

# INSIGHT TO STRATEGIES AND OPPORTUNITIES BEST PRACTICES FOR CLEAN AIR



UTAH DEPARTMENT OF  
ADMINISTRATIVE SERVICES

Natural Resources, Agriculture &  
Environment Interim Committee

September 21, 2016

# Resource Stewardship Duties

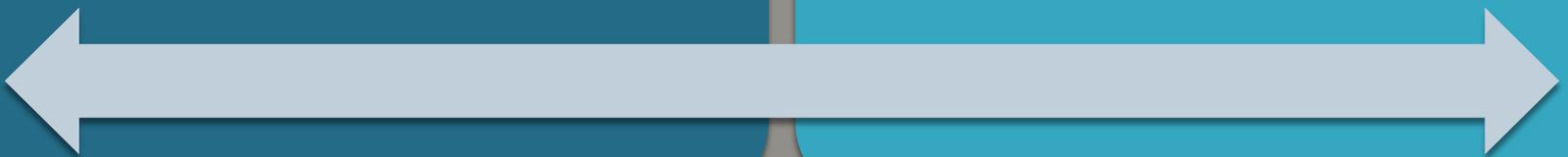


The coordinator of resource stewardship shall:

- Work with agencies to implement best practices and stewardship measures to improve air quality; and
- Make an annual report on best practices and stewardship efforts to improve air quality to the Natural Resources, Agriculture, and Environment Interim Committee.



Each agency will retain absolute discretion whether or not to incorporate any of the practices or measures suggested by the coordinator



# Mission, Vision, Values



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## Mission

- Support Agencies and increase the implementation of best practices and stewardship measures to improve air quality.

## Vision

- A State of Utah government workforce that contributes to a healthier Utah.

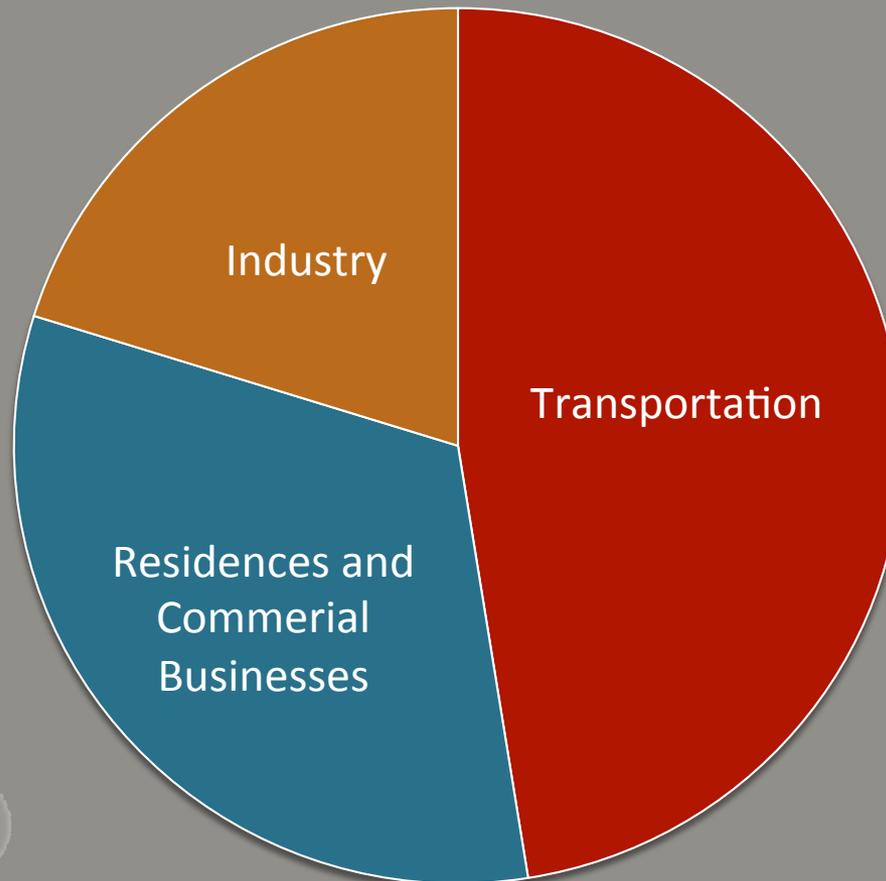
## Values

- Health
- Stewardship
- Knowledge
- Transparency
- Communication
- Efficacy

# Emissions Sources State of Utah



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# State of Utah Responsibility



20,000+  
Employees  
(100,000+  
Higher Ed)



57.9M SF of  
State  
Owned  
Buildings



7000+ Fleet  
Vehicles



Opportunity  
to impact  
Air Quality

# Operational Partners



**FACILITIES**

A circular image showing a rooftop solar farm. Rows of blue solar panels are laid out on a flat roof. In the background, a worker in an orange safety vest and white hard hat is visible. The horizon shows a cityscape and snow-capped mountains under a clear sky.

**PURCHASING**

A circular image of a woman with long blonde hair and sunglasses riding a green bicycle. She is wearing a white button-down shirt and black pants. The bicycle has a green basket with the "selecthealth" logo and "GREENbike" branding. Another person is partially visible in the background.

**FLEET**

A circular image showing a fleet of white cars parked in a multi-level parking garage. The cars are arranged in rows, and the scene is lit with overhead lights, creating a modern, industrial atmosphere.

# Stewardship In State Government Fleet On-Demand Motor Pool



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Right Size Fleet  
Every Day

Right Size  
Vehicle For the  
Job

Quicker  
Transition to  
Tier 3 Vehicle  
Use

# Stewardship In State Government Active Transportation Fleet Option



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## Capitol Hill E-Bike Partners



DIVISION OF  
FLEET OPERATIONS

**UCAIR**  
UTAH CLEAN AIR PARTNERSHIP

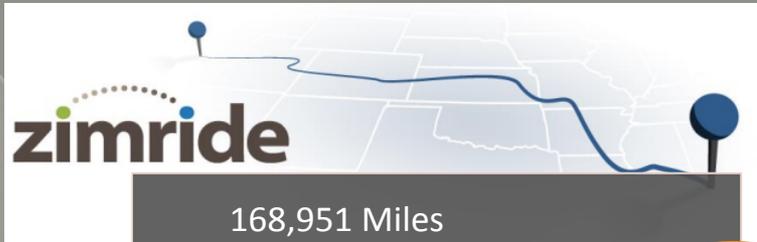
PARTNER



**First and Last Mile  
Solutions**  
Connecting for Clean Air



# Strategy Opportunities Carpool Network & EV Incentives



168,951 Miles

\$92,923

6,625 gal of Gasoline

128,535 lbs CO<sub>2</sub>

71,635 g VOC

90,895 g NO<sub>x</sub>

1,858 lbs CO

36,831 g PM

11,995 g SO<sub>2</sub>

4000  
Person  
Network to  
Clean Air



**U DRIVE ELECTRIC**

**UCAIR**  
UTAH CLEAN AIR PARTNERSHIP

PARTNER

# Strategy Opportunities

## UDOT – Traffic Management



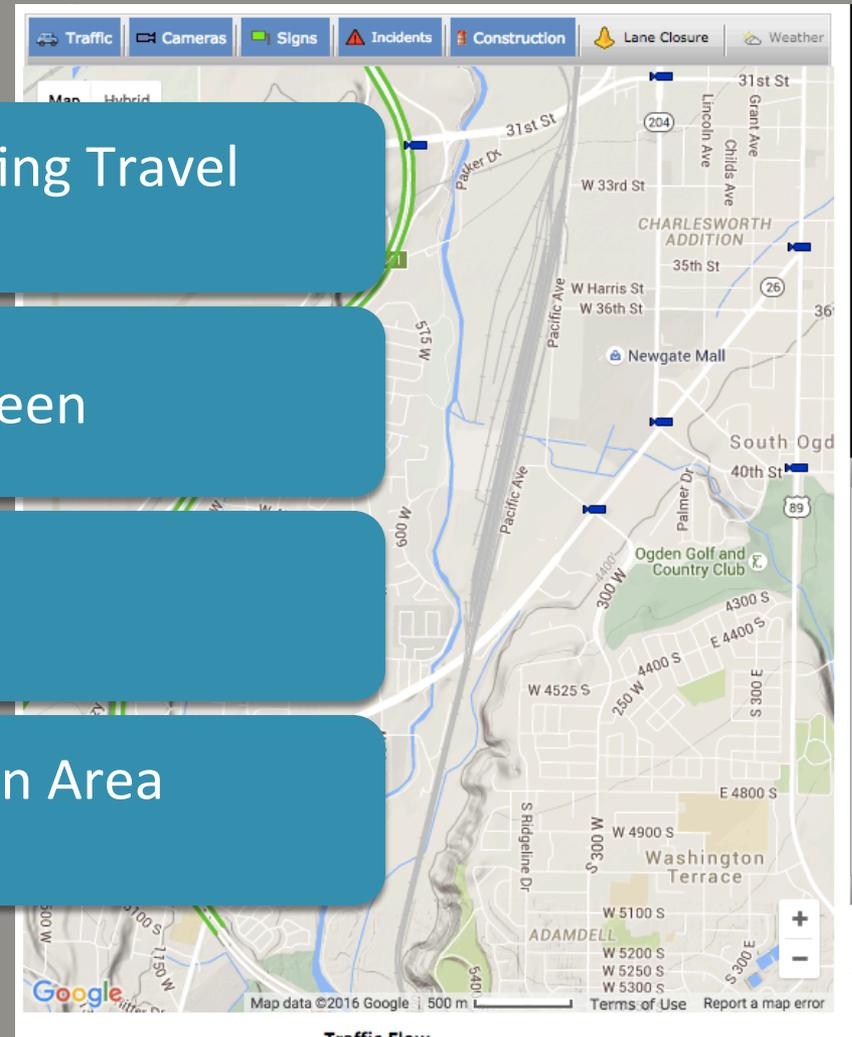
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Emissions Reductions with Existing Travel Behaviors

Consistent Rate of Arrival on Green

Reduces Idling Emissions

Lights Recalibrated as Changes in Area  
Increase Rate of Arrival on Red



Traffic Flow

# Stewardship in State Government E-Work Environment Opportunity



Measured Participation &  
Works with Outside Entities

State Contract - Inexpensive  
Option

Utah Learning Portal

Reduces Risk and Manages  
Trainings

High Quality Online Meeting  
and Collaboration Tools

# Stewardship In State Government

## State Building Energy Efficiency Program SBEEP

### Energy Upgrades to Existing Facilities



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**14 Million**  
kWh Saved Annually

**\$1.6 Million**  
Yearly Cost  
Avoidance from  
Efficiency

**\$2.1 Million**  
Utility Provided  
Incentives and  
Engineering  
(2010-2015)

**2377 KW**  
Capacity Left on the  
Grid

# Stewardship In State Government

## SBEEP Boiler Replacement Partnership



20 Boilers Tuned

Zero Tax Dollars

Private Partnership Using Questar  
Incentives

1% to 6% Increase in Efficiency Per Boiler



# Stewardship In State Government

## SBEEP Renewable Energy Development

A photograph showing a large-scale solar panel installation on a flat roof. Several workers in high-visibility vests are visible, working on the panels. The panels are mounted on metal racks and are arranged in long, parallel rows. The sky is blue with scattered white clouds, and a distant mountain range is visible on the horizon.

11.8 Million Kilowatt Hours Generated Annually  
from Solar on State Facilities

State Owned & PPA

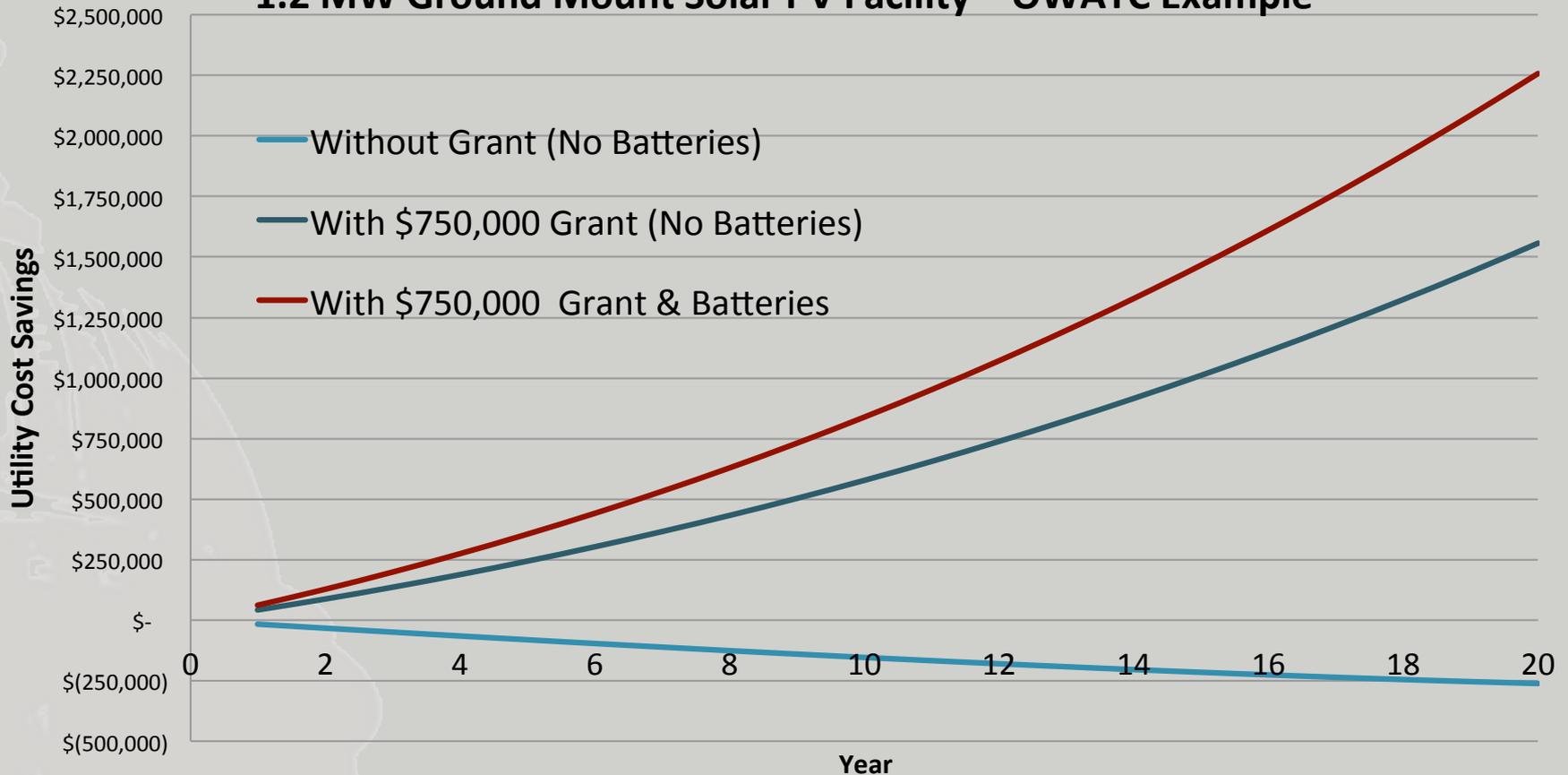
Capital or Buy Down from Grants Funds

Leverage Funding Sources Available

# Solar Power Purchase Agreement



## 1.2 MW Ground Mount Solar PV Facility – OWATC Example



# Stewardship In State Government

## New Building Energy Efficiency Requirements



Designed to Cost 20% Less for Energy Over  
Typical Code Built Facility

All Buildings Comprehensively  
Commissioned Systems Including Envelope

Measures Analyzed to Ensure they are Life-  
Cycle Cost Effective



# Strategy Opportunities Equipment Related Emissions

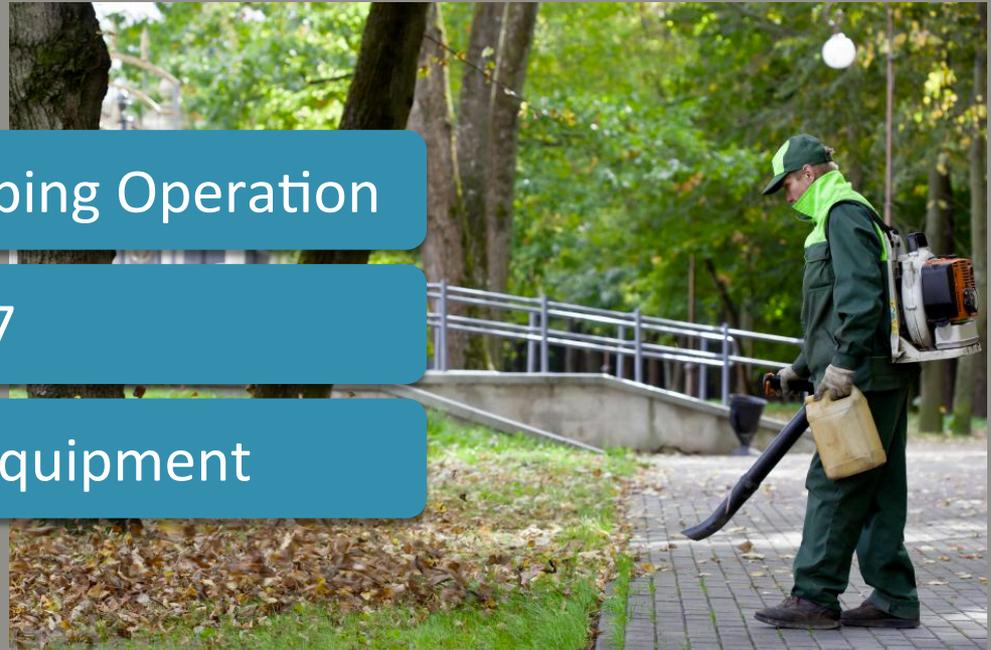


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University of Utah Landscaping Operation

2-Stroke Phase Out by 2017

Battery Operated Electric Equipment



# Contact



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Thank you.

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