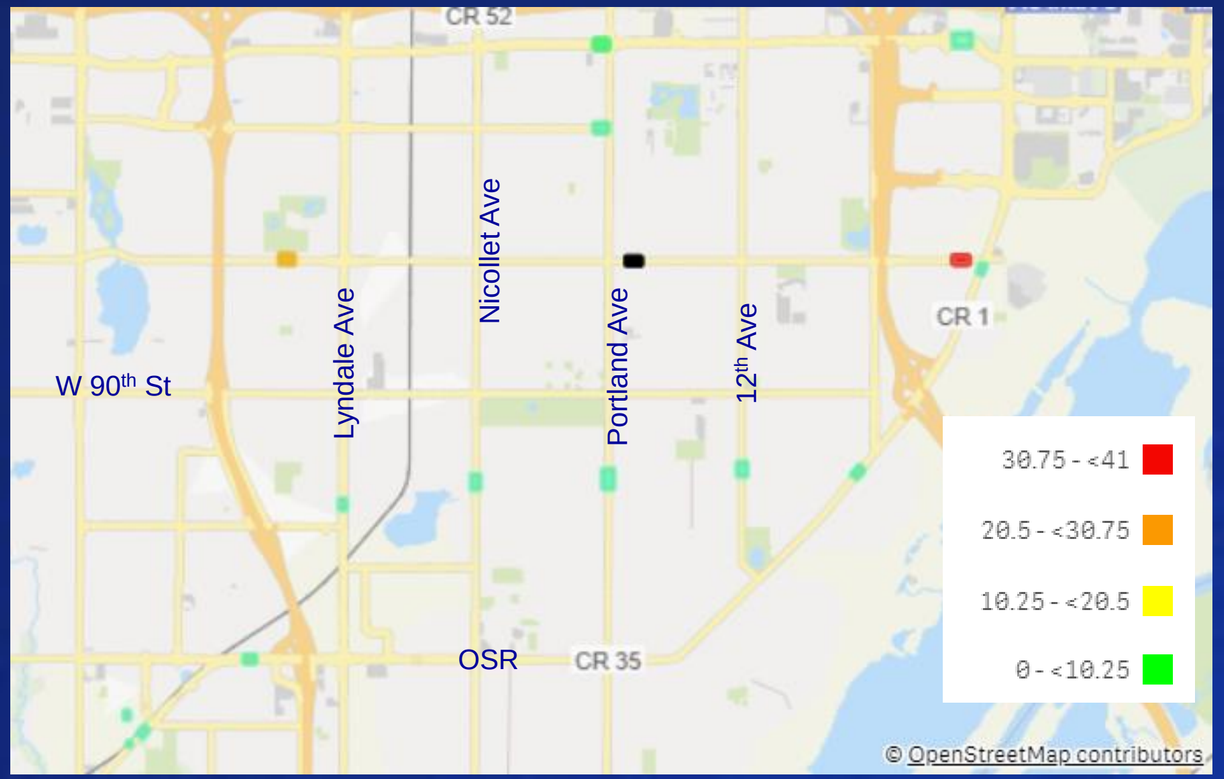
Streetlight Data

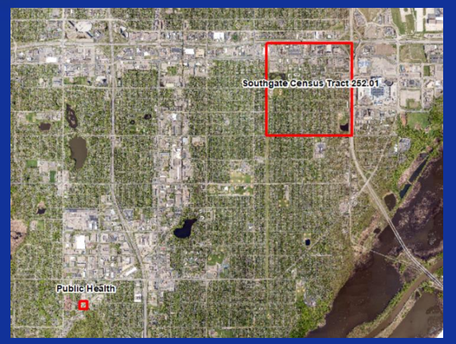
Bloomington employees on average work day.

O-D Analysis SG to PH (Peds)

- Design
  - Year 2018 Summer (June – Oct)
  - Segments placed along expected main routes of travel

Zones showing destination counts if the starting point was the dark polygon along 86th St with a few more walkers about, probably due to the fact that it is warmer





"I LIVE ON THE BOTTOM FLOOR AND I SEE PEOPLE WALKING THROUGH SNOW COMING FROM THE STORES. IF THE BUS WOULD COME CLOSE TO THE APARTMENTS THEN PEOPLE WOULDN’T HAVE TO DO THAT. I THOUGHT MANY TIMES, IF I COULD STILL DRIVE I WOULD PUT A NOTE IN THE BUILDING AND SAY, 'DO YOU NEED A RIDE?' $0.50 A RIDE OR SOMETHING LIKE THAT."

BLOOMINGTON RESIDENT AT
TRANSPORTATION LISTENING SESSION
SUMMER 2021

Take Aways

Climate change is a significant health and equity problem that requires immediate action.

Energy use and driving contribute to this problem the most in Bloomington.

We are not on track to avoid the worst of climate change.

Take Aways Cont.

Coordinated city-wide efforts to tackle this problem are in their infancy.

Sustainability efforts need to ramp up quickly in order to meet the City’s climate goals.

There are solutions and resources to help us tackle this problem.

Questions?