SB Stat | Sustainability

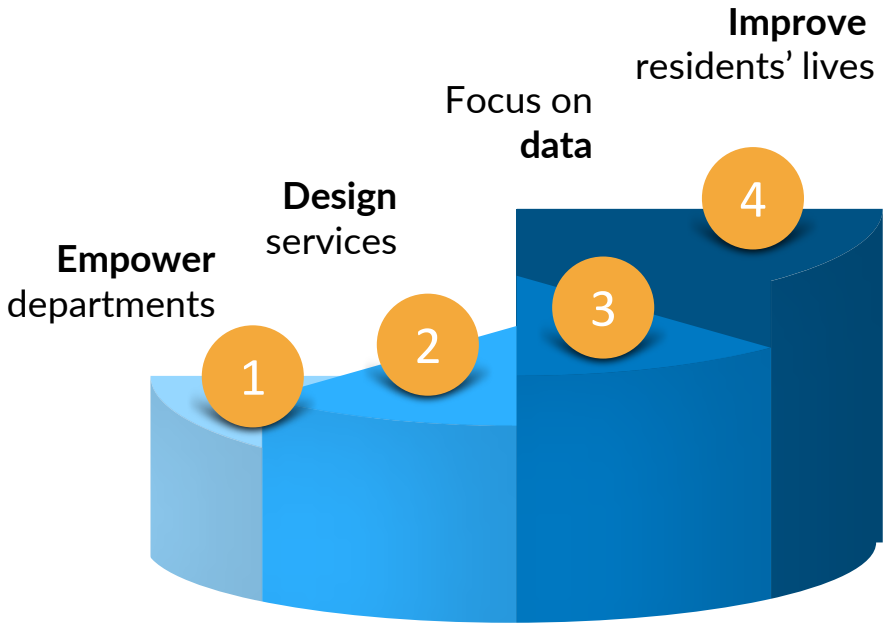
2023 Quarter 2 | July 14, 2023

City of South Bend

Why we're here

Citywide Performance Management

The purpose of SB Stat is to bring the most powerful people in the City – the Mayor, Department Heads, and key staff – into a room to **use data and take action** on some of the City's most pressing challenges



Stat meeting structure & cadence
• The Mayor's Office sets the agenda for the meeting • The Business Analytics team schedules the meeting each quarter and invites attendees • The Business Analytics team documents all action items discussed during the meeting and assigns each item to the appropriate City team

Participants	Purpose in the Stat meeting
Project Leads , analysts, and other key staff	• Lead discussion on assigned projects • Contribute with ideas, knowledge on data sources, and suggestions for improving performance
Mayor & Department Heads	• Share ideas, ask questions, and contribute to discussion on strategy and performance targets, • Assign next steps to relevant members of their department/teams

Sustainability Stat Purpose + Decision Points

Purpose of Sustainability Stat	Convene quarterly with City teams to establish a performance management framework and practices for the City's Sustainability Goals. This includes:  Defining the goals, metrics, and activities for the City's Sustainability Team  Reviewing sustainability metrics and programs quarterly to inform strategy and make course corrections  Updating the City's Climate Action Plan
Decision Points for the Mayor	• City staff have developed different options for the Mayor to consider in each Sustainability focus area, categorized as (1) **Bold**, (2) **Significant**, or (3) **Necessary** • City staff needs guidance on setting public-facing goals to mobilize the community

Today's Agenda

I. Data summary + climate action KPIs

II. Deep-dive on select projects and challenges
- Solar project options
- Electric vehicle strategy development

III. Celebrating our values

OOS: Planning Projects

Project	Project Objectives	Status
Sustainability Data Inventory	• Create and maintain a list of data sources the OOS uses for SB stat and carbon reporting	

Climate Action Plan (CAP)	• Create a 5-year Climate Action Plan with both mitigation and adaptation components,
	  • Draft for community review late spring/early summer 2024
	  • Final version to be passed fall 2024	

Climate Risk and Vulnerability Assessment (CRVA)	• Define climate risks and vulnerabilities for the City of South Bend to incorporate into CAP	
LEED for Cities	• Support DCI Planning team in applying for and achieving LEED for Cities certification. Incorporate elements from LEED into CAP	
Comprehensive Planning	• Support DCI Planning team in incorporating sustainability as a key pillar to the 20-year comprehensive plan. Weave comp plan and CAP goals together.	

Legend

- Project on schedule
- Project delayed or slowed
- Project cancelled
- Project under consideration / no project timeline

OOS: Mitigation Projects

Project	Project Objectives	Status
EASSI	• The Energy Assistance and Solar Savings Initiative (EASSI) provides subsidized energy assessments, grants, and low-interest loans to community organizations to complete energy efficiency and solar projects.	
Vibrant Places	• The Office of Sustainability provides a 20% sustainability bonus for projects and manages the SUNpowered Grant to increase solar on local businesses.	
Smart Businesses Recycle	• Reduce waste from local businesses by providing recycling incentives.	
Upskill SB	• Design, develop, and manage a workforce development program (Upskill Climate Action) to increase the number of individuals who participate in the "green transition."	
Internal Sustainability Development	• City leads and incorporates sustainable development internally, which includes research and implementation of facility and/or EV procurement	

Legend

- Project on schedule
- Project delayed or slowed
- Project cancelled
- Project under consideration / no project timeline

OOS: Adaptation Projects

Project	Project Objectives	Status
Urban Tree Canopy (UTC)	• 40% UTC by 2050 – Plant ≥ 100,000 trees • Finding and applying for funding	
Michiana Pollinator Project	• Creating and maintaining demonstration gardens with native plants • Sharing resources • Providing opportunities for community education and involvement	
Urban Ecology Research with ND, Holy Cross, IUSB	• Collaborate with local academic institutions to study the City in their back yard by establishing a baseline for adaptation efforts, identifying strategies, testing pilot projects, measuring progress, applying for BIL/IRA money, etc.	
Green Stormwater Infrastructure (GSI)	• Diversify portfolio of green infrastructure projects and related funding sources (e.g., 40% Tree Canopy, wetland mitigation credits)	
CAP: Collaboration	• Sync efforts across departments, break down silos, incorporate community collaboration into next CAP	

Legend

- Project on schedule
- Project delayed or slowed
- Project cancelled
- Project under consideration / no project timeline


Question 2
Energy is everywhere! What are some activities that you do that require energy?

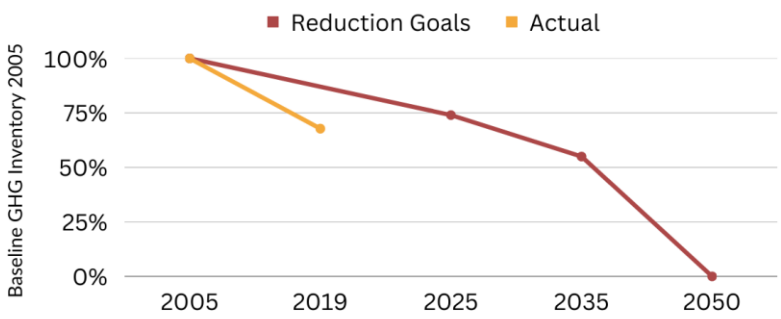
Data summary + climate action KPIs

Summarizing data points and statistics from the past quarter related to core operations

Comparison of science-based 2040 emission target versus current

SOUTH BEND GHG REDUCTION GOALS & CURRENT PROGRESS

With 2019 as our last greenhouse gas inventory date, South Bend is ahead of schedule in terms of reducing greenhouse gases to zero from a 2005 baseline level.

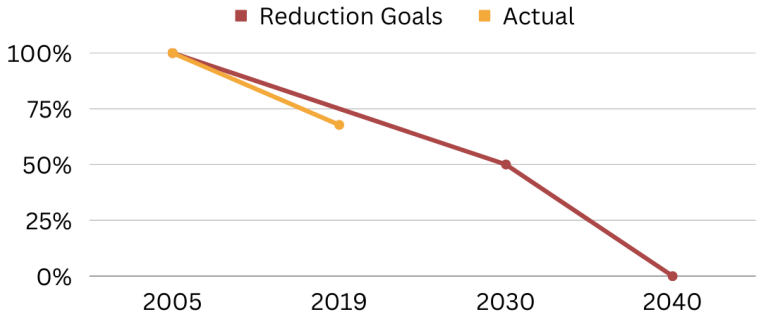


GREENHOUSE GAS INVENTORIES

2005 = 2,376,578 CO2e
2019 = 1,610,596 CO2e

→ **32.23%** decrease in emissions since 2005 baseline

2040 target



The City of South Bend has already surpassed its 2005-based emissions reduction goal of 26% by 2025.

A new, science-based emissions reduction target has been established since the Paris Agreement because, according to the IPCC's recent analyses, a more aggressive approach is necessary to avoid the worst effects of climate change: 50% of baseline levels by 2030 and net-zero by 2040.

Annual outcomes KPI Summary

KPIs	Sustainability Priority Category	How we measure success	Desired outcome	How the metric aligns with the City's values
Greenhouse Gas emission	Mitigation – Planning	• 50% reduction of 2005 levels of GHGs by 2035 • 100% by 2050	South Bend is a carbon net-zero city by 2050	Innovation
Tree Canopy	Adaptation	• 40% tree canopy coverage by 2050 • 100,000 trees planted • CO2e sequestered	Residents can benefit from cooler temperatures and other positive effects as temperatures increase	Empowerment
Environmental Justice	Collaboration	• At least 40% of the Office of Sustainability's investments goes towards census tracts that are identified as disadvantaged	Vulnerable communities which are most susceptible to climate change are adequately prepared	Inclusion
City Solar Output	Mitigation - Energy	• 100% renewable energy sources by…	City facilities are electrified and more energy efficiency.	Accountability

Program KPI Summary

Program	Sustainability Priority Category	How we measure success (KPIs)	Desired outcome
EASSI 2.0	Mitigation - Energy	12 organizations with completed energy assessments Projects: 2 solar, 1 window replacements, 5 LED lighting, 2 insulation, 3 efficient heating and cooling	Reduce building emissions Make community organizations more energy resilient Increase awareness on energy efficiency and renewable energy
Vibrant Places	Mitigation (some adaptation)	109 pre-applications, 84 indicated an interest in solar (77%) 7 Solar 101 sessions, 16 attendees 6 Feasibility studies 1 Solar project nearing contract	Businesses incorporate sustainability elements in the exterior of their building Reduce building emissions and energy consumption through solar energy Increase awareness of energy consumption and solar energy
EV Infra Plan	Mitigation - Transportation	Workshops & meetings with stakeholder groups is complete Draft of plan is anticipated for end of July, then shared with working group and external task force in August with draft plan for public comment in September.	Expand equitable access to public EV charging citywide Considers City's role in solutions for residents that cannot add private EV charging at home Explores pathways for equitable access to workforce development in EV charging

Program KPI Summary cont.

Upskill SB Climate Action	Collaboration	• 5 solar students in pilot program (none went on to receive certifications)
		• 11 individuals applied to Upskill Climate Programs, 3 enrolled
		  • 2 solar
		  • 1 green buildings
		• Hosted one 2-day training in partnership with South Bend Area REALTORS (SBAR)
		  • 16 realtors received NAR Green Designation
			South Bend has a reputation and track record of supporting local workers through the "green transition."

Climate Action Ambassadors	Collaboration	• 15 Climate Action Ambassadors • >500 people have filled out the Climate Action Survey	Residents are aware the COSB has a Climate Action Plan and their feedback is directly incorporated into the planning efforts.
Smart Business Recycling Pilot Program	Mitigation	• 4 open applications • Recycling memo • Outreach: DTSB, canvassing, Facebook ad, bus stop ad	Assist businesses to start a single-stream recycling service, improve their recycling capabilities, and reduce waste
Green Infrastructure	Adaptation	• 40% UTC goal established • Applied for $1.8M USDA forestry grant • 23.5 acres of additional space for urban tree nurseries → ~9k trees	South Bend is a climate resilient city that sequesters carbon into treasured green spaces and provides a wealth of ecosystem benefits to residents.

Deep-dive analysis & discussion

Diving deep into a few key initiatives being undertaken to improve city performance

- City solar project
- Electric vehicle policy ideas

City Solar Project

Determining which project options the city should pursue

Defining the problem

Problem Statement

Given the Mayor's interest in municipal solar, how should we spend the remaining $850,000 of ARP dollars effectively?

How might we...

- Best utilize ARP dollars to reduce energy consumptions, emissions given State and utility constraints
- Manage solar projects that are proposed to the City

Outcome Metric(s)

- Reduction in energy consumption (MW)
- Reduction in greenhouse gas emissions
- Visibility/awareness

Options for Large-Scale Solar

- Onsite
- Microgrid
- Green Tariff
- Special Agreement

Options for Large-Scale Solar

Strategies	Details	Pro	Con	Example
Onsite solar production of 1 MW or less	Solar up to 1MW that powers a specific City facility	Ease of meeting utility requirements	Space limits the ability to produce more solar and maximize offsetting of energy and emissions	Rooftop solar - similar to commercial solar projects like EASSI: 100% energy offset or less
Microgrid for facility use	Self operating solar system that is owned and managed by the City. Solar production is greater than 1MW and powers a specific City facility (self contained utility)	Can rightsize system to maximize benefits. Allows City to produce more than 1 MW Allows for owning and keeping energy and emissions savings without the need for an agreement.	2X expensive as normal system More requirements to meeting microgrid standards	Borrego, CA – powers community and critical facilities Fairfield, CT - powers critical facilities yearlong Fort Wayne, IN is developing a microgrid
Green Tariff	Buy renewable energy from the AEP	Reduce emissions footprint	Supporting only AEP renewable infrastructure Dependent on AEP capacity t	AEP GoGreen program
Special Agreement (~PPA)	Agreement with the utility where solar project is developed. Technically possible but difficult. Energy production is purchased by the utility. City can claim energy savings and/or emission reductions	Flexibility to produce solar that is not tied to a specific building, allowing general opportunity to reduce emissions	Only viable for very large systems of 20MW or greater. Uncompetitive compared to proposals the utility considers that are in the 100s of MW Only possible if favorable to AEP, all parties involved	Closest example (more like a community solar project) is Notre Dame agreement with AEP on St. Joseph County solar farm. Notre Dame pays AEP $125,000 to claim renewable energy credits

General Recommendations

- Pursuit of **1MW or less projects** is most feasible in the short-term
- Continue to **engage the utility** to see if exceptions, partnership opportunities become available
- Could **hold** onto funds if anticipate/want to wait and see if State passes a community solar bill that would be a true VPPA – solar not just intended for City-owned properties (do not anticipate a community solar bill in the near future)

Project Recommendation: Prioritize WWTP for the remaining $850k

- **Wastewater Treatment Plant (WTTP)** is most energy intensive facility
  - Deploy solar onsite as much as possible
  - Explore acquiring neighboring land. If possible, then expand financing to develop a microgrid
  - First step would likely be a feasibility study
- If not WWTP
  - **Smaller 1MW** or less projects for different facilities
- Shift to expand intended scope of solar
  - City facilities
  - Businesses
  - Community organizations
  - Residents

Related: Solar Proposals to the City

We receive proposals on occasion for solar projects on City-owned land, vacant land, or land that an owner would be willing to sell. **How should the City evaluate such proposals?**

Recommendations

Follow similar recommendations that align and with solar strategies

Only focus on projects that can directly power a City building/facility unless new solar options become available (state program for community solar, change in utility policies/flexibility)

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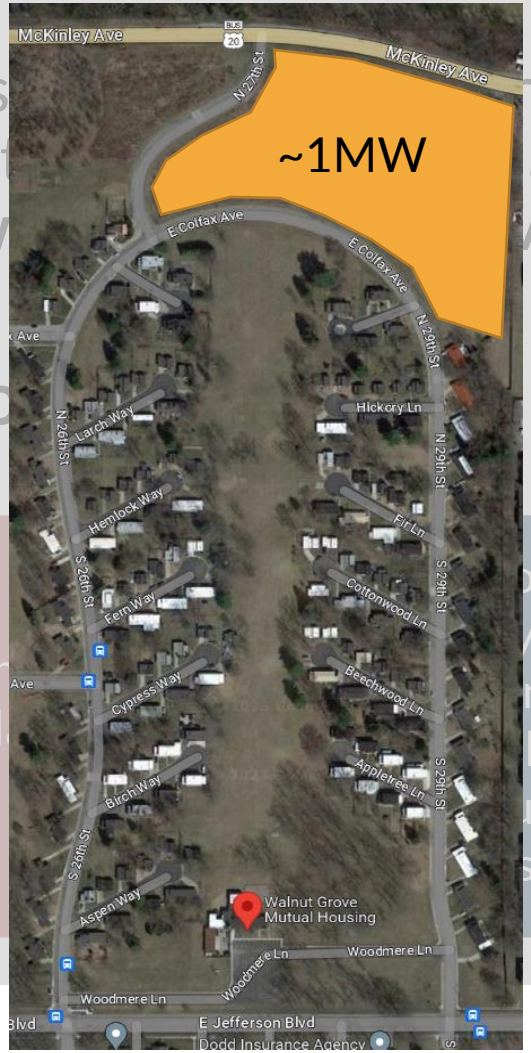

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Discussion questions before closing out the topic

1. What is your preference for large-scale solar projects?
2. Where should we focus large-scale solar efforts?
3. Is our goal to reduce emissions or increase renewable energy?
4. What is our solar prioritization (reconfirming): whole community or municipal energy?
5. How should we explore solar proposals sent to the City, if any? What parameters do we use, if any?
    - City-owned land? Location-based?
    - Only solar that directly feeds to a building?
    - Certain solar system size?
    - Any project?

Taking Action

The problem	Given the Mayor's interest in municipal solar, how should we spend the remaining $850,000 of ARP dollars effectively?
Outcome metrics	• Reduction in energy consumption (MW) • Reduction in greenhouse gas emissions • Visibility/awareness
Action items	• Determine if all options for WTTP are exhausted • Assess largest energy consuming facilities in addition to WTTP and their potential for solar • Finalize internal policy for managing large-scale solar proposals

Electric Vehicle Strategy Development

Defining the problem

Problem Statement

How to eliminate barriers towards EV adoption in South Bend? Transportation is a significant part of our carbon footprint. We are finalizing our EV Infrastructure Plan. What steps does the City go from here?

How might we...

- Accelerate EV adoption
- Plan infrastructure around EVs

Outcome Metric(s)

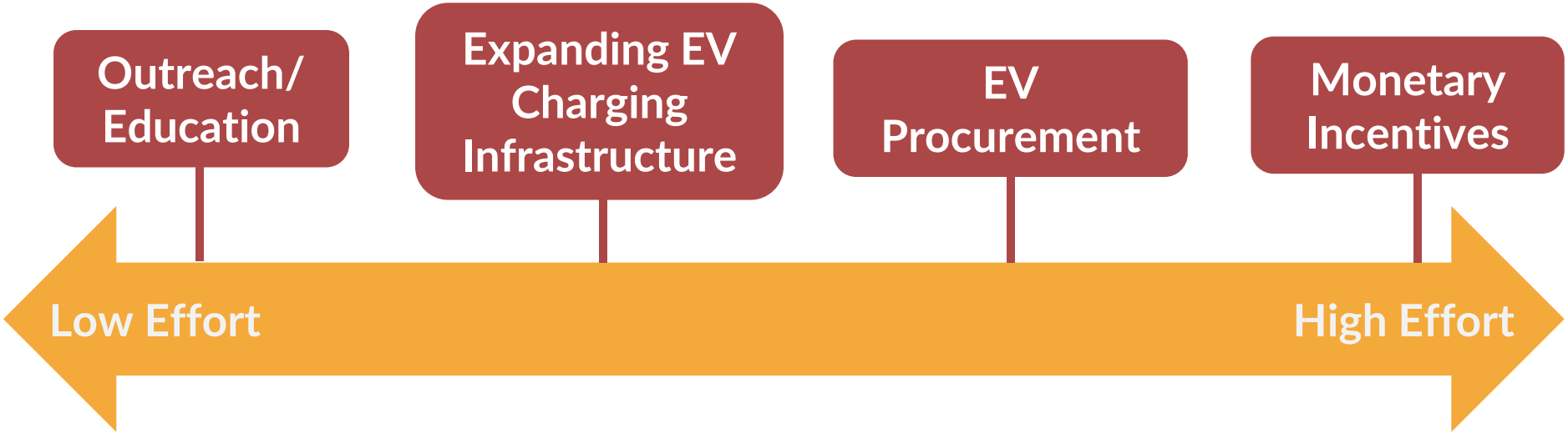
- Greenhouse gas emissions from the transportation sector
- Percent of cars that are electric
- Equitable allocation of EV infrastructure

EV policy options

Table 1. Summary of key policies to pursue at the city level

Summary of key city policies Benefits & impact key: High Medium Potential Negative Dificulty & cost key: Low Medium High		Benefits & impact					Difficulty to pass	Current cost to implement
		Direct GHG reduction	Health	Equity benefits	Jobs	Market impact		
Charging infrastructure	1. Infrastructure deployment							
	2. EV-ready buildings & businesses							
	3. Equitable charging							
	4. Streamlined charging approval (permits)							
Multi-sector	5. Zero emission (ZE) areas, diesel bans, or similar							
	6. Road tolls and CO_2-focused congestion pricing							
	7. Funding for electric vehicles and charging							
Freight	8. Zero emission freight/delivery zones/curb access							
	9. Zero emission ports and inland hubs/ warehouse districts							
Fleets (buses, light-duty)	10. Zero emission bus requirements & rollout							
	11. Fleet EV funding and business models							
	12. Light-duty city fleet requirements							
	13. EV procurement and use policies (all classes)							
Consumer	14. ZE mobility service provider/taxi deployment							
	15. City programs for faster uptake (bulk purchase agreements & dealer & education campaigns) (action)							

Range of EV Strategies



- Outreach events
- Informational materials
- Dealership engagement program
- Promote public EV charging stations

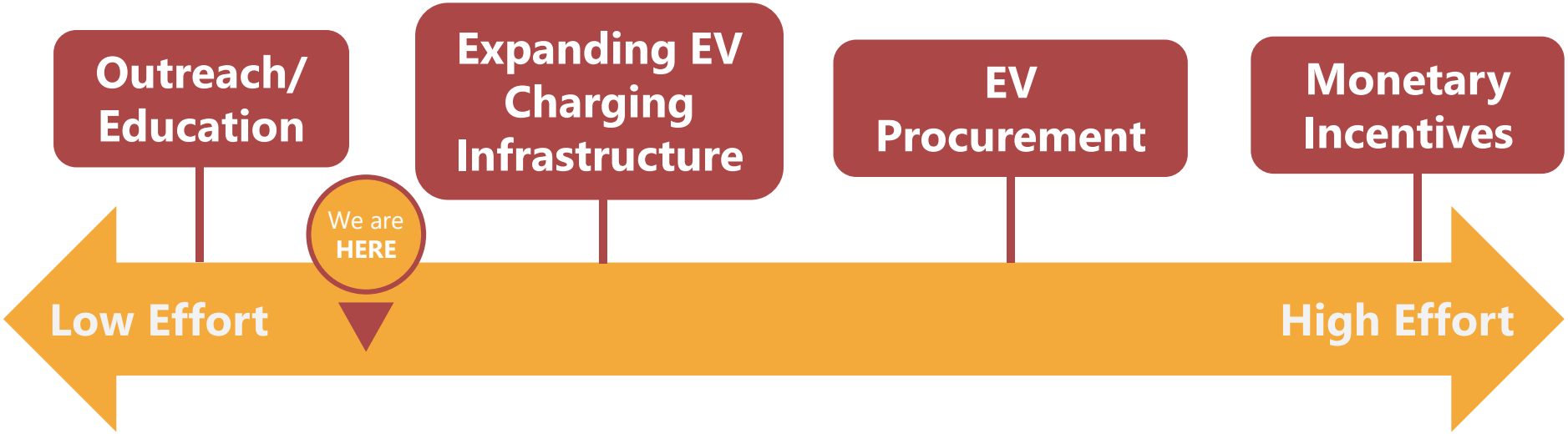
Guidance and supportive policies to allow for EV charging

- Voluntary EV ready standards for new construction
- Design guidelines for EV charging stations
- Equitable placement of public charging stations

- New procurement procedures in place for replacing vehicles in city fleet

- EV charging station and/or EV purchase incentive
- (rebates, revolving loan)
- Parking benefit
- Preferential EV charging rates
- Cash for clunkers
- Leverage IRA incentives to benefit residents (inform and assist)
- Incentives for home retrofitting – electrical panel upgrades

Range of EV Strategies



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- Equitable placement of public charging stations

- New procurement procedures in place for replacing vehicles in city fleet
- More info in next section

- EV charging station/EV purchase incentive
- (rebates, revolving loan) funds for recent EV buyers
- Parking benefit
- Preferential EV charging rates
- Cash for Clunkers
- Leverage IRA incentives to benefit residents (inform and assist)
- Incentives for home retrofitting – electrical panel upgrades

EV Fleet Best Practice Strategy

- *EV-First Procurement*
  - *New vehicle purchases must be EVs unless a waiver is obtained based on high cost or other substantive reasons.*
  - *Procurement policies can apply to specific vehicle types or applications, expanding in scope over time as more models become available.*
  - *Ex: Minneapolis, Madison, Albuquerque, Melrose, many examples!*
- *Set goals for EV fleet*
  - *Reduction in GHGs of fleet*
  - *# of EVs in fleet by 2030*
  - *Ex: Chicago, IL: 100% of fleet to zero emissions by 2035,*
  - *Ann Arbor, MI: Electrify 90% light duty fleet by 2025, followed by medium- and heavy-duty vehicles at a later date*
  - *Charlotte, NC: 100% zero carbon fleet by 2030*
  - *Minneapolis: reduce GHG emissions of fleet by 1.5% annually with goal of 2% annually*
- *Caleb – combustion engine delays*

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- *Caleb – combustion engine delays*

Direct Incentives Best Practice

- *Many options!*
- *Leverage IRA and federal funds and add incentives to make EV adoption more attractive*
- *Group EV purchasing*
  - *Fort Collins, CO; Salt Lake, UT,*
- *Rebate program for purchase or lease from participating dealers*
  - *New York*
- *Electrified Dealer Program – commitment to have dealership put EVs on their lots*
  - *Columbus, OH*
- *Rebate Partnership with Local Utility*
  - *Orlando, FL*
- *Taxis/Ridesharing, Buses/other fleets*
  - *Incentives to transition to EVs*

Direct Incentives Best Practice

- *Many options!*

Priority

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Focus on supporting those with greater challenges to reach EV adoption (low-income residents, renters, multifamily housing)

Discussion questions before closing out the topic

1. Which goals should we set for the administration?

2. What should be the City's vision for accelerating EV adoption?

3. What policies should we prioritize in the short and long term?

    - Should we consider EV City fleet procurement? Is this a start to a larger conversation on the City's sustainable procurement policies (e.g., buildings & maintenance)?

    - Do we consider monetary incentives for residents or businesses?

Taking Action

The problem	How can the City eliminate barriers towards EV adoption in South Bend? Transportation is a significant part of our carbon footprint, and we are finalizing our EV Infrastructure Plan. What steps does the City go from here?
Outcome metrics	• Greenhouse gas emissions from the transportation sector • Percent of cars that are electric • Equitable allocation of EV infrastructure
Action items	• Define and finalize EV strategy to pursue • Further work with A&F if we decide to pursue internal EV policies • Further work with DCI if we decide to pursue community-centered policies

Celebrating our values

This section highlights exemplary work happening in the City to improve performance that may otherwise go unnoticed

Celebrating our Values

- Over 500 climate action surveys filled out!

SB Stat | Sustainability

2023 Quarter 2 | July XX, 2023

City of South Bend

Appendix section

Annual outcomes summary for 2023

Performance Objective	KPI	2023 Actual	2023 Target
Mitigation	Greenhouse Gas emission	32.23% Co2e reduction (2019)	23.4% Co2e reduction
Adaption	Tree Canopy	26% Canopy coverage	26.5% Canopy coverage
Collaboration	Environmental Justice	15 Climate Action Ambassadors	40%< investment $'s towards disadvantaged communities
Mitigation	Annual solar output	TBD MWh	TBD