



**BOARD OF DIRECTORS**

# Reporting Item

March 15, 2022

ITEM

Pathways to Decarbonization Internal Operations and Community Work Stream Summary

PURPOSE

To provide an overview on the objectives, methodology, findings and recommendations on the Pathways to Decarbonization Internal Operations and Community work streams for March 2022.

PATHWAYS TO DECARBONIZATION FACTS

1. In November 2019, the Omaha Public Power District (“OPPD”) Board of Directors approved an overall commitment for OPPD to “Conduct all of its operations (including operations such as building services and transportation) in a manner that strives for the goal of net zero carbon production by 2050.” To identify pathways to meet this goal, OPPD has embarked upon a Strategic Initiative titled “Pathways to Decarbonization.” The strategic initiative is broken into four separate work streams: Energy Portfolio, Internal Operations, Customer, and Community. In March of 2022, Internal Operations and Community will present their findings and recommendations. In February 2022, the Energy Portfolio and Customer work streams did the same.
2. The Internal Operations work stream created a repeatable, standardized carbon accounting framework and greenhouse gas inventory that is transparent, complete, accurate, consistent, and relevant. This inventory is based on the World Resource Institutes Greenhouse Gas Protocol and has been independently verified by a third party.
3. The Community work stream identified four focused opportunity areas where OPPD is positioned to be a partner, educator, and leader for community-scale decarbonization. Industry benchmarking and best practices were utilized to identify current strategies and actions that OPPD is utilizing as well as potential incremental strategies and actions in these focus areas.
4. This update communicates a summary of the purpose of the work streams, the methodology for executing the studies, key findings, recommendations, and next steps.

**RECOMMENDED:**

DocuSigned by:  
  
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 Bradley R. Underwood  
 Senior Director – Systems Transformation

**APPROVED FOR REPORTING TO BOARD:**

DocuSigned by:  
  
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 L. Javier Fernandez  
 President and Chief Executive Officer

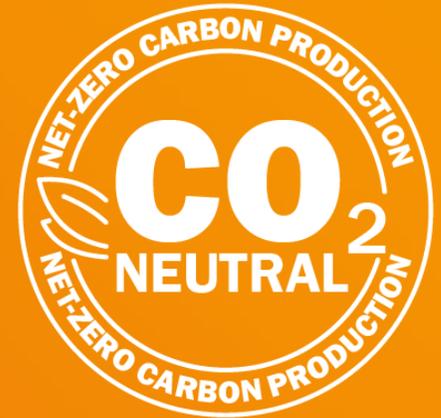
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# Strategic Initiative: Pathways to Decarbonization

## BOD Update March 2022

Emily Muth, Ryan Stigge  
March 15, 2022

NET-ZERO CARBON  
PRODUCTION  
BY **2050**

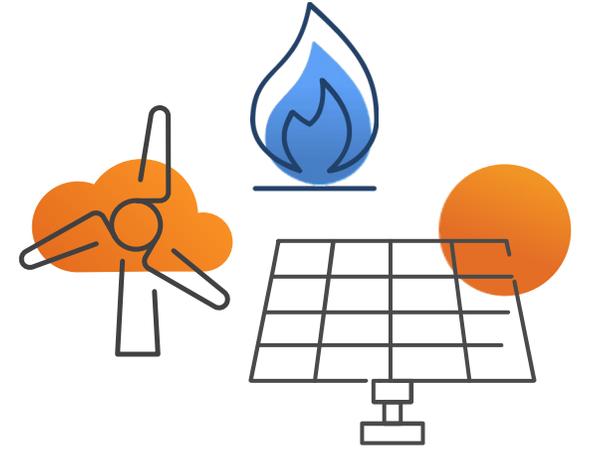


# Agenda

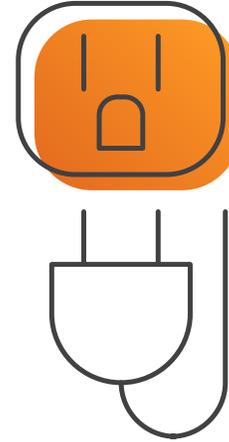
- Internal Operations Update
- Community Update



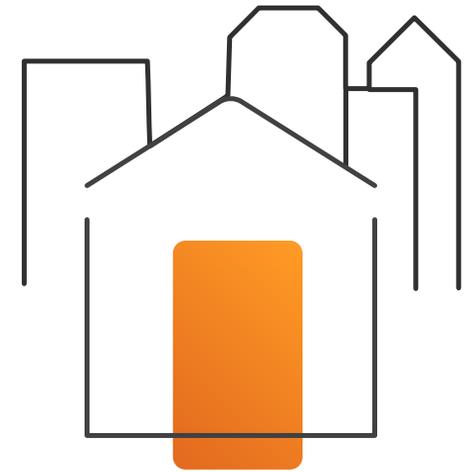
Internal Operations



Energy Portfolio



Customer  
Products & Services



Community Partner



# Decarbonization: Internal Operations



# Objective



- Create a Greenhouse Gas (GHG) Inventory that is **transparent, complete, accurate, consistent,** and **relevant**



- Base year 2018



- Institute a repeatable process and automate data collection where possible



- Inform projects to reduce OPPDs carbon emissions

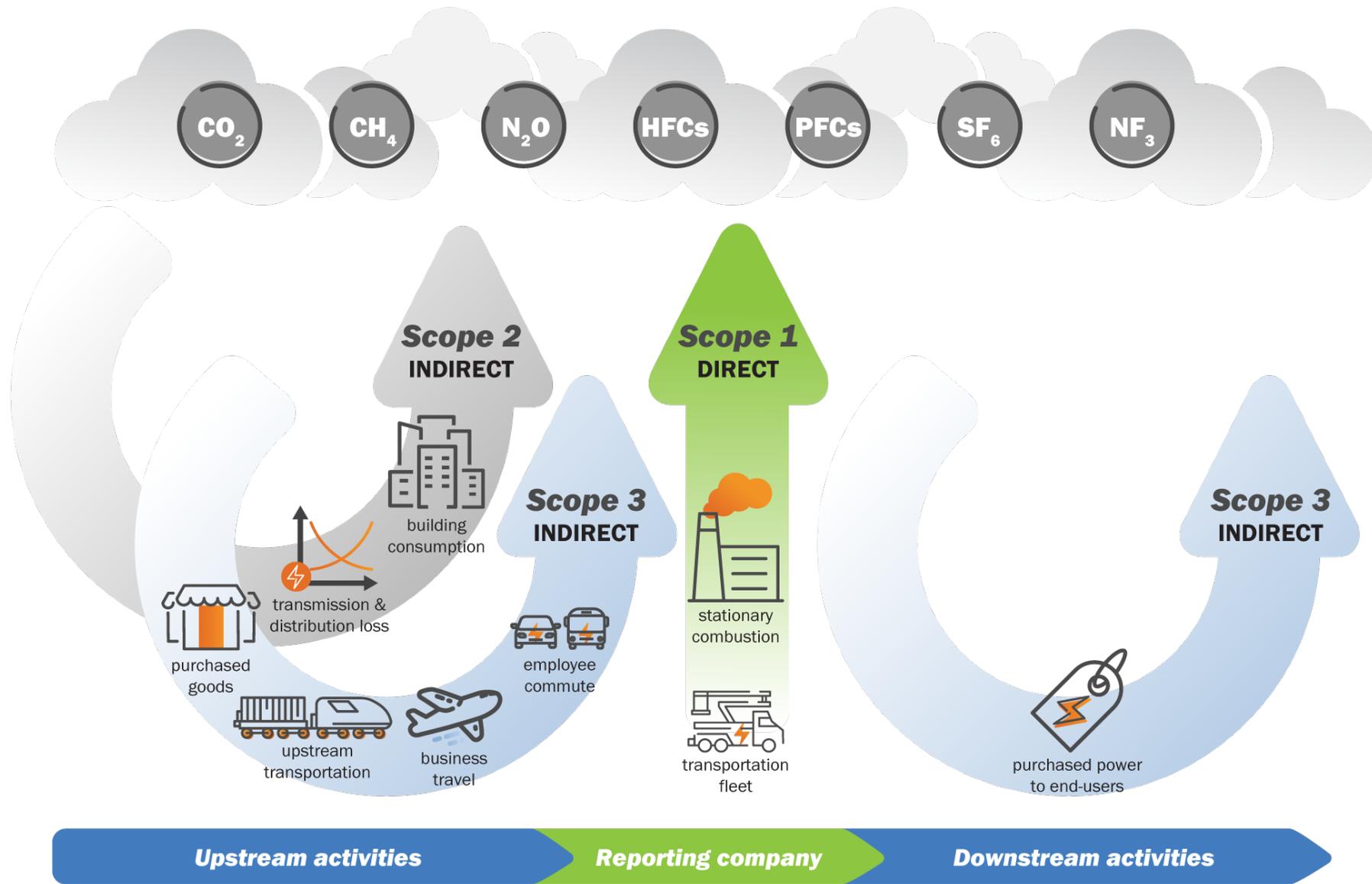
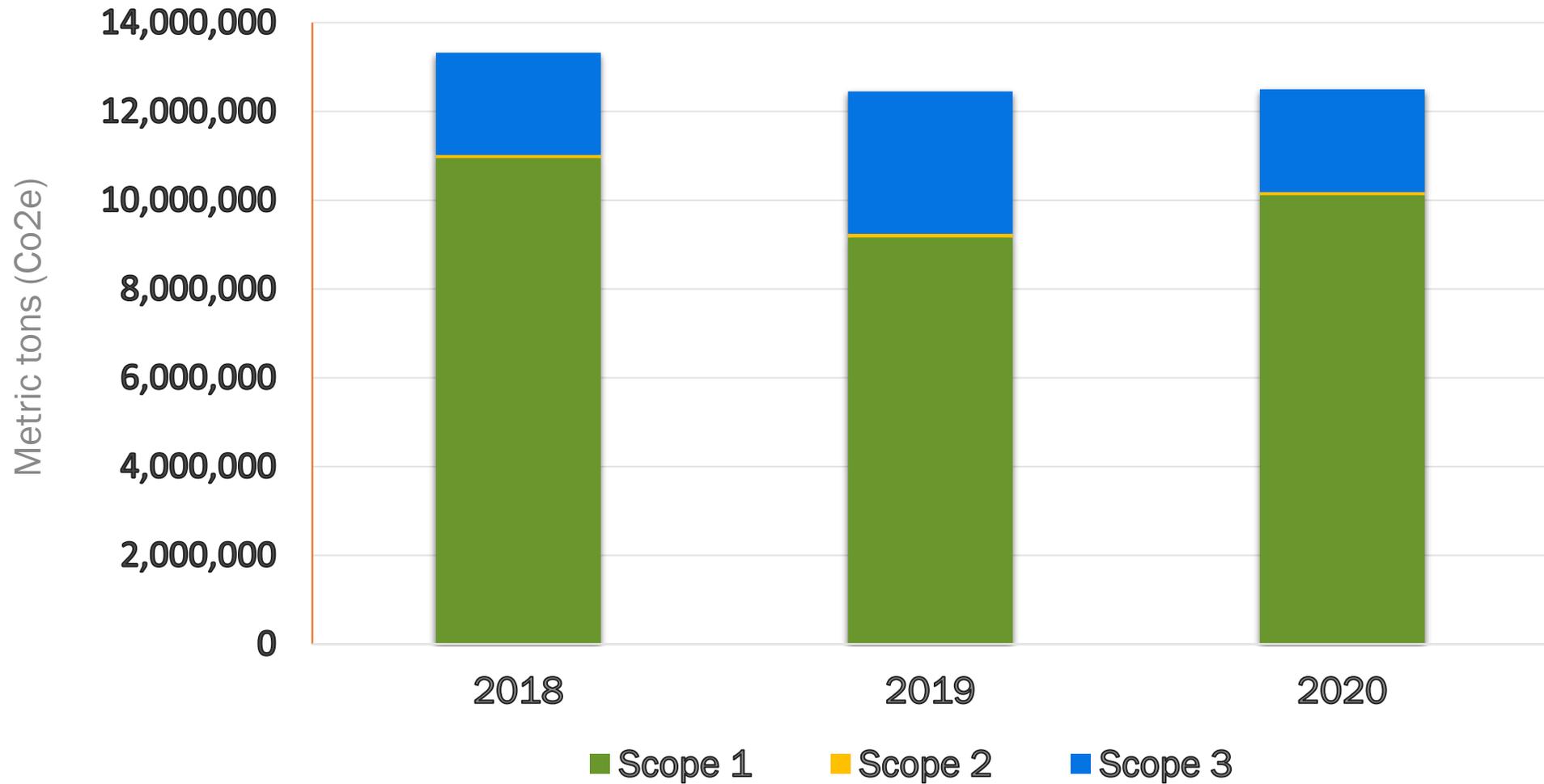


Figure adapted from [World Resources Institute Greenhouse Gas Protocol Corporate Accounting and Reporting Standard](#)



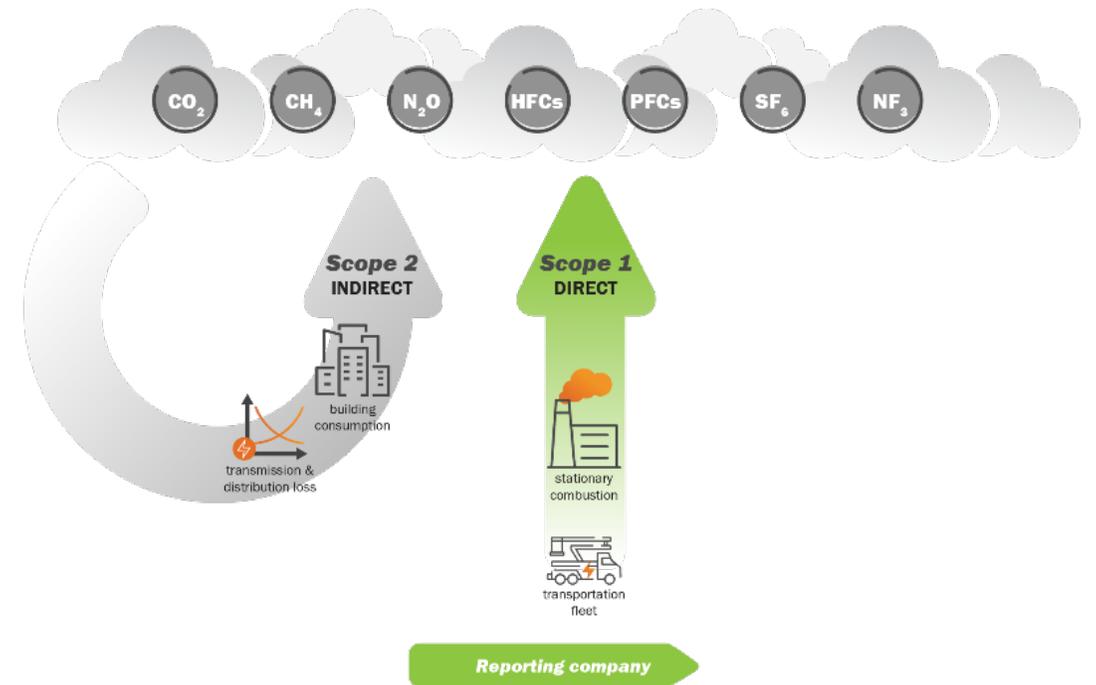
# GHG Inventory



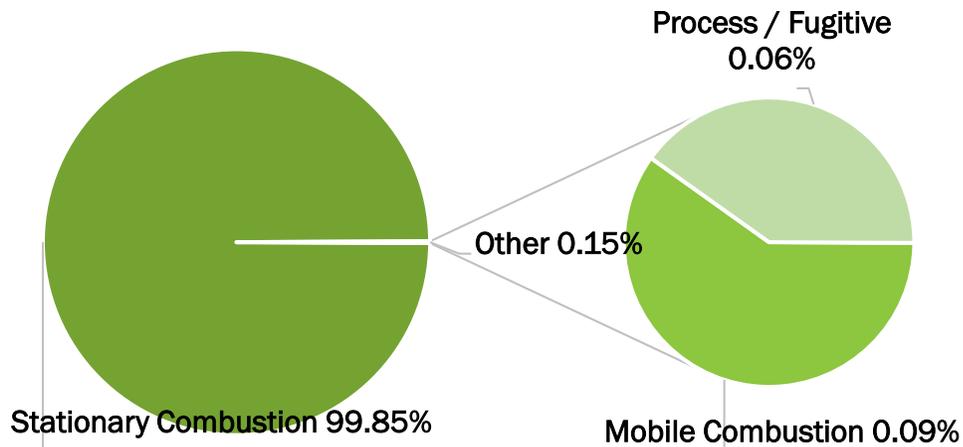


# GHG Scope 1 and 2

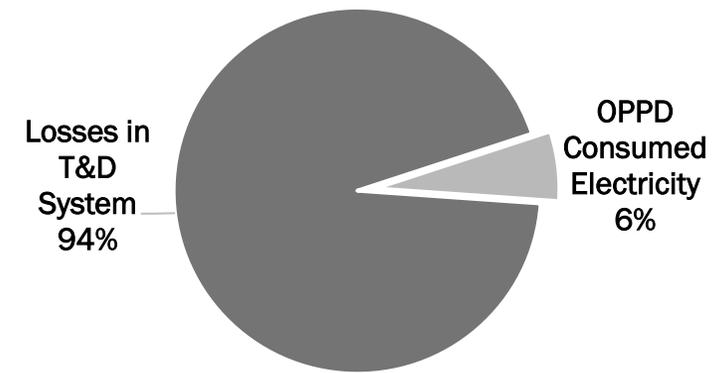
	Metric tons CO <sub>2</sub> e			
	2018	2019	2020	Average
Scope 1	10,951,778.9	9,161,659.1	10,113,600.3	10,075,679.4
Scope 2	69,916.6	84,793.2	68,782.4	74,497.4



## Scope 1: Avg Emissions



## Scope 2: Avg Emissions

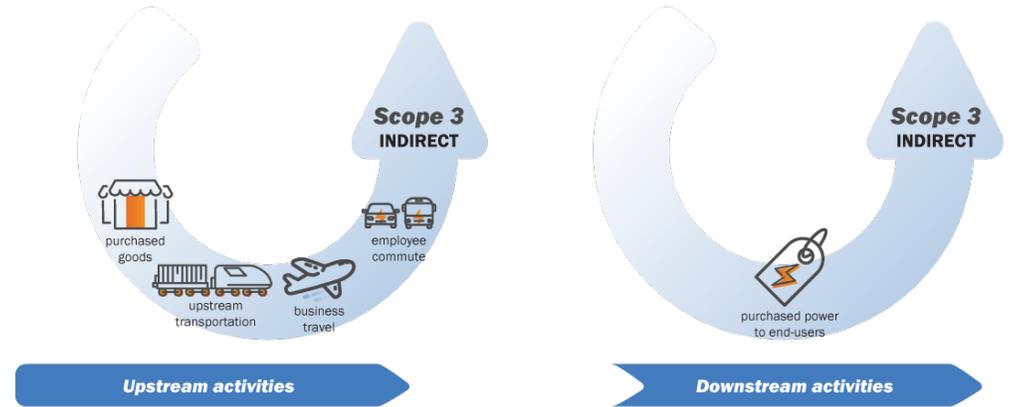
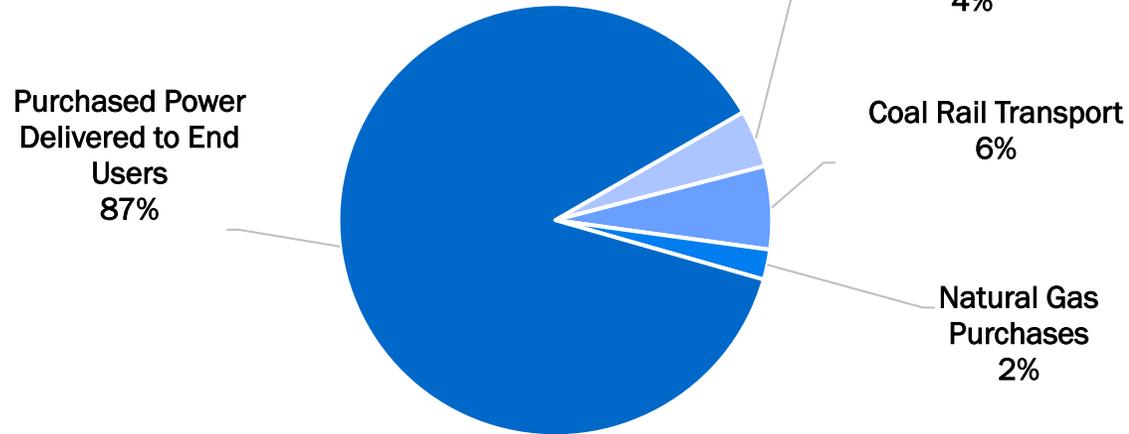




# GHG Scope 3



## Energy and Fuel Related Activities: Avg Emissions



	Metric tons CO <sub>2</sub> e			
	2018	2019	2020	Average
<b>Scope 3</b>				
Purchased Goods and Services	113,939	133,088	138,624	128,550.2
Energy and Fuel Related Activities	1,263,055	1,679,940	1,234,530	1,392,508.3
Waste	13,519	8,583	7,546	9,882.5
Business Travel	255	277	112	214.4
Employee Commute	4,286	4,388	3,190	3,954.5

# Scope of GHG Verification Effort

## Organizational Boundary

- Equity share

## Operational Boundary

- Scope 1
  - Utility boilers, mobile, etc.
- Scope 2
  - Buildings and line loss
- Scope 3
  - Designated categories (initial target of 5)

## Inventory years covered

- 2018 (base year for target setting)
- 2019
- 2020

## Inventory Management Plan



# Plan Assessment and Verification Findings

## Observations and Findings

- No Material Findings!
- Clear, well organized
- Methodologies explained
- Exemptions documented
- Adoption of this standardized is a best practice
- GHG accounting framework and aligns with stakeholder expectations



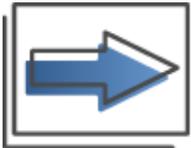
# Recommendations



- The GHG accounting process should be operationalized into the business, including the verification process (in Progress 2021 accounting underway)



- Continue with third-party verifications in future years to maintain data credibility. (Q3 2022)



- Work with the Technology Platform Strategic Initiative and Technology & Security Business Unit to automate more of the process and improve data management in the future. (suggest adding to the 2023 technology roadmap)

# Critical Information Management

## INFORMATION MANAGEMENT GOALS

Making it easier to:

- Find key information types
- Leverage for reporting and analytics



## LONG TERM TRACKING

- Positioning for advanced analytics and business intelligence
- Ensuring integrity via fundamental governance

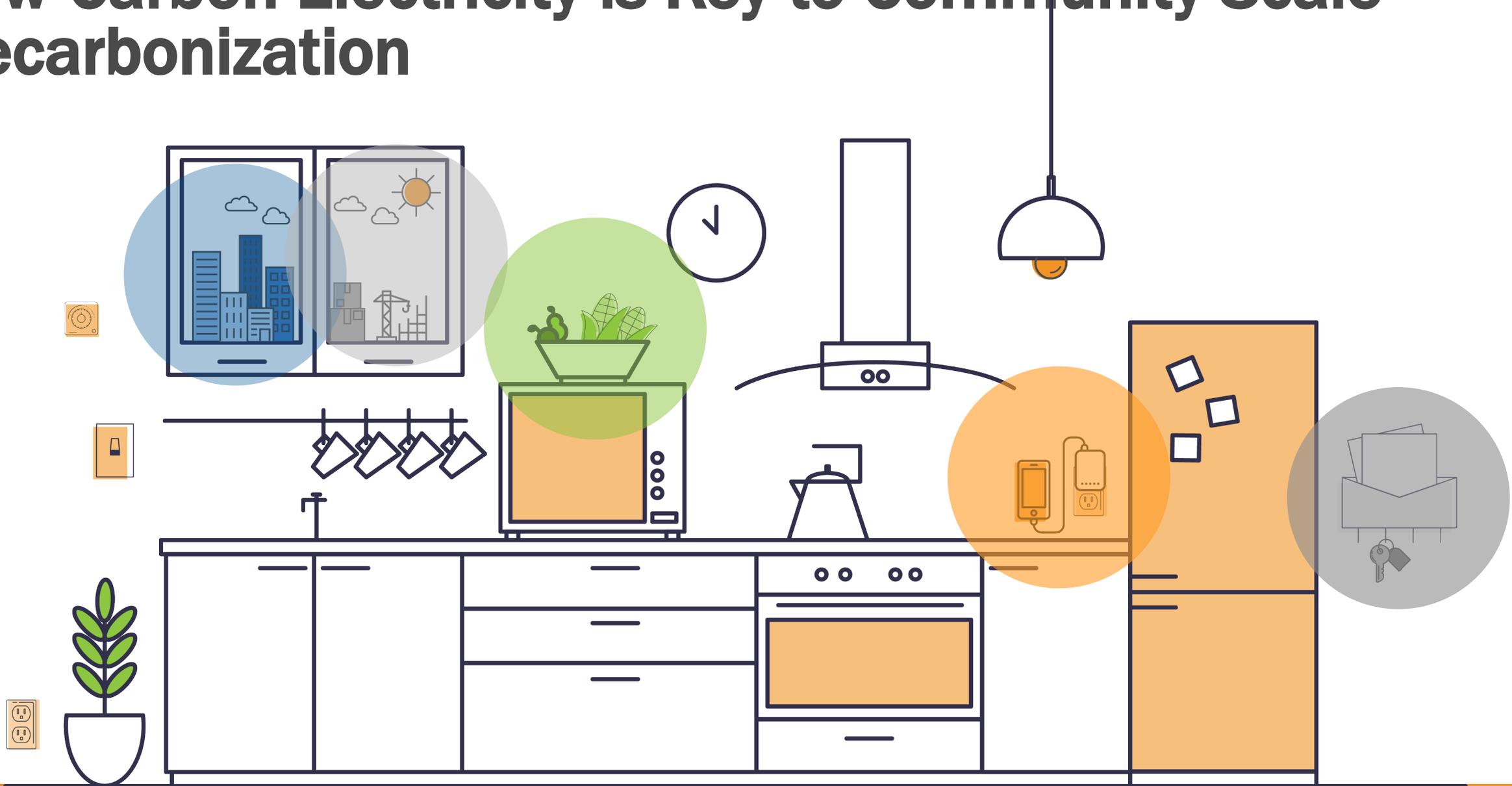




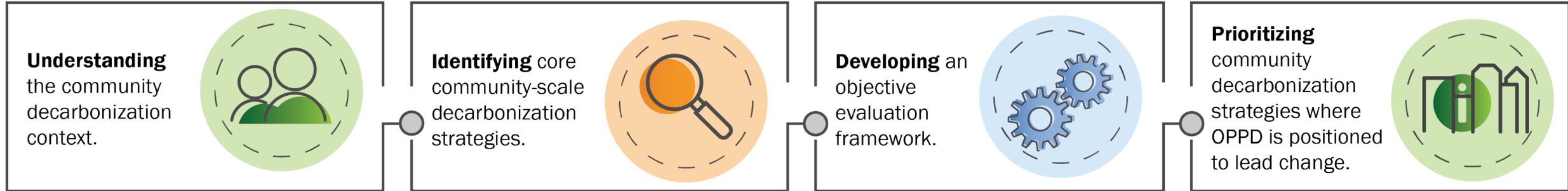
# Decarbonization: Community



# Low-Carbon Electricity is Key to Community Scale Decarbonization



# Community Decarbonization Approach & Objectives



- **Consider another vantage point**, encompassing community-scale decarbonization strategies.
- Prioritize **areas of focus** and identify potential partners to make meaningful impacts across service territory communities.
- **Position OPPD to lead community initiatives** in the transition towards a low-carbon future.

# Insight to Opportunity

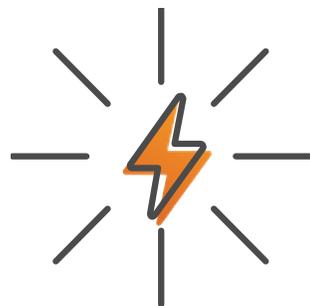
The analysis revealed four opportunity areas where OPPD is positioned to lead change, with potential for meaningful GHG emission reduction and community co-benefits:



Advocating for Advanced Energy Codes and Green Building Standards



Accelerating the EV Transition



Supporting Distributed Generation



Addressing the Water-Energy Nexus

# Building our Community Decarbonization Roadmap

## WHERE WE ARE TODAY

Review OPPD's existing programs related to opportunity areas to promote community-scale decarbonization.

## FUTURE OPPORTUNITIES

Research industry-leading practices to propose additional electric utility led programs related to community decarbonization opportunity areas.

## BUILDING A ROADMAP

Create an actionable Community Decarbonization Roadmap with clearly defined strategies and actions.

Focused on scaling opportunity to make the greatest impact



# Community Decarbonization Roadmap

- **Organizes actions into strategies** for each opportunity area.
- Creates a **database of existing, planned and potential incremental programs and initiatives** related to each of the four opportunity areas.
- Potential incremental opportunities based on **industry best practices**.





# Accelerating the EV Transition Roadmap

## Strategies

### EV Transition Strategies

- 1 Provide credible and objective information to allow customers to make informed decisions about plug-in extended-range hybrid vehicles (PHEV) and all-electric vehicles (EV)
- 2 Support widespread expansion of public fast charging infrastructure
- 3 Support community-scale adoption of plug-in extended-range hybrid vehicles (PHEV) and all-electric vehicles (EV)
- 4 Train and engage industry partners to support community-scale EV transition strategies
- 5 Adapt rates and business model specific to plug-in extended-range hybrid vehicles (PHEV) and all-electric vehicles (EV) service offerings

# Accelerating the EV Transition Roadmap



## Sample of Existing Programs and Initiatives

Created a robust EV resource website for customers, featuring information on rebates, charging stations, EV calculators, and other educational resources.

Continue leveraging available grants to install both Level 2 and Level 3 charging stations across the service territory.

Continue to pursue grant funding to maintain residential and commercial EV and charger rebate program.

Continue to electrify OPPD's light-duty vehicles through attrition of existing fleet

## Sample of Incremental Opportunities based on Industry Best Practices

Develop EV Ambassador program, incentivizing employee EV ownership and training them to educate those they interact with in the community.

Expand OPPD Trade Ally program to include companies trained and qualified to plan and install EV charging infrastructure.

Developing managed EV charging pilot for rollout late 2022/early 2023

# Supporting Distributed Generation Roadmap

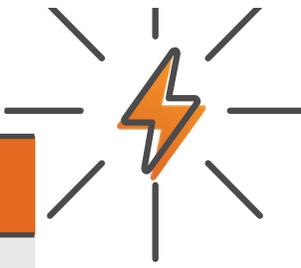
## Strategies



### Distributed Generation Strategies

- 1 Collaborate with Commercial & Industrial customers as their energy partner to help meet their renewable energy and carbon reduction goals.
- 2 Develop rate structures and supporting distribution infrastructure needed to support widespread supported distributed generation.
- 3 Provide credible and objective information to allow customers to make informed decisions about distributed generation.
- 4 Provide options for customers to access renewable energy
- 5 Train and engage industry partners to support community-scale distributed generation strategies.
- 6 Streamline processes to make it easy for customers to install distributed solar energy.

# Supporting Distributed Generation Roadmap



## Sample of Existing Programs and Initiatives

Net metering program allows customer-owned generation to receive an on-bill credit for excess electricity generated and exported to the grid.

Provide a dedicated customer-owned generation website for customers, featuring information on FAQs, net metering, solar calculator, and other educational resources.

Expanded Trade Ally program to identify companies that are trained and approved by OPPD to submit rebate applications for solar and other customer-owned generation.

Provide an online net metering application to simplify distributed generation interconnect process.

## Sample of Incremental Opportunities based on Industry Best Practices

Develop Commercial & Industrial Net Zero Program to provide access to carbon-free energy sources through credits or additionality.

Develop an on-demand, solar energy education course for customers who are interested in installing a solar energy system at their home.

Explore developing Solar as a Service (SaaS) model, offering turnkey installation, interconnect and maintenance solutions to residential and commercial customers.

Explore on-bill financing program for distributed solar installation.

# Advanced Energy Codes & Green Building Roadmap

## Strategies



### Strategy

- 1 Provide customer products and services that promote high-performance buildings aligned with green building standards.
- 2 Provide credible and objective information to allow customers to make informed decisions about green building best practices.
- 3 Promote beneficial electrification in new construction and building retrofits.
- 4 Train and engage industry partners to support community-scale high-performance design strategies.
- 5 Lead by example by implementing high-performance design and green building standards in facilities owned by the utility.



# Advanced Energy Codes & Green Building Roadmap

## Sample of Existing Programs and Initiatives

Continue OPPD Energy Consultant program to provide customer-specific energy efficiency assessments and implementation, for example ECO 24/7.

Continue to provide educational presentations on energy efficiency to community organizations and schools through the Speaker's Bureau.

Continue to offer rebates and incentives for select beneficial electrification residential and commercial products (such as heat pump water heaters and heat pump HVAC systems.)

## Sample of Incremental Opportunities based on Industry Best Practices

Communicate solar-ready guidelines for new residential and commercial property construction and retrofits.

Consider incentivizing all-electric new residential and/or commercial construction.

Explore partnership with developers to create a net-zero neighborhood.

Consider developing high-performance homes program, providing training to local builders on incorporating energy efficient design strategies.

# Energy-Water Nexus Roadmap

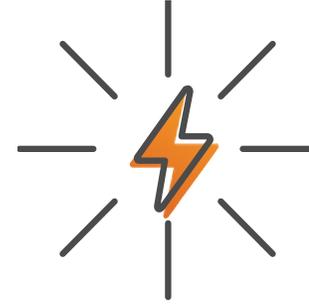
## Existing Programs, Incremental Opportunities based on Industry Best Practices



Strategy	Existing Programs & Initiatives
<b>1</b> Implement strategies to reduce water consumption within an electric utility's operations.	<ul style="list-style-type: none"><li>• Various water conservation tactics at generating facilities</li></ul>
Strategy	Incremental & Industry Best Practices
<b>2</b> Identify and promote strategies to our customers that simultaneously improve energy and water use efficiency.	<ul style="list-style-type: none"><li>• Explore partnering with local water utilities to jointly promote customer products and services that improve energy and water efficiency.</li><li>• Explore opportunities to utilize distributed solar generation with battery storage at water treatment facilities to reduce GHG emissions and improve resiliency.</li></ul>

Energy-Water nexus is the concept that water used for energy production and energy consumed to extract, purify, deliver, heat/cool, treat and dispose of water (and wastewater) are linked. Reductions in energy or water utilized has a direct impact on the other.

# Community Engagement



- Metro Area Planning Agency
- City of Omaha
  - Climate action planning
- Metro Smart Cities
- Nebraska Power Association EV Task Force
- Universities
- Environmental Groups

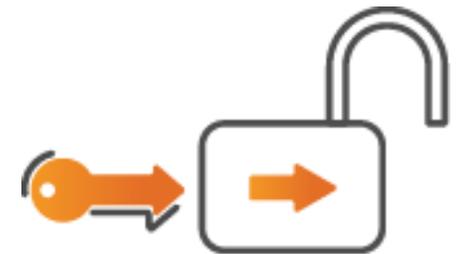
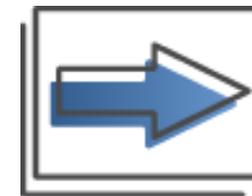
- Natural Resource Districts
- Habitat for Humanity
- Kiewit Luminarium
- Commercial & Industrial Customers
- Development Companies
- Local Public Officials

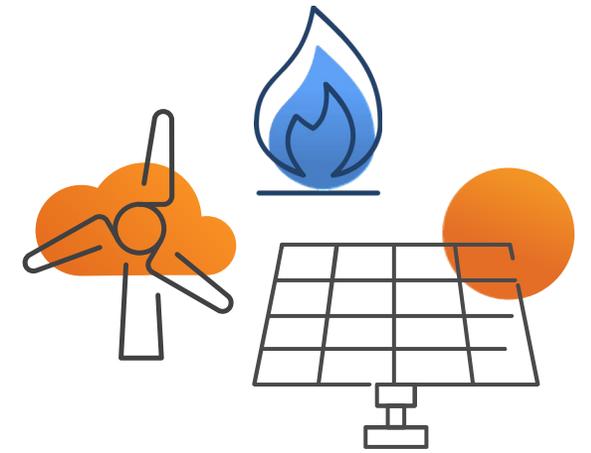
*The above Community groups and entities are a sample of the many avenues in which OPPD is continuing to focus and grow its presence by engaging and advancing efforts in the four opportunity areas and beyond.*

# Recommendations



- Integrate Community roadmap with Customer and Energy Portfolio findings for inclusion of the scoping of the Advanced Feasibility Studies and future strategies. (Q2 2022)
- Disclose GHG accounting and other priority sustainability metrics (e.g. carbon savings from products & services implemented) via sustainability reporting as part of the broader sustainability effort. (Q1 2023, additional resource needs being estimated as part of ongoing efforts)
- Utilize Pathways to Decarbonization findings to lead the way we power the future and provide direction for internal business decisions.
  - **For Example** Pathways to Decarbonization findings should be utilized to inform:
    - The Master Facilities Plan.
    - The execution planning for the Powering the Future to 2050 vision.





# Questions, Discussion

