

Beehive Emission Reduction Plan: Draft Priority Measures



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UTAH DEPARTMENT *of*
ENVIRONMENTAL QUALITY

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Priority Measures

The measures in this section have been identified as “priority measures” for which to pursue funding through the EPA Climate Pollution Reduction Grant (CPRG) program implementation grants. This list is not exhaustive of Utah’s priorities. Instead, the selected priority measures included in this Priority Plan meet the following criteria:

- The measure is implementation-ready, meaning that the design work for the policy, program, or project is complete enough that a full scope of work and budget can be included in a CPRG implementation grant application.
- The measure can be completed in the near term, meaning that all funds will be expended, and the project completed, within the five-year performance period for the CPRG implementation grants (approximately October 2024 through October 2029).
- The measure has a broad level of stakeholder support.
- The measure advances or is otherwise consistent with state of Utah priorities as identified in past climate, energy, and natural resource planning efforts¹, including:
 - Any-of-the-above approach
 - Market-based
 - Innovative
 - Cost-effective
 - Reliable and affordable energy
 - Incentives over mandates
 - Involve local leaders/decision-makers

The Table below summarizes Utah’s list of 12 priority measures from the following sectors: transportation, buildings, industrial, electric power, natural and working lands, and cross-cutting. Each of these measures includes one or more implementation-ready example projects that would help achieve the objectives of the broader measure in question. Example projects were developed based on assumptions regarding the total estimated budget request, incentive or deployment funding levels, projected number of units deployed, and other key parameters in order to estimate emission reductions, facilitate general and LIDAC benefits analyses, and assess other required plan elements. The lists of example projects for each measure are illustrative in nature and

¹ Examples of such planning initiatives include:

- [Greenhouse Gas Reduction Strategies in Utah: An Economic and Policy Analysis](#) - Utah Office of Energy and Resource Planning (2000)
- [Governor’s Blue Ribbon Advisory Council on Climate Change](#) (2007)
- [The Utah Roadmap: Positive solutions on climate and air quality](#) - Kem C. Gardner Policy Institute (2020)
- [One Utah Roadmap](#) - Governor Cox (January 19, 2021)
- [State and County Resource Management Plans](#) (January 9, 2023)
- [Utah Energy and Innovation Plan](#) - Utah Office of Energy Development (May 10, 2022)

non-exhaustive and, as such, entities eligible to pursue implementation grants for measures that stem from this Priority Plan may develop their own unique projects that would help achieve the objectives of each measure.

Utah Priority Plan Measures					
Priority Measure/Project	Cumulative GHG emission reductions (MMT CO ₂ e)		Potential Implementing Agencies	Potential Partners	Geographic Scope
	2025-2030	2025-2050			
Transportation					
Measure #1: Light-Duty Zero-Emission Vehicle Incentives					
Project #1 - Electric Vehicle Replacement Assistance Program (EVRAP)	8,886.8	26,660.4	UDAQ, Local Health Departments/ counties	Local Health Departments/ counties, dealerships, vehicle recyclers	Salt Lake, Davis, Weber, Cache, Utah counties
Project #2 - Electric Vehicle Incentive Program	23,136.8	69,410.5	UDAQ	other agencies	State
Project #3 - Electric Fleet Program	2,024.5	6,941.1	UDAQ	municipalities and other public/government entities	State
Measure #2 - Medium-and-Heavy-Duty Zero-Emission Vehicle Incentives					
Project #1 - Electric Delivery Vehicle Incentive Program	1,528.0	4,365.7	UDAQ	other private and government entities	State
Project #2 - Electric Refuse Hauler Incentive Program	335.4	1,006.3	UDAQ	other private and government entities	State
Project #3 - Electric School Bus Ready Program	701.1	4,006.1	UDAQ	School Districts	State
Project #4 - Electric School Bus Pilot Program	467.4	2,670.8	UDAQ	School Districts	State
Measure #3 - Light-Duty Zero-Emission Vehicle Charging/Refueling Incentives					
Project #1: Electric Fleet Chargers	4,000.5	11,429.9	UDAQ, municipalities, Local Health Departments/ counties	other private and government entities	State

Utah Priority Plan Measures					
Priority Measure/Project	Cumulative GHG emission reductions (MMT CO ₂ e)		Potential Implementing Agencies	Potential Partners	Geographic Scope
	2025-2030	2025-2050			
Project #2 - Charging Alternatives (Workplace and Multi-Family Dwelling Electric Vehicle Chargers)	8,504.8	24,299.5	UDAQ	UCAIR, municipalities and/or relevant stakeholders	State
Measure #4: Mode-Shifting/Reducing Vehicle Miles Traveled					
Project #1 - E-Bike Incentive	1,188.0	2,969.9	UDAQ	UCAIR	State
Project #2 -Trail Development for Active Transportation	940.9	10,349.4	UDOT		Washington and Kane counties
Measure #5: Zero-Emission Non-Road Incentives					
Project #1 - Electric Non-Road Equipment	More information needed	More information needed	UDAQ	equipment operators	State
Project #2 - Electric Locomotives	More information needed	More information needed	UDAQ	locomotive operators	
Buildings					
Measure #6: Energy Efficiency and Zero-Emission Technology					
Project #1 - Whole Home Retrofits Program	6,560.8	37,490.0	Utah Office of Energy Development (UOED)		State
Project #2 - Residential Pre-Weatherization Program	492.6	2,463.0	Utah Department of Workforce Services (UDWS)		State
Project #3 - Residential Heat Pump Program	5,059.3	28,910.0	UDWS	RMP	State
Project #4 - K-12 School/Public Building Program	More information needed	More information needed	UDAQ, UOED	School Districts	State
Industrial					
Measure #7 - Facility Energy Efficiency					

Utah Priority Plan Measures					
Priority Measure/Project	Cumulative GHG emission reductions (MMT CO ₂ e)		Potential Implementing Agencies	Potential Partners	Geographic Scope
	2025-2030	2025-2050			
Project #1 - StepWise Industrial Assessment Program	101,457.0	202,914.0	University of Utah IIAC	Facility owners/operators	State
Measure #8 - Oil/Gas Methane Emission Reductions					
Project #1 - Uinta Basin Oil/Gas Electrification Program	More information needed	More information needed	UDAQ	Moon Lake Electric, operators	Uinta Basin
Project #2 - Uinta Basin Energy Recovery and Infrastructure Improvements	More information needed	More information needed	EGI	Operators	Uinta Basin
Project #3 - Uinta Basin Oil/Gas Thief Hatch Replacement Program	Oil: 51,875.3; Gas: 33,939.2	Oil: 148,215.0; Gas: 96,969.0	UDAQ	Tank owners/operators	Uinta Basin
Project #4 - Uinta Basin Oil/Gas Flyover Program for Leak Detection	More information needed	More information needed	UDAQ	Aerial monitoring services, USU	Uinta Basin
Electric Power					
Measure #9 - Renewable Energy					
Project #1 - Community Choice Renewable Program	More information needed	More information needed	Salt Lake City, Utah Renewable Communities	RMP, renewable project developers	18 communities throughout Utah
Project #2 - Rooftop Solar Residential Incentive Program	146,093.1	730,465.4	UOED	homeowners	State
Natural and Working Lands					
Measure #10 - Promote Healthy and Resilient Forests					
Project #1 - Forest Management and Wildfire Mitigation Program	More information needed	More information needed	UDAQ, UDFSL	Other western states	More information needed, potentially Western States Coalition
Cross-Cutting					
Measure #11 - Energy Outreach, Education, and Workforce					

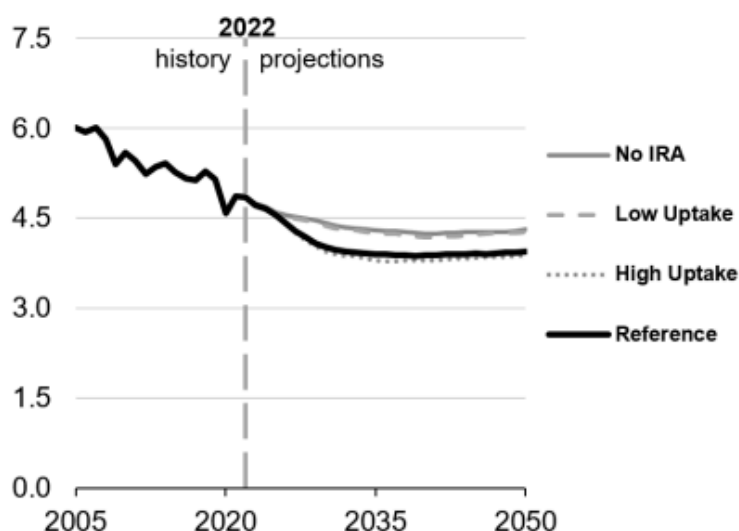
Utah Priority Plan Measures					
Priority Measure/Project	Cumulative GHG emission reductions (MMT CO ₂ e)		Potential Implementing Agencies	Potential Partners	Geographic Scope
	2025-2030	2025-2050			
Project #1 - Energy Demonstration and Assistance Program (One-Stop Shop)	More information needed	More information needed	UDAQ, State colleges and universities	third-party organizations	State
Project #2 - Workforce Training	More information needed	More information needed	UDAQ		State
Measure #12 - Carbon Sequestration and Storage					
Project #1 - Utah Carbon Sequestration and Storage Survey	More information needed	More information needed	UDAQ, EGI	Emitting facilities, direct air capture projects	Iron and Beaver counties

Please note that, to the extent possible, estimated emission reductions for measure example projects included in this Priority Plan are net of any increases in emissions that may be associated with a given measure. For example, emission reductions for projects that replace direct fossil fuel combustion with equipment electrification (e.g., electric vehicles, EV chargers, and heat pumps) have been adjusted or “netted” to account for the increase in electricity generation emissions associated with the project in question using recognized quantification tools such as AVERT or eGRID. However, because these tools use emissions associated with the recent/actual electric generation mix, such net emissions reduction estimates are inherently conservative, since the electricity grid is slated to become increasingly clean over the Priority Plan planning period (i.e., 2025-2050). This anticipated change in electricity sector CO₂e emissions is reflected in the U.S. Department of Energy, Energy Information Administration (EIA) *AEO2023 Issues in Focus: Inflation Reduction Act Cases in the AEO2023*², which estimates a 57-75% reduction in electricity sector emissions between 2005 and 2050 depending on the level of uptake for Inflation Reduction Act provisions, as shown in the figure below.

² Source: https://www.eia.gov/outlooks/aeo/IIF_IRA/pdf/IRA_IIF.pdf

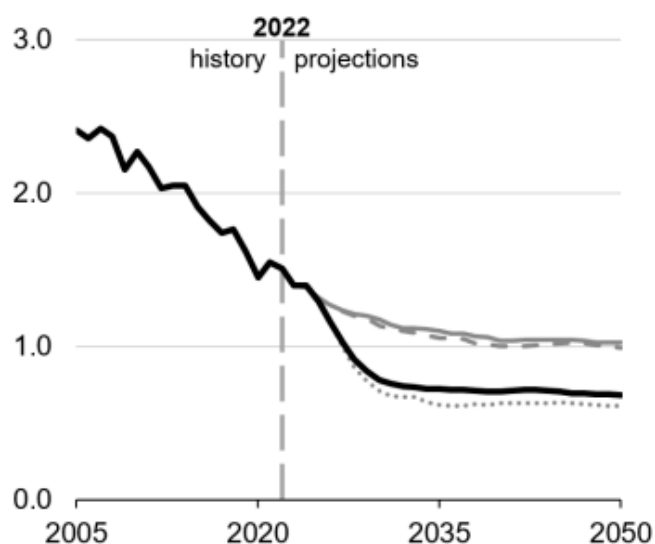
all sectors

billion metric tons



electricity sector

billion metric tons



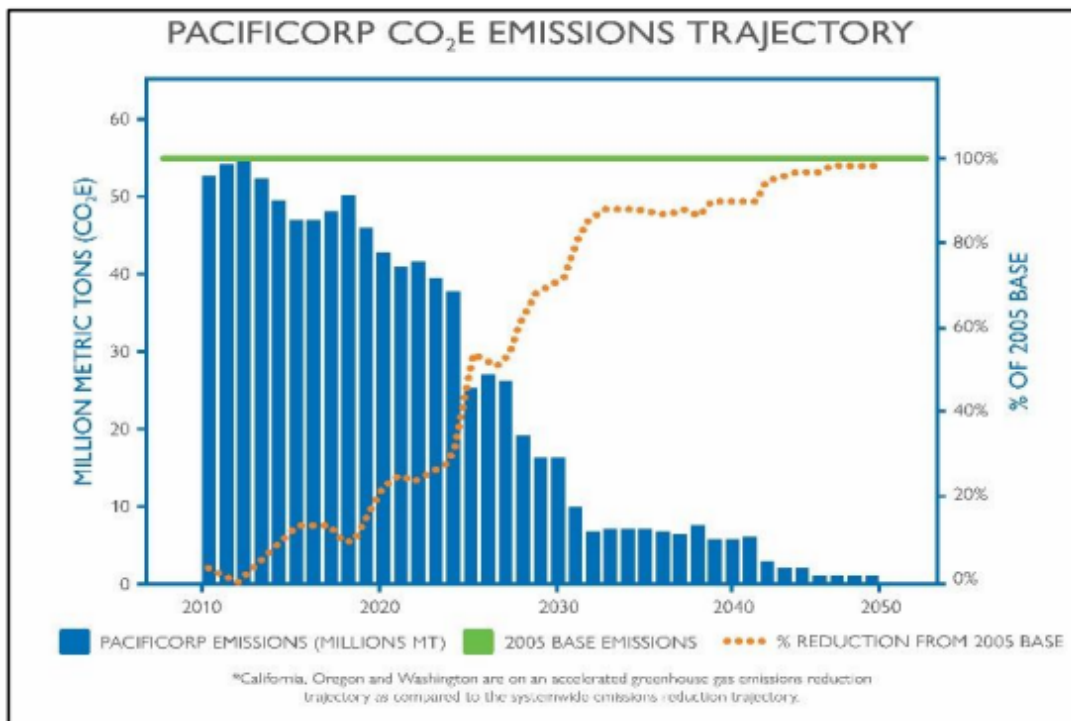
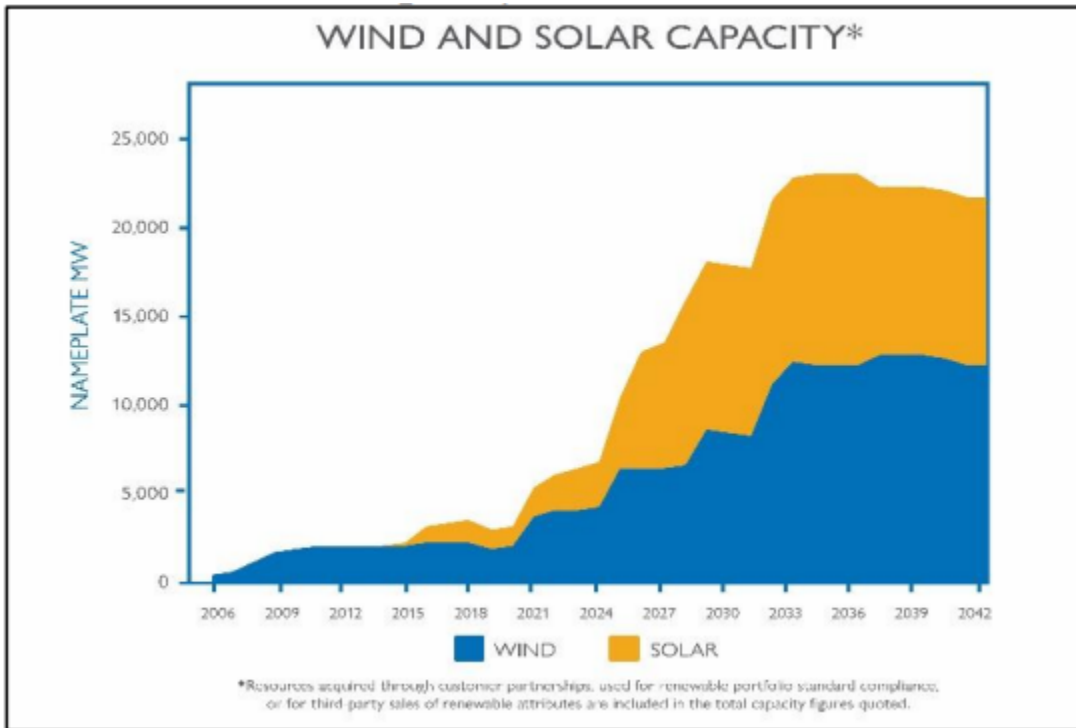
Data source: U.S. Energy Information Administration, *Annual Energy Outlook 2023* (AEO2023)

Note: Charts include CO₂ emissions from fossil fuel and industrial feedstock uses. This scope excludes industrial process emissions, agriculture, waste, land use, and other greenhouse gases such as methane and hydrofluorocarbons. Industrial emissions include combined-heat-and-power plants that have a non-regulatory status and small on-site generating systems.

Even more dramatic is the projected increase in wind and solar capacity and associated decrease in GHG emissions from PacifiCorp's 2023 Integrated Resource Plan (IRP)³, as illustrated in the charts below.

³ Source:

https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2023-irp/2023_IRP_Volume_I.pdf



Actual net emission reductions for electrification measures are, therefore, likely to be larger than the estimates shown in this Priority Plan.

Detailed write-ups for each measure and its example projects can be found in Appendix A of this Priority Plan. These write-ups include measure-specific assessments related to several required plan elements, including benefits analysis (i.e., co-pollutant emission reductions), LIDAC benefits analysis, review of authority to implement, and intersection with other funding.

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Appendix A - Priority Measures

Transportation

Measure #1: Light-Duty Zero-Emission Vehicle Incentives

This measure aims to voluntarily increase adoption of light-duty zero-emission vehicles in use in Utah. Potential financial incentives could include point of sale rebates, ongoing grants, and technical assistance navigating incentives and could be scaled and/or otherwise qualified based on income⁴. Below are specific examples of types of projects that could advance this measure.

Project #1 - Electric Vehicle Replacement Assistance Program (EVRAP)

1. Project Description

Use CPRG funds to create a proposed light-duty income-qualified incentive, EVRAP (Electric Vehicle Replacement Assistance Program), for individuals. The Vehicle Repair and Replacement Assistance Program ([VRRAP](#)) is currently administered in the State of Utah through the Utah Department of Environmental Quality (UDEQ), Division of Air Quality (UDAQ) and Local Health Departments to help repair or replace internal combustion engine (ICE) vehicles that fail inspection and maintenance (I/M) program emissions tests. Unlike the existing VRRAP program, the implementation of a new Electric Vehicle Replacement Assistance Program (EVRAP) in Utah would exclusively focus on replacing high-polluting vehicles with new or used electric vehicles for income-qualified Utahns in I/M Counties: Salt Lake, Davis, Weber, Cache, and Utah. Such incentives could potentially be extended to all counties throughout the state through an income-based mechanism similar to that employed by the [Vehicle Exchange Colorado \(VXC\)](#) program.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 1,000 vehicles. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO ₂	PM _{2.5}	VOCs	NH ₃	CO ₂ e
By 2030	8.0	-0.2	0.1	10.3	1.7	8,886.8

⁴ Examples of similar programs include: [Texas](#), [Colorado](#), and [California](#).

By 2050	24.1	-0.5	0.4	30.8	5.2	26,660.4
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Quantification tool(s) utilized: AVERT

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and would sub-contract/partner with Local Health Departments, although other eligible entities in Utah could apply for and administer a similar income-qualified program not tied directly to I/M testing (see [Vehicle Exchange Colorado \(VXC\)](#) for an example).

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under this authority, UDAQ has administered clean vehicle and equipment incentive programs for over two decades.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
200 units	200 units	200 units	200 units	200 units

6. Geographic location

Implementation in Salt Lake, Davis, Weber, Cache, Utah counties.

7. Funding sources

- a. Funding needed to implement: \$5,750,000
- b. Complementary Funding:
 - IRA 13401: Qualified Clean Vehicle Credit
 - IRA 13402: Used Clean Vehicle Credit

- IRA 60103 - Greenhouse Gas Reduction Fund - Clean Communities Investment Accelerator
 - EPA Targeted Airshed Grant (TAG) funding for VRRAP in Cache, Salt Lake, Davis, and Weber counties
- c. Funding pursued by state or secured for implementation of this project:
- EPA TAG funding for VRRAP in Cache, Salt Lake, Davis, and Weber counties
- d. How additional implementation grant dollars are necessary to fund the measure:
- EPA Targeted Airshed Grant funding is nearly expended in Cache County, and Utah County did not qualify for TAG VRRAP support; the remaining counties' programs could be extended with CPRG support.
 - Specific criteria of the existing Qualified Clean Vehicle Credit and Used Clean Vehicle Credit may keep individuals from purchasing.
 - EVs are too expensive and tax credits are not as accessible for most low-income households, so this program provides additional support to extend EVs to LIDAC communities.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of vehicles replaced/deployed, vehicle life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 1,000 units at an incentive level of \$5,000/unit, for a total incentive budget of \$5,000,000, to which 15% in administrative expenses were added, for a total project budget of \$5,750,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

A new EVRAP program would be for low-income residents who live in I/M counties of Utah (Salt Lake, Davis, Weber, Cache, Utah counties). All of these I/M counties include disadvantaged areas according to the IRA Disadvantaged Communities [map](#). As an income-qualified program, EVRAP intends to target the low-income population in Utah that is typically less financially able to purchase EVs.

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure accrue to Utah's I/M counties, including:

- Reduced level of NO_x, PM_{2.5}, VOCs, NH₃ shown in this project's Section 2 table;
- Increased access to transportation options for LIDAC individuals;
- Lower cost of maintenance and cost of charging (compared to an ICE vehicle's maintenance and cost of gasoline) for LIDAC individuals;
- Reduced noise pollution.

A potential unique disbenefit (identified by LIDAC stakeholders) is the high initial cost of an EV/lack of ability for low-income families to access EVs. This program intends to mitigate this by providing an additional financial incentive and allowing the purchase of both new or used EVs. For detailed information about UDAQ LIDAC engagement, see the Outreach and Coordination section of this Priority Plan.

Project #2 - Electric Vehicle Incentive Program

1. Project Description

Use CPRG funds to create a general EV incentive program for the public. Potential financial incentives could include point-of-sale rebates, ongoing grants, and technical assistance navigating incentives. The new general EV incentive program would be open to all state of Utah residents.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 4,000 units. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	1.0	-0.7	0.1	9.4	2.8	23,136.8
By 2050	3.0	-2.1	0.3	28.2	8.4	69,410.5

Quantification tool(s) utilized: AVERT

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and could sub-contract/partner with other agencies to administer the program, although other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and

administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under this authority, UDAQ has administered clean vehicle and equipment incentive programs for over two decades.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
800 units	800 units	800 units	800 units	800 units

6. Geographic location

Statewide implementation.

7. Funding sources

- a. Funding needed to implement: \$11,500,000
- b. Complementary Funding:
 - IRA 13401: Qualified Clean Vehicle Credit
 - IRA 13402: Qualified Used Clean Vehicle Credit
 - IRA 60103 - Greenhouse Gas Reduction Fund - Clean Communities Investment Accelerator
- c. Funding pursued by state or secured for implementation of this project:
 - None.
- d. How additional implementation grant dollars are necessary to fund the measure:
 - There is no existing state-specific funding for this project.
 - Specific criteria of existing Qualified Clean Vehicle Credit and Used Clean Vehicle Credit may keep individuals from purchasing.
 - EVs are too expensive for most individuals, and this program may lighten the burden for individuals otherwise unable to purchase an EV.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of vehicles deployed, vehicle life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 4,000 units at an incentive level of \$2,500/unit, for a total incentive budget of \$10,000,000, to which 15% in administrative expenses were added, for a total project budget of \$11,500,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

A new general EV incentive program would be open to all Utah residents. Funding could be prioritized to moderate-income households, who may not be eligible for the EVRAP program. Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, PM_{2.5}, VOCs, NH₃ shown in this project's Section 2 table;
- Increased access to transportation options for Utah residents;
- Lower cost of maintenance and cost of charging, compared to an ICE vehicle's maintenance and cost of gasoline, for individuals;
- Reduced noise pollution.

Potential unique disbenefits (identified by LIDAC stakeholders) include the high initial cost of an EV and the lack of practical vehicle alternatives for rural applications, i.e., the need for larger trucks/vehicles for agricultural activities in those areas. This program intends to mitigate the former, by providing an additional financial incentive for EVs. For detailed information about UDAQ LIDAC engagement, see the Outreach and Coordination section of this Priority Plan.

Project #3 - Electric Fleet Program

1. Project Description

Use CPRG funds to create a proposed EV incentive program for incremental cost incentives for commercial and government light-duty fleets. Potential financial incentives could include ongoing grants and technical assistance navigating incentives.

This could be developed as a new program or could build upon/scale up the existing Clean Fuels and Emission Reduction Technology Program (CFERT), which among other provisions provides incentives for clean vehicles and vehicle refueling/charging infrastructure for commercial and government fleets.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 400 vehicles. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	0.1	-0.1	0.0	0.8	0.2	2,024.5

By 2050	0.3	-0.2	0.0	-2.8	0.8	6,941.1
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Quantification tool(s) utilized: AVERT

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and would subcontract/partner with municipalities and other public/government entities in the state, although other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under this authority, UDAQ has administered clean vehicle and equipment incentive programs for over two decades.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Project development	100 units	100 units	100 units	100 units

6. Geographic location

Statewide implementation.

7. Funding sources

- a. Funding needed to implement: \$2,300,000
- b. Complementary Funding:
 - IJJA 40109 - State Energy Program
 - IRA 70002 - U.S. Postal Service Clean Fleets
 - IRA 13403: Qualified Commercial Clean Vehicle Credit

- c. Funding pursued by state or secured for implementation of this project:
 - UDAQ Conversion to Alternative Fuel Grant Program
 - IRA 13403: Qualified Commercial Clean Vehicle Credit
- d. How additional implementation grant dollars are necessary to fund the measure:
 - The CFERT program's Conversion to Alternative Fuel Grant Program Fund has been expended, but the program could be extended and potentially augmented through CPRG funding.
 - Specific criteria of existing Qualified Commercial Clean Vehicle Credit may keep individuals from purchasing.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of government fleet electric vehicles deployed, vehicle life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 400 units at an incentive level of \$5,000/unit, for a total incentive budget of \$2,000,000, to which 15% in administrative expenses were added, for a total project budget of \$2,300,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

This new light-duty EV incentive program would be for government fleets within Utah, including those of municipalities. Many municipalities in Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, VOCs, NH₃ shown in this project's Section 2 table;
- Lower cost of maintenance and cost of charging, compared to an ICE vehicle's maintenance and cost of gasoline, for government fleets;
- Reduced noise pollution.

For detailed information about UDAQ LIDAC engagement, see the Outreach and Coordination section of this Priority Plan.

Measure #2 - Medium-and-Heavy-Duty Zero-Emission Vehicle Incentives

This measure intends to voluntarily increase fleet adoption of medium-duty and heavy-duty Zero-Emission Vehicles in Utah. Potential formats of the program include vouchers, grants, and technical assistance navigating incentives. Below are specific examples of types of projects for this measure.

Project #1 - Electric Delivery Vehicle Incentive Program

1. Project Description

Use CPRG funds to create an incentive program for electric Class 5 delivery vehicles for commercial and government fleets. Potential formats of the program include vouchers, tax credits/ exemptions, grants, and technical assistance for navigating incentives.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 40 Medium-Duty vehicles. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	0.1	-0.2				1,528.0
By 2050	0.8	-0.9				4,365.7

Quantification tool(s) utilized: Diesel Emission Quantifier, eGRID

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and would establish an incentive program for commercial and government entities in the state, although other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under this authority, UDAQ has administered clean vehicle and equipment incentive programs for over two decades.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Program development	10 units	10 units	10 units	10 units

6. Geographic location

Statewide implementation.

7. Funding sources

- a. Funding needed to implement: \$2,300,000
- b. Complementary Funding:
 - IRA 60101 - [Clean Heavy-Duty Vehicle Program](#)
 - IIJA 21202 - Local and Regional Project Assistance Grants ([RAISE](#))
 - IRA 13403 - Commercial Clean Vehicle Tax Credit (45W)
 - IRA 60103 - [Greenhouse Gas Reduction Fund - Clean Communities Investment Accelerator](#)
 - IIJA 40552 - Energy Efficiency and Conservation Block Grant Program (EECBG)
 - IRA 60201 - [Environmental and Climate Justice Block Grants - Change Grants](#)
 - IIJA 40109 - State Energy Program
 - IIJA 40401 - Department of Energy Loan Programs
 - IIJA Division J Title VIII - Port Infrastructure Development Program Grants
 - IRA 70002 - U.S. Postal Service Clean Fleets
 - IRA 60104 - EPA Diesel Emissions Reduction Act (DERA) funding
 - EPA Targeted Airshed Grants (TAG)
- c. Funding pursued by state or secured for implementation of this project:
 - IRA 60104 - EPA Diesel Emissions Reduction Act (DERA) funding
 - EPA Targeted Airshed Grants
 - Alternative Fuel Heavy-Duty Vehicle Tax Credit
- d. How additional implementation grant dollars are necessary to fund the measure:
 - Over saturation
 - Scrappage requirements deter

- EMY/other eligibility requirements deter
- Extend existing programs (Clean Fuels)

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of Class 5 vehicles deployed, vehicle life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 40 units at an incentive level of \$50,000/unit, for a total incentive budget of \$2,000,000, to which 15% in administrative expenses were added, for a total project budget of \$2,300,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#). This medium-duty electric vehicle incentive program could prioritize funding in LIDAC areas of Utah, which are often also non-attainment areas.

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, shown in this project’s Section 2 table;
- Lower cost of maintenance and cost of charging, compared to an ICE vehicle’s maintenance and cost of gasoline, for fleets;
- Reduced noise pollution.

For detailed information about UDAQ LIDAC engagement, see the Outreach and Coordination section of this Priority Plan.

Project #2 - Electric Refuse Hauler Incentive Program

1. Project Description

Use CPRG funds to create an incentive program for Class 8 refuse haulers for commercial and government fleets. Potential formats of the program include vouchers, tax credits/exemptions, grants, and technical assistance for navigating incentives.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy six Class 8 EV refuse haulers. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NO _x	SO ₂	PM _{2.5}	VOCs	NH ₃	CO _{2e}

By 2030	0.5	-0.1		0.0		335.4
By 2050	1.5	-0.4		0.0		1,006.3

Quantification tool(s) utilized: Diesel Emission Quantifier, eGRID, Oregon Clean Fuels

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and would sub-contract/partner with municipalities and fleet operators, although other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under this authority, UDAQ has administered clean vehicle and equipment incentive programs for over two decades.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Program development	6 units	Program assessment	Program closed	Program closed

6. Geographic location

Statewide implementation.

7. Funding sources

a. Funding needed to implement: \$1,725,000

b. Complementary Funding:

- IIJA 40552 - [Energy Efficiency and Conservation Block Grant \(EECBG\) Program](#)
- IRA 60101 - [Clean Heavy-Duty Vehicle Program](#)

- IIJA 21202 - Local and Regional Project Assistance Grants ([RAISE](#))
 - IRA 13403 - Commercial Clean Vehicle Tax Credit (45W)
 - IRA 60103 - [Greenhouse Gas Reduction Fund - Clean Communities Investment Accelerator](#)
 - IRA 60201 - [Environmental and Climate Justice Block Grants - Change Grants](#)
 - IIJA 40109 - State Energy Program
 - IIJA 40401 - Department of Energy Loan Programs
 - IIJA Division J Title VIII - Port Infrastructure Development Program Grants
 - IRA 60104 - EPA Diesel Emissions Reduction Act (DERA) funding
 - EPA Targeted Airshed Grants
- c. Funding pursued by state or secured for implementation of this project:
- IRA 60104 - EPA Diesel Emissions Reduction Act (DERA) funding
 - EPA Targeted Airshed Grants
 - Alternative Fuel Heavy-Duty Vehicle Tax Credit
- d. How additional implementation grant dollars are necessary to fund the measure:
- This would be a new state program but would complement or replenish funding for the state's existing Heavy-Duty tax credit, Clean Fuels and Emission Reduction Technology Program (CFERT), and CARROT Program.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of electric Class 8 refuse haulers deployed, vehicle life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of six units at an incentive level of \$250,000/unit, for a total incentive budget of \$1,500,000, to which 15% in administrative expenses were added, for a total project budget of \$1,725,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#). This heavy-duty electric vehicle incentive program could prioritize funding in LIDAC areas of Utah, which are often also non-attainment areas.

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, shown in this project's Section 2 table;
- Lower cost of maintenance and cost of charging, compared to an ICE vehicle's maintenance and cost of gasoline, for fleets;
- Reduced noise pollution.

For detailed information about UDAQ LIDAC engagement, see the Outreach and Coordination section of this Priority Plan.

Project #3 - Electric School Bus Ready Program

1. Project Description

Use CPRG funds to create a proposed voluntary School Bus Ready Program. This program would not fund school buses, but would instead provide gap funding for complementary items like electrical/utility work, site preparation, and other supporting costs that may not be directly eligible for other funding sources (e.g., EPA’s Clean School Bus Program, DERA, and TAG). This program would help school districts across the state, enabling more schools to acquire electric school buses.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 60 units. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	2.7	-0.1	-0.001	0.2	0.2	701.1
By 2050	15.2	-0.5	-0.005	1.3	1.0	4,006.1

Quantification tool(s) utilized: AVERT, Uinta Basin School Bus Program

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and would sub-contract/partner with school districts, although other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the

federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under this authority, UDAQ has administered clean vehicle and equipment incentive programs for over two decades.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Program development	15	15	15	15

6. Geographic location

Statewide implementation.

7. Funding sources

a. Funding needed to implement: \$4,140,000

a. Complementary Funding:

- IIJA 40552- [Energy Efficiency and Conservation Block Grant \(EECBG\) Program](#)
- IIJA 40431 - Consideration of Measures to Promote Greater Electrification of the Transportation Sector
- IRA 40541 - [Grants for Energy Efficiency and Renewable Energy Improvements at Public Schools \(Renew America's Schools\)](#)
- IRA 60103 - [Greenhouse Gas Reduction Fund - Clean Communities Investment Accelerator](#)
- IRA 60201 - [Environmental and Climate Justice Block Grants - Change Grants](#)
- IIJA 40109 - State Energy Program
- IIJA 40401 - Department of Energy Loan Programs
- IIJA 71101 - Clean School Bus Program
- Diesel Emission Reduction Act (DERA)
- EPA Targeted Airshed Grants (TAG)

b. Funding pursued by state or secured for implementation of this project:

- IIJA 71101 - Clean School Bus Program

c. How additional implementation grant dollars are necessary to fund the measure:

- Schools don't have the budget to purchase EV and infrastructure
- EPA Clean School Bus program, DERA, and TAG do not account for some infrastructure requirements (e.g., front-of-meter expenses).
- Requirements for eligibility/ criteria of other programs make it difficult for some districts to apply (e.g., EPA Clean School Bus minimum school bus requirement).

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of school buses deployed, school bus life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 60 units at an incentive level of \$60,000/unit, for a total incentive budget of \$3,600,000, to which 15% in administrative expenses were added, for a total project budget of \$4,140,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#). UDAQ could prioritize funding for school districts in the state's LIDAC areas that do not yet have an electric school bus.

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, VOCs, NH₃ shown in this project's Section 2 table;
- Lower cost of maintenance and cost of charging, compared to maintenance and cost of fuel for diesel/gasoline school buses;
- Reduced noise pollution.

For detailed information about UDAQ LIDAC engagement, see the Outreach and Coordination section of this Priority Plan.

Project #4 - Electric School Bus Pilot Program

1. Project Description

Use CPRG funds to create a new Electric School Bus (ESB) program, which would be a new, voluntary pilot program for school districts across the state.

While a few school districts in Utah have accessed federal funding for electric school buses, the majority have experienced barriers in accessing funding for this new technology. UDAQ would be the lead agency and would sub-contract/partner with school districts to administer the program. There would be no minimum unit requirement and no scrappage requirement.

Various ESB measures could be implemented by multiple states in a coalition. For instance, a technical assistance center and a workforce development program could be scaled up and made regional rather than state-specific. Many of the measures could be bid out to a third-party administrator (or at least major portions of work). For instance, a technical

assistance center or workforce development program could be almost entirely implemented by a third-party administrator via contractors.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 40 electric school buses. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	1.8	-0.1	-0.001	0.1	0.1	467.4
By 2050	10.1	-0.3	-0.004	0.8	0.7	2,670.8

Quantification tool(s) utilized: AVERT

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and would sub-contract/partner with school districts, although other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under this authority, UDAQ has administered clean vehicle and equipment incentive programs for over two decades.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
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Program development	10 units	10 units	10 units	10 units
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6. Geographic location

Statewide implementation.

7. Funding sources

- a. Funding needed to implement: \$15,870,000
- b. Complementary Funding:
 - IIJA 40552 - [Energy Efficiency and Conservation Block Grant \(EECBG\) Program](#)
 - IIJA 40431 - Consideration of Measures to Promote Greater Electrification of the Transportation Sector
 - IRA 40541 - [Grants for Energy Efficiency and Renewable Energy Improvements at Public Schools \(Renew America's Schools\)](#)
 - IRA 60101 - [Clean Heavy-Duty Vehicle Program](#)
 - IRA 60103 - [Greenhouse Gas Reduction Fund - Clean Communities Investment Accelerator](#)
 - IIJA 40109 - State Energy Program
 - IRA 60104 - EPA Diesel Emissions Reduction Act (DERA) funding
 - EPA Targeted Airshed Grants
 - The EPA's [Clean School Bus](#) (CSB) program
- c. Funding pursued by state or secured for implementation of this project:
 - IRA 60104 - EPA Diesel Emissions Reduction Act (DERA) funding
 - EPA Targeted Airshed Grants
 - The EPA's [Clean School Bus](#) (CSB) program
- d. How additional implementation grant dollars are necessary to fund the measure:
 - UDAQ has been told that the application process and requirements of this program often make it difficult for other Utah school districts to access. Requirements for eligibility/ criteria of other programs (EPA Clean School Bus) make it difficult for some districts to apply.
 - The logistical challenge with adopting new technology (ie electric school buses) often is a hurdle in itself.
 - Increase adoption among the School Districts that do not yet have one.
 - DERA program scappage requirements.
 - Schools don't have the budget to purchase EV and infrastructure
 - EPA clean school bus, DERA, and TAG don't account for utilities

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of electric school buses deployed, vehicle life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 40 units at an incentive level of \$345,000/unit (approximate incremental cost), for a total incentive budget of \$13,800,000, to which 15% in administrative expenses were added, for a total project budget of \$15,870,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#). UDAQ could prioritize, but not limit, funding for school districts in the state's LIDAC areas that do not yet have an electric school bus.

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, VOCs, NH₃ shown in this project's Section 2 table;
- Lower cost of maintenance and cost of charging, compared to maintenance and cost of fuel for diesel/gasoline school buses;
- Reduced noise pollution.

For detailed information about UDAQ LIDAC engagement, see the Outreach and Coordination section of this Priority Plan.

Measure #3 - Light-Duty Zero-Emission Vehicle Charging/Refueling Incentives

This measure intends to voluntarily increase adoption/use of light-duty zero-emission vehicles in Utah through enabling more vehicle charging/refueling. Potential financial incentives could include ongoing grants and technical assistance navigating incentives. Below are specific examples of types of projects for this measure.

Project #1: Electric Fleet Chargers

1. Project Description

Use CPRG funds to create a proposed Electric Fleet Charger incentive program for the full cost of Level 2 chargers for government and commercial fleets. Potential financial incentives could include ongoing grants and technical assistance navigating incentives. UDAQ would be the lead agency and would sub-contract/partner with municipalities and other public/government entities in the state.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 400 EV chargers. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	1.4	-0.7	0.0	4.0		4,000.5
By 2050	4.0	-2.0	0.1	11.4		11,429.9

Quantification tool(s) utilized: *BTS MOVES emission factors, eGRID, SLC fleet charger data*

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and would sub-contract/partner with municipalities and other public/government entities in the state, although other eligible entities in Utah could apply for and administer this a or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed

by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Program development	100 units	100 units	100 units	100 units

6. Geographic location

Statewide implementation.

7. Funding sources

- a. Funding needed to implement: \$3,220,000
- b. Complementary Funding:
 - IRA 13404 - Alternative Fuel Refueling Property Credit (30C)
 - IIJA 11129 - Grants for Charging and Fueling Infrastructure
 - IRA 60101 - Clean Heavy Duty Vehicles
 - IIJA 11401 - Charging and Fueling Infrastructure Grants (Community Charging/Corridor Charging)
 - IIJA 40431 - Consideration of Measures to Promote Greater Electrification of the Transportation Sector
 - IIJA Division J - Title VIII - NEVI Program
 - IIJA 40103 - Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency
 - IIJA 40552 - [Energy Efficiency and Conservation Block Grant \(EECBG\) Program](#)
- c. Funding pursued by state or secured for implementation of this project:
 - IIJA Division J - Title VIII - NEVI Program
 - [Utah's Workplace Electric Vehicle Charging Funding Assistance \(EVSE\) Program](#)
- d. How additional implementation grant dollars are necessary to fund the measure:
 - Leading by example
 - Would these be available for public use too when not gov hours?
 - No existing funding for this currently?

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of government and/or commercial EV Chargers deployed, EV charger life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 400 units at an incentive level of \$7,000/unit, for a total incentive budget of \$2,800,000, to which 15% in administrative expenses were added, for a total project budget of \$3,220,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

A new EV charger incentive program would be available to government and commercial fleets within Utah, including fleets of municipalities. Many municipalities in Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure (enabling greater use of EVs) include:

- Reduced level of NO_x and VOCs, shown in this project's Section 2 table;
- Lower cost of maintenance and cost of charging, compared to an ICE vehicle's maintenance and cost of gasoline, for government fleets;
- Reduced noise pollution.

For detailed information about UDAQ LIDAC engagement, see the Outreach and Coordination section of this Priority Plan.

Project #2 - Charging Alternatives (Workplace and Multi-Family Dwelling Electric Vehicle Chargers)

1. Project Description

Use CPRG funds for the full cost of Level 2 chargers at multi-family dwellings and workplaces throughout the state. Potential financial incentives could include one-time grants and technical assistance navigating incentives.

This new program would build upon/scale up the success of Utah's existing [Workplace Electric Vehicle Charging Funding Assistance](#) (EVSE) Program and Rocky Mountain Power's [EV Make-Ready Program](#). Funding for EVSE was expended in 2023. UDAQ would be the lead agency and would sub-contract/partner with municipalities, other public/government entities, and NGOs in the state.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 400 EV chargers. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	2.9	-1.5	0.1	8.5		8,504.8
By 2050	8.3	-4.4	0.2	24.3		24,299.5

Quantification tool(s) utilized: BTS MOVES emission factors, eGRID, SLC public charger data

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and would sub-contract/partner withUCAIR, municipalities and/or relevant stakeholders like housing providers and multi-family building developers in the state, although other eligible entities in Utah could apply for and administer this a or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Program development	100 units	100 units	100 units	100 units

6. Geographic location

Statewide implementation.

7. Funding sources

- a. Funding needed to implement: \$3,220,000
- b. Complementary Funding:
 - IRA 13404 - Alternative fuel refueling property credit (30C)

- IIJA 11129 - Grants for Charging and Fueling Infrastructure
 - IRA 60101 - Clean Heavy Duty Vehicles
 - IIJA 11401 - Charging and Fueling Infrastructure Grants (Community Charging/Corridor Charging)
 - IIJA 40431 - Consideration of Measures to Promote Greater Electrification of the Transportation Sector
 - IIJA Division J - Title VIII - NEVI Program
 - IIJA 40552 - [Energy Efficiency and Conservation Block Grant \(EECBG\) Program](#)
 - Rocky Mountain Power's [EV Make-Ready Program](#)
- c. Funding pursued by state or secured for implementation of this project:
- IIJA Division J - Title VIII - NEVI Program
 - [Utah Workplace Electric Vehicle Charging Funding Assistance](#) (EVSE) Program
 - Rocky Mountain Power's [EV Make-Ready Program](#)
- d. How additional implementation grant dollars are necessary to fund the measure:
- Need for greater charging network to incentive people to buy EV
 - Utah Workplace Electric Vehicle Charging Funding Assistance Program has been depleted
 - The U.S. Department of Energy reports that more than 80 percent of electric vehicle (EV) charging [occurs at home](#). Approximately 30 percent of U.S. households are multi-family dwellings (MFDs) such as apartments and condos and almost 75 percent of MFD households have at least one vehicle. For the EV market to reach the entire driving population, EV charging must be made available to [MFD residents](#).
 - The US Department of Energy reports that around 80% of EV charging happens at home. Unfortunately, that means that renters and those who don't live in single-family homes are unlikely to be able to charge at home, presenting a significant barrier to EV adoption.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of EV chargers deployed, EV charger life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 400 units at an incentive level of \$7,000/unit, for a total incentive budget of \$2,800,000, to which 15% in administrative expenses were added, for a total project budget of \$3,220,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

According to the [U.S. Department of Energy](#), low-income households (earning 80% or less of the area median income) reside in approximately 60% of MFD housing units. A new EV

charger incentive program would be for MFDs located in Utah. Many parts in Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure (enabling greater use of EVs) include:

- Reduced level of NO_x and VOCs, shown in this project's Section 2 table;
- Greater access to EV charging for residents of MFDs;
- Lower cost of maintenance and cost of charging, compared to an ICE vehicle's maintenance and cost of gasoline, for residents of MFDs;
- Reduced noise pollution.

A potential unique disbenefit (identified by LIDAC stakeholders) is lack of interest/need for EV chargers since many LIDAC members/MFD residents do not currently own EVs; this can be mitigated through incentive programs to increase ownership of EVs among LIDAC members/MFD residents. For detailed information about UDAQ LIDAC engagement, see the Outreach and Coordination section of this Priority Plan.

Measure #4: Mode-Shifting/Reducing Vehicle Miles Traveled

This measure intends to voluntarily increase mode-shifting and reduce vehicle miles traveled (i.e., individuals adopting modes of transportation other than personal vehicles) in Utah. Mode shifting/reduction of VMT can be achieved through actions like transportation demand management programs, programs that support/incentivize active transportation (such as biking, walking, and public transit), and, more holistically, by ensuring that land use and transportation planning are considered together. Potential financial incentives could include ongoing grants and technical assistance navigating incentives. Below are specific examples of types of projects for this measure.

Project #1 - E-Bike Incentive

1. Project Description

Use CPRG funds to create an additional cost incentive for e-bikes for individuals in Utah, including those in LIDAC households. Potential financial incentives could include ongoing grants and outreach and technical assistance navigating incentives.

This project could scale up an existing statewide [e-bike incentive program](#), in order to increase adoption of e-bikes among individuals in Utah. Several states currently or have previously implemented this type of program, including [Colorado](#). A [research study for the Bureau of Transportation Statistics](#) focused on the number of daily trips taken in the United States. In 2021, 52% of all trips, including all modes of transportation, were less than three miles, with 28% of trips less than one mile. E-bikes can provide an accessible alternative mode of transportation for short daily trips (those less than 3 miles).

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 1000 E-bikes. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	0.6	-0.0	0.0	0.9		1,188.0
By 2050	1.4	-0.1	0.0	2.3		2,969.9

Quantification tool(s) utilized: *BTS MOVES emission factors, eGRID, DEQ assumptions*

3. Implementing agency or agencies

UDAQ would be the lead agency and could sub-contract/partner with Utah Clean Air Partnership (UCAIR) to administer the program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
200 units	200 units	200 units	200 units	200 units

6. Geographic location

Statewide implementation.

7. Funding sources

- a. Funding needed to implement: \$690,000
- b. Complementary Funding:
 - There is currently no federal or State of Utah funding allocated for e-bike incentives.
- c. Funding pursued by state or secured for implementation of this project:
 - There is currently no federal or State of Utah funding allocated for e-bike incentives.
- d. How additional implementation grant dollars are necessary to fund the measure:
 - Need for state-specific program
 - More cost-effective than EV for many individuals/families

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of e-bikes deployed, e-bike life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 1,000 units at an incentive level of \$600/unit, for a total incentive budget of \$600,000, to which 15% in administrative expenses were added, for a total project budget of \$690,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

A new e-bike incentive program could be open to all residents of Utah, and funding could be prioritized for low-income residents/LIDAC areas. Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#). As a program with an income-qualified component, this incentive intends to target the population that is typically less financially able to purchase e-bikes.

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x and VOCs, shown in this project's Section 2 table;
- Increased access to transportation alternatives/options for Utah residents and LIDAC individuals;
- Lower up-front cost and lower cost of maintenance (compared to a vehicle's up-front cost and cost of maintenance), for LIDAC individuals;
- Increased physical activity/health benefits;
- Reduced traffic;
- Reduced noise pollution.

Potential unique disbenefits include the initial cost of an e-bike and lack of carrying capacity compared to a car. This program intends to mitigate the cost concerns, by providing an additional financial incentive for e-bikes; also, there could be a greater incentive amount for cargo e-bikes with larger carrying capacity. For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section of this Priority Plan.

Project #2 - Trail Development for Active Transportation

1. Project Description

Use CPRG funds to fund trail development for increased use of active transportation (like walking and biking). This project would support ongoing efforts related to the [Utah Trail Network](#). This is a vision of a network of paved trails throughout the state that connects Utahns of all ages and abilities to their destinations and communities. Specifically, CPRG funding would be utilized to develop one trail project along SR-9 and US-89 in Kane County and another along SR-7 in Washington County.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would complete two trail projects in Kane and Washington counties. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	0.5		0.0	0.7		940.9
By 2050	5.0		0.1	7.8		10,349.4

Quantification tool(s) utilized: *BTS MOVES emission factors, UDOT assumptions*

3. Implementing agency or agencies

UDOT would implement this measure.

4. Review of authority to implement

UDOT is a State entity established by Utah Code 17-1-2 which has “the general responsibility for planning, research, design, construction, maintenance, security, and safety of state transportation systems” in the state of Utah. UDOT routinely receives federal funding for transportation investments, including trail development.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Trails to be completed before the end of the performance period.				

6. Geographic location

Kane County and Washington County.

7. Funding sources

- Funding needed to implement:*
- Complementary Funding:*
- Funding pursued by state or secured for implementation of this project:*
 - More information needed.
- How additional implementation grant dollars are necessary to fund the measure:*
 - More information needed.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: completion of trails projects on a timely basis, measurement of trail use via surveys, tracking services, and related metrics.

9. Quantitative cost estimates

Based on assumptions made for an example program that would incentivize two trail projects. UDAQ estimates total project costs of \$40,000,000. Future implementation grant proposals from eligible entities may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

Public trails would be open to all residents of Utah, and funding could be prioritized for LIDAC areas. Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, PM_{2.5}, VOCs, shown in this project's Section 2 table;
- Increased access to transportation alternatives/options for Utah residents and LIDAC individuals;
- Reduced traffic;
- Reduced noise pollution.

For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section of this Priority Plan.

Measure #5: Zero-Emission Non-Road Incentives

This measure intends to voluntarily increase adoption of zero-emission nonroad equipment and locomotives in Utah. Potential formats of the program include vouchers, grants, and technical assistance navigating incentives. Below are specific examples of types of projects for this measure.

Project #1 - Electric Non-Road Equipment

1. Project Description:

Use CPRG funds to create a proposed zero-emission nonroad program for nonroad equipment incentives for government and commercial fleets. Potential formats of the program include vouchers, grants, and technical assistance navigating incentives.

This project was identified by one or more stakeholders and/or UDAQ staff. UDAQ is seeking feedback on program design and quantification of costs, emission reductions, and other program parameters.

2. Estimate of GHG and criteria pollutant emissions reductions

More information needed.

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and would sub-contract/partner with municipalities and other public/government entities in the state.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

5. Implementation schedule and milestones

More information needed.

6. Geographic location

Statewide implementation.

7. Funding sources

a. Funding needed to implement: More information needed.

b. Complementary Funding:

- IIJA 40552 - [Energy Efficiency and Conservation Block Grant \(EECBG\) Program](#)
- IRA 60101 - [Clean Heavy-Duty Vehicle Program](#)
- IIJA 21202 - Local and Regional Project Assistance Grants ([RAISE](#))
- IRA 13403 - Commercial Clean Vehicle Tax Credit (45W)
- IRA 22002 - Rural Energy for America Program (REAP)
- IRA 60101 - Grants to Reduce Air Pollution at Ports
- IRA - Clean Ports Program
- IIJA Division J Title VII - Port Infrastructure Development Program Grants
- IRA 60103 - [Greenhouse Gas Reduction Fund - Clean Communities Investment Accelerator](#)
- IRA 60201 - [Environmental and Climate Justice Block Grants - Change Grants](#)
- IIJA 40109 - State Energy Program
- IIJA 40401 - Department of Energy Loan Programs
- IIJA Division J Title VIII - Port Infrastructure Development Program Grants
- IRA 60104 - EPA Diesel Emissions Reduction Act (DERA) funding

c. Funding pursued by state or secured for implementation of this project:

- IRA 60104 - EPA Diesel Emissions Reduction Act (DERA) funding

d. How additional implementation grant dollars are necessary to fund the measure:

- This would be a new state program but would complement the state's existing DERA grant.
- Scrappage requirements in DERA make the existing funds less enticing.
- Eligibility requirements in DERA have been a stopping point for some interested parties.

8. Metrics for tracking progress

More information needed.

9. Quantitative cost estimates

More information needed.

10. LIDAC Benefits/Analysis

More information needed.

Project #2 - Electric Locomotives

1. Project Description:

Use CPRG funds to create a proposed zero-emission switcher locomotive pilot grant program for smaller rail operators to explore zero-emission switcher locomotives that operate outside of the Utah Inland Port Authority (UIPA) jurisdiction.

This project was identified by one or more stakeholders and/or UDAQ staff. UDAQ is seeking feedback on program design and quantification of costs, emission reductions, and other program parameters.

2. Estimate of GHG and criteria pollutant emissions reductions

More information needed.

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency and would sub-contract/partner with other entities in the state.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

5. Implementation schedule and milestones

More information needed.

6. Geographic location

Statewide implementation.

7. Funding sources

a. *Funding needed to implement:* **More information needed.**

b. *Complementary Funding:*

- IRA 22002 - Rural Energy for America Program (REAP)
- IRA 60101 - Grants to Reduce Air Pollution at Ports
- IRA - Clean Ports Program
- IIJA Division J Title VII - Port Infrastructure Development Program Grants
- IIJA 21201 - National Infrastructure Project Assistance
- IIJA 40552 - [Energy Efficiency and Conservation Block Grant \(EECBG\) Program](#)
- IRA 60101 - [Clean Heavy-Duty Vehicle Program](#)
- IIJA 21202 - Local and Regional Project Assistance Grants ([RAISE](#))
- IRA 13403 - Commercial Clean Vehicle Tax Credit (45W)
- IRA 60103 - [Greenhouse Gas Reduction Fund - Clean Communities Investment Accelerator](#)
- IRA 60201 - [Environmental and Climate Justice Block Grants - Change Grants](#)
- IRA 22103 - [Consolidated Rail Infrastructure and Safety Improvement Grants](#) (CRISI)
- IIJA - [Rail Vehicle Replacement Grants](#)
- [IIJA - National Highway Freight Program \(NHFP\) through the Fixing America's Surface Transportation \(FAST\) Act](#)
- [IIJA - Transportation Infrastructure Finance & Assistance \(TIFIA\)](#)
- [Railroad Rehabilitation Improvement Finance \(RRIF\)](#)
- [Surface Transportation Block Grant \(STBG\) Program \(previously the Surface Transportation Program\)](#)
- [Congestion Mitigation Air Quality \(CMAQ\) Improvement Program through Fixing America's Surface Transportation \(FAST\) Act](#)
- IIJA 40109 - State Energy Program
- IIJA 40401 - Department of Energy Loan Programs
- IIJA Division J Title VIII - Port Infrastructure Development Program Grants
- IRA 60104 - EPA Diesel Emissions Reduction Act (DERA) funding
- EPA Targeted Airshed Grants

c. *Funding pursued by state or secured for implementation of this project:*

- IRA 60104 - EPA Diesel Emissions Reduction Act (DERA) funding
- EPA Targeted Airshed Grants

d. *How additional implementation grant dollars are necessary to fund the measure:*

- This is too expensive of a commitment for people to make without a large incentive.
- It is often too large of a project for our existing funds (Targeted Airshed and DERA) and the scrappage requirement is not likely to work for participants.

8. Metrics for tracking progress

More information needed.

9. Quantitative cost estimates

More information needed.

10. LIDAC Benefits/Analysis

More information needed.

DRAFT

Buildings

Measure #6: Energy Efficiency and Zero-Emission Technology

This measure intends to voluntarily increase efforts related to building energy efficiency and zero-emission technology in Utah. Potential financial incentives could include point of sale rebates, ongoing grants, and technical assistance navigating incentives. Below are specific examples of types of projects for this measure.

Project #1 - Whole Home Retrofits Program

1. Project Description:

Use CPRG funds to expand financial incentives to ensure that whole home energy upgrades/retrofits continue after the Home Energy Rebate (HER) federal funds are expended. Potential financial incentives could include ongoing grants, new financing or lending programs, including credit enhancements to make it more attractive for lenders to provide financing for home energy upgrades.

This new program proposal is meant to ensure that Utah’s HER program does not end after the state’s federal allocation for the home energy rebate program is expended. In addition to serving many more households after HER funds are expended, this proposal can potentially help support more Utah jobs in the home energy improvement market into the future.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 500 units. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	3.3					6,560.8
By 2050	18.8					37,490.0

Quantification tool(s) utilized: ResStock Detailed Annual Total Savings per Dwelling Unit

3. Implementing agency or agencies

The program could potentially be administered by UDAQ and/or UOED, although other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under Utah Code 79-6-401, by following the procedures and requirements of Title 63J, Chapter 5, Federal Funds Procedures Act, the office [Office of Energy Development] may seek federal grants or loans, seek to participate in federal programs, and, in accordance with applicable federal program guidelines, administer federally funded state energy programs.

Under this authority OED administers building efficiency programs in Utah.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Program development	125 units	125 units	125 units	125 units

6. Geographic location

Statewide implementation.

7. Funding sources

a. *Funding needed to implement:* \$2,875,000

b. *Complementary Funding:*

- IIJA Division J Title VII - Home Energy Rebate (HER) program
- IRA 50121 - Home Energy Performance Based Whole-House Rebates
- IRA 13301 - Extension, Increase, and Modification of Nonbusiness Energy Property Credit (25C)
- IRA 50122 - High-Efficiency Electric Home Rebate Program
- IRA - [Clean Energy Tax Credit](#)

- IRA - [Energy Efficiency Home Improvement Credit](#)
 - Additionally, other current energy efficiency programs exist in Utah that are administered by Rocky Mountain Power and Dominion Energy.
 - IIJA 40552 - [Energy Efficiency and Conservation Block Grant \(EECBG\) Program](#)
 - [Rocky Mountain Power's WattSmart Home Programs](#)
- c. *Funding pursued by state or secured for implementation of this project:*
- IIJA Division J Title VII - Home Energy Rebate (HER) program
- d. *How additional implementation grant dollars are necessary to fund the measure:*
- HER program: this funding must be spent within 10 years and some experts/stakeholders have stated that funds are likely to be exhausted within only 3 to 5 years.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of homes that received retrofits, life of the houses/units retrofitted, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 500 units at an incentive level of \$5,000/unit, for a total incentive budget of \$2,500,000, to which 15% in administrative expenses were added, for a total project budget of \$2,875,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

A new whole home retrofits program would be open to all residents of Utah, and funding could be prioritized to low-income and moderate-income households and/or LIDAC areas in the state. Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, shown in this project's Section 2 table;
- Improved energy efficiency.

A potential unique disbenefit is the high financial cost of retrofits. This program intends to mitigate the cost concerns, by providing an additional financial incentive for retrofits. For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section of this Priority Plan.

Project #2 - Residential Pre-Weatherization Program

1. Project Description:

Use CPRG funds to create a new Pre-Weatherization (or “Pre-WAP”) Program in Utah that addresses severe conditions in low-income homes that would cause a home to be deferred from the Weatherization Assistance Program (WAP). Potential financial incentives could include ongoing grants and technical assistance navigating incentives.

This would be a new standalone program for Utah, but it would make existing measures such as Utah’s WAP more effective. These repairs will enable otherwise deferred low-income homes to access incentives for weatherization, as well as efficiency, electrification, and renewables. Other states currently or have previously implemented this type of program.⁵

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 75 units. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NO _x	SO ₂	PM _{2.5}	VOCs	NH ₃	CO ₂ e
By 2030	0.3					492.6
By 2050	1.5					2,463.0

Quantification tool(s) utilized: DWS program data, EIA natural gas consumption data

3. Implementing agency or agencies

As envisioned, the Pre-WAP program would be administered by UDWS. They could also issue a competitive Request for Proposal (RFP) for a third-party to administer the program in conjunction with the state’s WAP program. Other eligible entities in Utah could apply for and administer this or a similar program.

Multiple states could jointly issue an RFP for a single third-party program administrator. A shared third-party administrator could make efficient use of limited capacity and expertise, and there could be economies of scale in the administration of these programs. Multiple states in a coalition could also use separate administrators but share market research, marketing materials and digital strategies to increase buy-in and trust within a region. These states could also share workforce training or standards to increase the pool of labor performing these services.

4. Review of authority to implement

⁵ Examples of similar programs include: [Connecticut](#) through their Residential Energy Preparation Services (REPs) and [Delaware](#) through their Pre-Weatherization Program. Both Connecticut and Delaware use third-party administrators.

Under Utah Code 35A-8-202, the division [Utah Division of Workforce Services (DWS)] shall support economic development activities through grants, loans, and direct programs financial assistance.

The division may, by following the procedures and requirements of Title 63J, Chapter 5, Federal Funds Procedures Act, seek federal grants, loans, or participation in federal programs. Additionally, if any federal program requires the expenditure of state funds as a condition to participation by the state in any fund, property, or service, with the governor's approval, [the division may] expend whatever funds are necessary out of the money provided by the Legislature for the use of the department.

Under this authority, DWS administers Utah's Weatherization Assistance Program.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
15 units	15 units	15 units	15 units	15 units

6. Geographic location

Statewide implementation.

7. Funding sources

- a. *Funding needed to implement:* \$862,500
- b. *Complementary Funding:*
 - American Rescue Plan Act
 - IIJA 40551 - Weatherization Assistance Program (WAP)
 - IIJA Division J Title VII - Low Income Home Energy Assistance Program
 - [Rocky Mountain Power's WattSmart Home Programs](#)
- c. *Funding pursued by state or secured for implementation of this project:*
 - American Rescue Plan Act
 - IIJA 40551 - Weatherization Assistance Program (WAP)
- d. *How additional implementation grant dollars are necessary to fund the measure:*
 - While Utah currently has used some existing funding sources (ARPA, WAP) for pre-weatherization, the need for Utah's low-income households is much greater than these existing funding sources. CPRG funds could greatly extend the reach of the existing program.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of houses/residential units pre-weatherized, life of the houses/units pre-weatherized, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 75 units at an incentive level of \$10,000/unit, for a total incentive budget of \$750,000, to which 15% in administrative expenses were added, for a total project budget of \$862,500. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

The Pre-WAP program would help low-income families across the state. Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#). As an income-qualified program, Pre-WAP intends to target the population that is typically less financially able to make critical home repairs themselves and less likely to access funding that could help.

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, shown in this project's Section 2 table;
- Directly improved health of residents (e.g., removing issues such as mold, asbestos, vermiculite, and other conditions, which improves air quality, prevents disease and injury, and protects vulnerable individuals such as people with asthma, children, the elderly, and immunocompromised individuals)
- Directly improved housing quality, comfort, and safety;
- Indirect benefits include:
 - Reduced utility bills (reducing energy burden allows individuals to spend more on groceries and medicine);
 - Decreased electricity generation and resulting pollution (improves local air quality and reduces adverse health effects, particularly asthma);
 - Enabled solar generation development on roofs, which reduces electricity generation and utility bills.

Potential disbenefits include the need for additional outreach/staffing for pre-weatherization to LIDAC households; this can be mitigated through allocating funding specifically for outreach/staffing purposes. For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section.

Project #3 - Residential Heat Pump Program

1. Project Description:

Use CPRG funds to create a new heat pump incentive program in Utah for low-income households. For residents that live in low-income housing and/or meet other income-qualified criteria, the state will buy-down or otherwise augment existing utility program subsidies to reduce the cost of heat pumps.

Electrifying building heating and cooling reduces fossil fuel consumption, and heat pumps are efficient two-way electric appliances that heat and cool by moving heat into and out of a building. To encourage heat pump adoption, DWS can create a program (or revise their existing weatherization program) to incentivize residents to replace fully natural gas-fueled heating with primarily electric heat pumps that have natural gas as a backup. There are potential models for this type of program⁶ from other states.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy 500 units. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	2.6					5,059.3
By 2050	14.8					28,910.0

Quantification tool(s) utilized: ResStock Detailed Annual Total Savings per Dwelling Unit

3. Implementing agency or agencies

As envisioned, the program would be administered by Utah DWS. They could also issue a competitive Request for Proposal (RFP) for a third-party to administer the program in conjunction with the state's WAP program. Other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 35A-8-202, the division [UDWS] shall support economic development activities through grants, loans, and direct programs financial assistance.

The division may, by following the procedures and requirements of Title 63J, Chapter 5, Federal Funds Procedures Act, seek federal grants, loans, or participation in federal programs. Additionally, if any federal program requires the expenditure of state funds as a condition to participation by the state in any fund, property, or service, with the governor's approval, [the division may] expend whatever funds are necessary out of the money provided by the Legislature for the use of the department.

Under this authority, DWS administers Utah's Weatherization Assistance Program.

5. Implementation schedule and milestones

⁶ Examples include:

- [Efficiency Trust Maine](#)
- Colorado provides tax credit exemptions for heat pumps.
- Rhode Island also delivers heat pump incentives.

Year 1	Year 2	Year 3	Year 4	Year 5
Program development	125 units	125 units	125 units	125 units

6. Geographic location

Statewide implementation.

7. Funding sources

a. *Funding needed to implement:* \$2,875,000

b. *Complementary Funding:*

- IIJA Division J Title VII - Home Energy Rebate (HER) program
- IRA 50121 - Home Energy Performance Based Whole-House Rebates
- IRA 13301 - Extension, Increase, and Modification of Nonbusiness Energy Property Credit (25C)
- IRA 13302 - Residential Clean Energy Credit (25D)
- IRA 50122 - High-Efficiency Electric Home Rebate Program
- IRA - [Clean Energy Tax Credit](#)
- IRA - [Energy Efficiency Home Improvement Credit](#)
- Additionally, other current energy efficiency programs exist in Utah that are administered by Rocky Mountain Power and Dominion Energy.
- IIJA 40552 - [Energy Efficiency and Conservation Block Grant \(EECBG\) Program](#)
- [Rocky Mountain Power's WattSmart Home Programs](#)

c. *Funding pursued by state or secured for implementation of this project:*

- IIJA Division J Title VII - Home Energy Rebate (HER) program

d. *How additional implementation grant dollars are necessary to fund the measure:*

- There is other federal funding available for heat pumps; however, existing funding will not be enough for Utah households. UOED is applying for funding under the High Efficiency Electric Home Rebate Act (HEEHRA) program, but we believe that the \$4.275 billion that will be distributed among several states will not allow us to deploy enough heat pumps to meet demand.
- Additionally, there is currently a lack of adequate funding/resources for heat pumps targeted to low-income households in Utah specifically. DWS experiences challenges with current federal funding sources from DOE due to requirements related to energy savings ratios and the inability to buy down the cost of equipment. CPRG funding can help fill this gap, in order for more LIDAC households in Utah to access heat pumps.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of heat pumps deployed, heat pump life, number of performance years for implementation and weatherization program data in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 500 units at an incentive level of \$5,000/unit, for a total incentive budget of \$2,500,000, to which 15% in administrative expenses were added, for a total project budget of \$2,875,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

Electric heat pumps are two-way electric appliances that heat and cool by moving heat into and out of a building. Heat pumps are more efficient per unit of energy input than other kinds of heating equipment. The Heat Pump program would help low-income households across the state by producing energy cost savings and improving comfort. Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, shown in this project's Section 2 table;
- Directly improved indoor air quality and reduced criteria pollutants, so heat pumps can have direct health benefits in LIDAC communities that typically have higher rates of asthma and other respiratory illnesses;
- Reduced energy costs/energy burden, since heat pumps are efficient and can help consumers save money every year on their energy bills. A high-energy burden is associated with additional health ailments, and reducing energy costs could have additional health benefits for [LIDAC communities](#).

Potential disbenefits include the need for additional education and training about how to operate/maintain the heat pumps with LIDAC households; this can be mitigated through allocating funding specifically for education/training purposes. For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section.

Project #4 - K-12 School/Public Building Program

1. Project Description:

a. Brief description

Use CPRG funds to create a new heat pump/other efficient equipment incentive program in Utah for K-12 schools and other public community buildings such as libraries, community/recreation centers, etc. The program would cover incremental costs for new heat pumps/equipment and/or retrofits.

This project was identified by one or more stakeholders and/or UDAQ staff. UDAQ is seeking feedback on program design and quantification of costs, emission reductions, and other program parameters.

Industrial

Measure #7 - Facility Energy Efficiency

This measure intends to voluntarily increase industrial/commercial energy efficiency efforts in Utah. Below is a specific example of a type of project for this measure.

Project #1 - StepWise Industrial Assessment Program

1. Project Description:

Use CPRG funds to continue the Intermountain Industrial Assessment Center (IIAC) StepWise Program which involves eligible commercial and industrial customers receiving a no-cost energy efficiency assessment that will identify measures for reducing energy usage and emissions. Customers receive a customized report that shows where improvements can be made, approximately how much those improvements will cost, how long it will take for the improvements to pay back, and project ongoing savings.

Several states currently or have previously implemented this type of program through the U.S. Department of Energy's Industrial Assessment Centers Program. This would build upon/scale up the existing Utah [StepWise Program](#), currently administered by the University of Utah's Intermountain [Industrial Assessment Center](#).

2. Estimate of GHG and criteria pollutant emissions reductions

The IIAC utilized both AVERT and eGRID and data collected from the program and only counted emissions reductions from recommended measures that were actually implemented (or under implementation).

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	179.4	19.1	5.8	3.6	0.2	101,457.0
By 2050	358.8	38.1	11.5	7.3	0.4	202,914.0

Quantification tool(s) utilized: AVERT and eGRID, U of U IIAC program data

3. Implementing agency or agencies

As envisioned, the University of Utah IACC would be the lead agency with student training assistance from Weber State University.

4. Review of authority to implement

Under Utah Code 53B-7-103, the board [Utah Board of Higher Education] is the designated state educational agency authorized to negotiate and contract with the federal government and to accept financial or other assistance from the federal government or any of its

agencies in the name of and in behalf of the state of Utah, under terms and conditions as may be prescribed by congressional enactment designed to further higher education.

Subject to policies and procedures established by the board, an institution of higher education and the institution of higher education's employees may apply for and receive grants or research and development contracts within the educational role of the recipient institution. A program [as described above] may be conducted by and through the institution, or by and through any foundation or organization that is established for the purpose of assisting the institution in the accomplishment of the institution's purposes.

An institution or the institution's foundation or organization engaged in a program authorized by the board may enter into contracts with federal, state, or local governments or their subsidiary agencies or departments, with private organizations, companies, firms, or industries, or with individuals for conducting the authorized programs. One may also accept contributions, grants, or gifts from, and enter into contracts and cooperative agreements with, any private organization, company, firm, industry, or individual, or any governmental agency or department, for support of authorized programs within the educational role of the recipient institution, and may agree to provide matching funds with respect to those programs from resources available to the institution.

Under this authority, the University of Utah IIAC currently administers the state of Utah's existing weatherization assistance program for which it receives funding from DOE. The StepWise program ratepayer funding was established through Utah Code 54-20-105, but will no longer be available after February 2024.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Extend existing StepWise Program for five years				

6. Geographic location

Statewide implementation.

7. Funding sources

- a. *Funding needed to implement:* \$2,500,000
- b. *Complementary Funding:*
 - IIJA 40521 - Industrial Research and Assessment Centers
 - IRA 60107 - Low Emissions Electricity Program
- c. *Funding pursued by state or secured for implementation of this project:*
 - IIJA 40521 - Industrial Research and Assessment Centers
- d. *How additional implementation grant dollars are necessary to fund the measure:*

- Dominion Energy funding for a portion of this existing program is no longer available, significantly limiting the reach and efficacy of the program.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of facilities assessed, energy efficiency savings, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed extending the existing Dominion Energy-funded StepWise program for five years at a cost of \$500,000 per year for a total budget of \$2,500,000. Future implementation grant proposals from eligible entities, including the University of Utah or UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

The extended energy assessment program would be open to commercial and industrial entities throughout Utah, including facilities in LIDAC areas. Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, SO₂, PM_{2.5}, VOCs, NH₃ shown in this project's Section 2 table.

For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section of this Priority Plan.

Measure #8 - Oil/Gas Methane Emission Reductions

This measure intends to voluntarily reduce methane emissions related to the Oil/Gas industry.

Project #1 - Uinta Basin Oil/Gas Electrification Program

1. Project Description:

Use CPRG funds to create a new Uinta Basin Electrification program which would fund microgrids, solar farms, site solar, highline/shoreline for pumpjack engines with the Oil/Gas industry.

This project was identified by one or more stakeholders and/or UDAQ staff. UDAQ is seeking feedback on program design and quantification of costs, emission reductions, and other program parameters.

2. Estimate of GHG and criteria pollutant emissions reductions

More information needed.

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency, although other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

5. Implementation schedule and milestones

More information needed.

6. Geographic location

Implementation in the Uinta Basin.

7. Funding sources

a. *Funding needed to implement:* More information needed.

b. *Complementary Funding:*

- IRA 22004 - USDA Assistance for Rural Electric Cooperatives
- IRA 60105 - Funding to Address Air Pollution: Methane Monitoring
- IRA 60113 - Methane Emissions Reduction Program

- IIJA 40552 - [Energy Efficiency and Conservation Block Grant \(EECBG\) Program](#)
- IIJA 40601 - Funding to Support Orphan Well Plugging
- c. *Funding pursued by state or secured for implementation of this project:*
 - IRA 60113 - Methane Emissions Reduction Program
- d. *How additional implementation grant dollars are necessary to fund the measure:*
 - Options to electrify oil and gas operations extend beyond regulatorily required equipment such as pneumatics to non-required equipment such as pump jack and other engines which have been identified as large emitters of methane and VOCs. The co-pollutant VOC reductions associated with this program are particularly important in Utah's Uinta Basin, which is a marginal nonattainment area for ozone. While additional program funding may become available under the Methane Emissions Reduction Program, it is critical to begin reducing emissions in this sector immediately to address climate and ozone challenges.

8. Metrics for tracking progress

More information needed.

9. Quantitative cost estimates

More information needed.

10. LIDAC Benefits/Analysis

A new Uinta Basin Electrification program would be open to oil/gas entities in that region of Utah. Many parts of Utah's Uinta Basin include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of VOCs, shown in this project's Section 2 table;
- By reducing methane, co-pollutants which contribute to ground-level ozone can be reduced. In recent years, concentrations of wintertime ozone in the Uinta Basin have reached or exceeded the National Ambient Air Quality Standards (NAAQS), raising concerns about the health and environmental impacts of elevated [ozone levels in the Basin](#). Reducing the concentration of methane in the Basin is an important health and environmental goal of this project.

For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section of this Priority Plan.

Project #2 - Uinta Basin Energy Recovery and Infrastructure Improvements

1. Project Description:

This project seeks to reduce GHG emissions by leveraging CPRG funding to accelerate the electrification of oil and gas production sites located within the Uinta Basin by working with technology partners and oil and gas operators to develop and deploy an optimized power grid. This project has the potential to enable rapid and scalable technologies in remote oil and gas fields, which could result in the realization of huge amounts of future CH₄ emissions both within and beyond the state of Utah.

The University of Utah Energy and Geoscience Institute (EGI) has proposed a demonstration project which will develop optimized electric powered microgrids allowing for the electrification of substantial portions of oil and gas operations. This process will allow for substantial emission reductions at the production sites, eliminating the need for fossil fuel powered infrastructure like pump jacks which have been shown to be a major source of CH₄ emissions. This process would work by converting excess or waste field gas into electricity resulting in significantly decreased emissions. As the Uinta Basin is not the only remote oil and gas field where remote electrification could result in large scale emission reductions, this project could scale to other production fields beyond Utah.

This project was identified by one or more stakeholders and/or UDAQ staff. UDAQ is seeking feedback on program design and quantification of costs, emission reductions, and other program parameters.

2. Estimate of GHG and criteria pollutant emissions reductions

The UDAQ is seeking additional feedback from stakeholders on what the potential emission reductions associated with this enabling measure could be. The total CO₂e emissions associated with gas equipment at production sites in the Uinta Basin that could be electrified is 13,129 metric tons per year, showing the high ceiling of this transformative measure just within the Uinta Basin.

3. Implementing agency or agencies

EGI has proposed this project, and therefore the University of Utah in collaboration with EGI would be the implementing agency, with the UDEQ providing assistance where appropriate.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under Utah Code 53B-7-103, the board [Utah Board of Higher Education] is the designated state educational agency authorized to negotiate and contract with the federal government and to accept financial or other assistance from the federal government or any of its agencies in the name of and in behalf of the state of Utah, under terms and conditions as may be prescribed by congressional enactment designed to further higher education.

Subject to policies and procedures established by the board, an institution of higher education and the institution of higher education's employees may apply for and receive grants or research and development contracts within the educational role of the recipient institution. A program [as described above] may be conducted by and through the institution, or by and through any foundation or organization that is established for the purpose of assisting the institution in the accomplishment of the institution's purposes.

An institution or the institution's foundation or organization engaged in a program authorized by the board may enter into contracts with federal, state, or local governments or their subsidiary agencies or departments, with private organizations, companies, firms, or industries, or with individuals for conducting the authorized programs. One may also accept contributions, grants, or gifts from, and enter into contracts and cooperative agreements with, any private organization, company, firm, industry, or individual, or any governmental agency or department, for support of authorized programs within the educational role of the recipient institution, and may agree to provide matching funds with respect to those programs from resources available to the institution.

5. Implementation schedule and milestones

UDAQ is seeking additional feedback from stakeholders on what the implementation schedule could be for this project.

Milestones for this project include five distinct processes:

- 1) Perform a thorough evaluation of needs and possible solutions including analysis of electrification pathways and identification of possible constraints, including access, regulatory and supply-chain issues.
- 2) Study the applicability of implementation of promising technology including emission reductions and economic evaluation.

- 3) Identify auxiliary and/or complementary technologies which further accelerate electrification.
- 4) Create and execute an implementation plan.
- 5) Conduct a detailed analysis on the effectiveness of implementation and identify other areas of electrification and associated emissions reductions.

6. Geographic location

The Uinta Basin oil and gas field is located in Uintah and Duchesne counties, which are located in eastern rural Utah.

7. Funding sources

a. *Funding needed to implement:*

The UDAQ is seeking additional feedback from stakeholders on what the level of funding would be required for this project.

b. *Complementary Funding:*

- IJJA 40209 - Advanced Energy Manufacturing and Recycling Grants
- IRA 60113 - Methane Emissions Reduction Program
- IRA 21001 - Environmental Quality Incentives Program (EQIP)
- IRA 50144 - Energy Infrastructure Reinvestment Financing

c. *Funding pursued by state or secured for implementation of this project:*

- **More information needed.**

d. *How additional implementation grant dollars are necessary to fund the measure:*

- **More information needed.**

8. Metrics for tracking progress

The primary metric for tracking progress would be the number of pieces of equipment electrified at oil and/or gas production sites.

For this project, the following metrics to track progress were utilized: type and number of pieces of equipment electrified, and number of performance years for equipment in order to quantify emissions reductions.

9. Quantitative cost estimates

More information needed.

10. LIDAC Benefits/Analysis

A Uinta Basin Energy Recovery and Infrastructure Improvement project would be conducted in parallel with, and would benefit, oil and gas entities operating within the Uinta Basin of Utah. Many parts of Utah's Uinta Basin include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of VOCs, shown in this project's Section 2 table;
- By reducing methane, co-pollutants which contribute to ground-level ozone can be reduced. In recent years, concentrations of wintertime ozone in the Uinta Basin have reached or exceeded the National Ambient Air Quality Standards (NAAQS), raising concerns about the health and environmental impacts of elevated [ozone levels in the Basin](#). Reducing the concentration of methane in the Basin is an important health and environmental goal of this project.

Project #3 - Uinta Basin Oil/Gas Thief Hatch Replacement Program

1. Project Description:

Use CPRG funds to create a new Uinta Basin program which would fund Thief Hatch Replacements for the Oil/Gas industry. Current state rules require that storage tank thief hatches remain closed unless removing liquids or maintenance or operating activities however the rules do not have an engineering standard specified. Through many years of inspections by compliance staff approximately 80% of identified fugitive emissions via infrared camera observations are located at the thief hatches on storage tanks. This is due to under engineered pieces of equipment that do not wear well with the vapor pressure levels inside of the storage tank, frequent gauging of tank levels, dirt and debris buildup, failed gaskets and also the lack of proper closure after liquid unloading. The program would encourage the replacement of the current thief hatches with well designed thief hatches that can better withstand the tank vapor pressures, gaskets that will not be damaged by gauging and also be combined with remote tank tilt sensors that can notify operators that the thief hatch has been left open. Operators that have upgraded their thief hatches have seen reductions in mechanical issues and as such reduced emissions. The program would also encourage the combination of better designed thief hatches with remote sensors that can inform the operators if a thief hatch has been left open and can close the thief hatch in a rapid manner. This program would be open to all operators in the Uinta Basin and cover the full cost of the equipment required.

2. Estimate of GHG and criteria pollutant emissions reductions

The emissions reductions are based off of the gap filling line items for the tank control effectiveness adjustment for Utah's 2017 oil and gas inventory. These estimates were made using a monte carlo simulation, and were based on studies showing that about 30% of the time controlled tanks experience emissions not making it to their intended control device. Utah compliance inspections showed that when emissions weren't making it to the combustor that about 58% it was due to an open or leaking thief hatch. We in turn applied 58% of the tank control effectiveness emissions to thief hatch failures. There is also the understanding that thief hatch seals may still fail and that thief hatches may still be left open. To account for that we estimate that the replacement will reduce the existing thief hatch emissions by 50%. The emissions were then apportioned to oil and gas facilities to get a per facility reduction estimate. A CH₄/VOC ratio was developed using Uinta Basin

Composition Study data to estimate methane emissions. On oil facilities the 2017 Utah oil and gas emissions inventory showed an average of 3.4 tanks on oil facilities and an average of 2.0 tanks on gas facilities. To effectively mitigate thief hatch emissions on a facility it's recommended to replace all thief hatches at the facility. At a given facility it was estimated that 49.405 metric tons/yr of CO₂e at an oil facility and 96.96 metric tons/yr of CO₂e at a gas facility could be eliminated. This is under the assumption that replacing old thief hatches with good seals and potential monitors that notify the operators when open would reduce all failed thief hatch emissions. Thief hatch replacement would also have a co-pollutant reduction for VOCs of 3.83 metric tons/yr for oil facilities and 0.83 tons/yr for gas facilities.

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy X units. Actual emissions reductions will vary depending on selected program parameters.

Table 1. Oil Facility						
GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO ₂	PM _{2.5}	VOCs	NH ₃	CO ₂ e
By 2030				8,053		51,875
By 2050				23,010		148,215

Table 2. Gas Facility						
GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO ₂	PM _{2.5}	VOCs	NH ₃	CO ₂ e
By 2030				581		33,939
By 2050				1,660		96,969

Quantification tool(s) utilized: See detailed quantification narrative above

3. Implementing agency or agencies

As envisioned, UDAQ would be the lead agency, although other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed

by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

5. Implementation schedule and milestones

We anticipate that 70 oil and gas facilities could be switched out per year starting in year two.

Oil Facility - Performance Period				
Year 1	Year 2	Year 3	Year 4	Year 5
Program Development	150	150	150	150

Gas Facility - Performance Period				
Year 1	Year 2	Year 3	Year 4	Year 5
Program Development	50	50	50	50

6. Geographic location

Implementation in the Uinta Basin; potential to expand to other oil and gas producing regions of the state.

7. Funding sources

- a. *Funding needed to implement: \$2,815,200 (oil); \$552,000 (gas); \$3,367,200 (combined)*
- b. *Complementary Funding:*
 - IRA 21001 - Environmental Quality Incentives Program
 - IRA 60113 - Methane Emissions Reduction Program
 - IIJA 40552 - Energy Efficiency and Conservation Block Grant (EECBG) Program
- c. *Funding pursued by state or secured for implementation of this project:*
 - IRA 60113 - Methane Emissions Reduction Program
- d. *How additional implementation grant dollars are necessary to fund the measure:*
 - More information needed.

8. Metrics for tracking progress

We have given the thief hatches a useful life of 10 years and a cost of \$1200 to replace one thief hatch. We would like to implement 150 oil facilities per year and 50 gas facilities per year. The average number of thief hatches to be replaced would be 3.4 at an oil facility and 2 at a gas facility.

9. Quantitative cost estimates

At an oil facility, the cost would be \$4,080 to reduce 24.70 metric tons of CO₂e (3.83 metric tons VOC) annually. At a gas facility, the cost would be \$2,400 to reduce 48.48 metric tons of CO₂e (0.83 metric tons VOC) annually. Importantly, the above estimates conservatively assume that the replacement thief hatches reduce 50 percent of total historical emissions at controlled facilities (i.e., those with flares).

Future implementation grant proposals from eligible entities will vary depending on selected program parameters.

10. LIDAC Benefits/Analysis

A new Uinta Basin Thief Hatch Replacement program would be open to oil/gas entities in that region of Utah. Many parts of Utah's Uinta Basin include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of VOCs, shown in this project's Section 2 table;
- By reducing methane, co-pollutants which contribute to ground-level ozone can be reduced. In recent years, concentrations of wintertime ozone in the Uinta Basin have reached or exceeded the National Ambient Air Quality Standards (NAAQS), raising concerns about the health and environmental impacts of elevated [ozone levels in the Basin](#). Reducing the concentration of methane in the Basin is an important health and environmental goal of this project.

For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section of this Priority Plan.

Project #4 - Uinta Basin Oil/Gas Flyover Program for Leak Detection

1. Project Description:

This project would establish a Utah flyover and leak detection and repair program (LDAR) similar to the Colorado Ongoing Basin Emissions (COBE) program, which is led by Colorado State University (CSU) in coordination with the Colorado Department of Public Health and Environment and aerospace sensing companies. A similar program could be developed for

Utah's Uinta Basin, potentially with the assistance of Utah State University and other partners.

This project was identified by one or more stakeholders and/or UDAQ staff. UDAQ is seeking feedback on program design and quantification of costs, emission reductions, and other program parameters.

2. Estimate of GHG and criteria pollutant emissions reductions

Estimates from aerospace operators suggest the potential to reduce emissions of over 1,800,000 MCF from upstream production-related assets and pipelines per survey.

More information is needed to put this potential project into context with other measures/projects in this Priority Plan.

Electric Power

Measure #9 - Renewable Energy

This measure intends to voluntarily increase the deployment of renewable energy in Utah through incentives and/or direct deployment efforts. Below are specific examples of types of projects for this measure.

Project #1 - Community Choice Renewable Program

1. Project Description:

Use CPRG funds to support a Community Choice Renewable Program in Utah. Utah Renewable Communities (URC) aims to offer customers a choice to supplement their current energy mix with renewable energy at a minimal cost increase.

The Utah Community Renewable Energy Act, which was enacted by the Utah Legislature in 2019, allows for the creation of a Program to enable eligible Utah communities to acquire renewable energy resources to serve participating customers. All costs of the Program must be paid for by the customers within the communities who participate in the Program, and customers may elect to leave the Program at any time. The URC Program would seek to use an EPA CPRG implementation grant to build a financial reserve fund for renewable energy resources acquired to serve participating customers. This reserve fund would be used to satisfy the legal requirement that "non-participating customers and the utility will not be subject to any program liabilities or costs," even if participation in this voluntary program drops to zero. An EPA CPRG Implementation Grant request to support the URC program can also be tailored to support a smaller initial renewable energy resource

acquisition – for example, pairing the initial acquisition down from 400 MW of combined solar and wind to only 200 MW of solar or less (with correspondingly smaller initial emissions reductions). As the Program pays down an initial resource, a corresponding portion of the reserve fund will be freed up to backstop another renewable energy resource.

This project was identified by one or more stakeholders and/or UDAQ staff. UDAQ is seeking feedback on quantification of costs and other program parameters.

2. Estimate of GHG and criteria pollutant emissions reductions

The following emissions reductions reflect an illustrative case in which the URC program fully meets its net-100% renewable electricity goal by acquiring energy from a new 200 MW solar project and a new 200 MW wind project. Actual emissions reductions will vary depending on selected program parameters.

Estimate of emission reductions received from URC stakeholders: 636,000 metric tons of CO₂e annually

3. Implementing agency or agencies

The participating municipalities in the URC program, including Salt Lake City, would lead and administer this program.

4. Review of authority to implement

Utah Code 54-17-9, [Utah Community Renewable Energy Act](#), allows for the creation of a Program to enable eligible Utah communities to acquire renewable energy resources to serve participating customers. Final implementation of this program requires the approval of an application submitted by a qualified utility by the Utah Public Service Commission (PSC). Of 23 eligible communities, 18 joined by the participation deadline, paving the way for application submittal to the PSC.

5. Implementation schedule and milestones

More information needed.

6. Geographic location

The following municipalities/communities in Utah have signed on to participate in this program:

- Town of Castle Valley
- Moab
- Grand County
- Springdale
- Kearns
- Salt Lake City
- Millcreek
- Cottonwood Heights
- Holladay
- Emigration Canyon
- Alta
- Salt Lake County

- Ogden
- Park City
- Francis
- Oakley
- Coalville
- Summit County

7. Funding sources

a. *Funding needed to implement:* **More information needed.**

b. *Complementary Funding:*

- IRA 13801 - Elective Payment for Energy Property and Electricity Produced from Certain Renewable Resources, etc.
- IRA 22001 - Electric Loans for Renewable Energy
- IRA 22002 - Rural Energy for America Program
- IIJA 40552 - Energy Efficiency and Conservation Block Grant (EECBG) Program
- IIJA - Pumped Storage Hydropower Wind and Solar Integration and System Reliability Initiative
- IRA 60103 - GHG Reduction Fund zero-emission Technologies Grant Program
- IRA 60107 - Low Emissions Electricity Program
- IIJA Division J Title VII - Home Energy Rebate (HER) program
- IRA 50121 - Home Energy Performance Based Whole-House Rebates
- IRA 13301 - Extension, Increase, and Modification of Nonbusiness Energy Property Credit (25C)
- IRA 13302 - Residential Clean Energy Credit (25D)
- IRA 50122 - High-Efficiency Electric Home Rebate Program
- IRA - Clean Energy Tax Credit
- IRA - Energy Efficiency Home Improvement Credit

c. *Funding pursued by state or secured for implementation of this project:*

- Ratepayers in participating URC communities would pay for the bulk of this program under the provisions of the Utah Community Renewable Energy Act.

d. *How additional implementation grant dollars are necessary to fund the measure:*

Because all costs of the Program must be paid for by the customers within the communities who participate in the Program, and customers may elect to leave the Program at any time. The URC Program would seek to use an EPA CPRG implementation grant to build a financial reserve fund for renewable energy resources acquired to serve participating customers. This reserve fund would be used to satisfy the legal requirement that “non-participating customers and the utility will not be subject to any program liabilities or costs,” even if participation in this voluntary program drops to zero.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of households served by renewable energy, renewable energy system life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

While emission estimates reflect an illustrative case in which the URC program fully meets its net-100% renewable electricity goal by acquiring energy from a new 200 MW solar project and a new 200 MW wind project, total project costs at this time are to be determined. Future implementation grant proposals from eligible entities will vary depending on selected program parameters.

10. LIDAC Benefits/Analysis

A new Community Choice Renewable program would be open to eligible Utah communities and eligible participating customers. Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced levels of co-pollutants;
- Increased energy options for Utahns.

Potential disbenefits include the need for additional education and training to LIDACs about the Community Choice Renewable program; this can be mitigated through allocating funding specifically for education/training purposes. For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section.

Project #2 - Rooftop Solar Residential Incentive Program

1. Project Description:

Use CPRG funds to provide a general incentive program for onsite residential solar for qualifying residents in Utah. Potential financial incentives could include point of sale rebates, ongoing grants, and technical assistance navigating incentives. This program intends to supplement anticipated funds from Solar for All for low-income households. This incentive will help continue to support solar since Utah's residential Solar PV Tax Credit ended on December 31, 2023.

For installations completed in 2023, the residential Solar PV tax credit was calculated as 25 percent of the eligible system cost or \$400, whichever was less for installations on residential dwelling units.

2. Estimate of GHG and criteria pollutant emissions reductions

UDAQ estimated GHG and criteria pollutant emission reductions based on assumptions made for an example program that would incentivize and deploy X units. Actual emissions reductions will vary depending on selected program parameters.

GHG and Criteria Emissions Reductions (metric tons)

	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030	77.5	42.6	8.3	2.8	2.8	146,093.1
By 2050	387.4	213.1	41.5	13.8	13.8	730,465.4

Quantification tool(s) utilized: AVERT

3. Implementing agency or agencies

The program could potentially be administered by UDAQ and/or UOED.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under Utah Code 79-6-401, by following the procedures and requirements of Title 63J, Chapter 5, Federal Funds Procedures Act, the office [OED] may seek federal grants or loans, seek to participate in federal programs, and, in accordance with applicable federal program guidelines, administer federally funded state energy programs.

Under this authority, OED administers the Utah Renewable Energy Systems Tax Credit program⁷ which until recently included residential solar tax credits.

5. Implementation schedule and milestones

Year 1	Year 2	Year 3	Year 4	Year 5
1,000	1,000	1,000	1,000	1,000

6. Geographic location

Statewide implementation.

7. Funding sources

⁷ <https://le.utah.gov/xcode/Title59/Chapter7/59-7-S614.html>

- a. *Funding needed to implement:* \$5,750,000
- b. *Complementary Funding:*
 - IRA 60103 Greenhouse Gas Reduction Fund - Zero-Emission Technologies Grant Program (Solar for All)
- c. *Funding pursued by state or secured for implementation of this project:*
 - IRA 60103 Greenhouse Gas Reduction Fund - Zero-Emission Technologies Grant Program (Solar for All)
- d. *How additional implementation grant dollars are necessary to fund the measure:*
 - Since Utah's residential Solar PV Tax Credit ended on December 31, 2023, additional funds are needed to incentivize households to pursue residential solar. Even if Utah is awarded Solar for All funds, many households still may not qualify.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of residential solar PV systems deployed, PV system life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

UDAQ assumed total deployment of 5,000 units at an incentive level of \$1,000/unit, for a total incentive budget of \$5,000,000, to which 15% in administrative expenses were added, for a total project budget of \$5,750,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

A new residential solar incentive program would be open to all Utahns. Funding could be prioritized to moderate-income households, who might not be eligible for the Solar for All program. Many parts of Utah include disadvantaged areas according to the IRA Disadvantaged Communities [map](#).

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced level of NO_x, SO₂, PM_{2.5}, VOCs, NH₃, shown in this project's Section 2 table;
- Increased energy options for residents.

Potential disbenefits include the need for additional education and training about the solar program to Utah residents, including those in LIDACs; this can be mitigated through allocating funding specifically for education/training purposes. For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section.

Natural and Working Lands

Measure #10 - Promote Healthy and Resilient Forests

This measure intends to voluntarily improve forest management in Utah with the goal of promoting healthy and resilient forests and reducing wildfire risk as essential to addressing GHG emissions through collaboration on landscape-scale forest health and fuels reduction projects. Below are examples of project types related to this measure.

Project #1 - Supporting Forest Management and Wildfire Mitigation

1. Project Description:

Use CPRG funds for projects that support forest management and wildfire mitigation. The Utah Division of Forestry, Fire and State Lands (UDFFSL) would be a key partner in ensuring that projects directly align with the [Utah Forest Action Plan](#) and other relevant laws and guidelines. Projects could be implemented within state boundaries only or implemented with neighboring Western states.

UDAQ is seeking more information on specific projects that support the following goals:

- Promote forest restoration activities on private lands with forest conservation and stewardship practices that include climate benefits;
- Engage local communities in planning and implementing Urban & Community Forestry projects focused on climate benefits;
- Encourage activities on private forest lands focusing on improving forest health and resilience, reducing the potential for land fragmentation, and addressing wildfire risk reduction;
- Support program integration between UDFFSL programs in forestry and hazardous fuels reduction treatments in the common goal of pre-fire vegetation management;
- Educate landowners, logging contractors, and others on forest stewardship;
- Support the [Utah Forest Legacy Program](#) strategies and objectives.

2. Estimate of GHG and criteria pollutant emissions reductions

More information needed.

3. Implementing agency or agencies

As envisioned, funding for this program could be secured through the CPRG implementation grant program by UDAQ with the Utah Division of Forestry, Fire, and State Lands (UDFFSL) as a sub-awardee. DFFSL would administer the program and/or work with similar entities in neighboring Western states as part of a coalition. Other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and

administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

UDFFSL is established by Utah Code 65A-1-4 and “is the executive authority for the management of sovereign lands, and the state's mineral estates on lands other than school and institutional trust lands, and shall provide for forestry and fire control activities as required in Section 65A-8-101.”

5. Implementation schedule and milestones

More information needed.

6. Geographic location

More information needed.

7. Funding sources

a. *Funding needed to implement:*

b. *Complementary Funding:*

- IIJA 40806 - Fuel Breaks
- IRA 23001 - Develop and Implement Activities and Tactics for Old Growth
- IRA 23003 - Urban and Community Forestry Assistance Program
- IIJA - Forest Health Management on Federal Lands Programs
- IIJA - Joint Chiefs Landscape Restoration Partnership Program
- IIJA - Reforestation Trust Fund
- IIJA - State Fire Assistance
- IIJA - State Forest Action Plans
- IIJA 40803 - Collaborative Forest Landscape Restoration Program
- IIJA 40804 - Recreation Sites
- IRA 60201 - Environmental and Climate Justice Block Grants - Change Grants
- IIJA - Department of Interior Wildfire Management
- IIJA - State Fire Assistance

- IIJA 40101 - Preventing Outages and Enhancing the Resilience of the Electric Grid Formula Grants
 - IIJA Division J Title VI - Wildfire Management
- c. *Funding pursued by state or secured for implementation of this project:*
More information needed.
- d. *How additional implementation grant dollars are necessary to fund the measure:*
More information needed.

8. Metrics for tracking progress

More information needed.

9. Quantitative cost estimates

More information needed.

10. LIDAC Benefits/Analysis

In addition to the general LIDAC benefits associated with measures (see the LIDAC Analysis section of this Priority Plan) potential benefits unique to this measure include:

- Reduced community wildfire risk and improved water quality;
- Reduced levels of co-pollutants;
- In areas across the state, this measure could result in more resilient communities through green infrastructure, storm buffers, and storm water mitigation. It could also result in more access to open space and the corresponding positive physical and mental health effects.

For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section.

Cross-Cutting

Measure #11 - Energy Outreach, Education, and Workforce

This measure intends to increase outreach, education, and workforce-focused efforts related to energy efficiency and zero-emission technology in Utah. Below are specific examples of types of projects for this measure.

Project #1 - Energy Demonstration and Assistance Program (One-Stop Shop)

1. Project Description:

Use CPRG funds for staffing an Energy Demonstration and Assistance program in Utah. This program could include demonstration facilities and/or staff who would serve as a

cost-free “one-stop shop,” a trusted resource providing information in various formats about efficiency and clean energy measures (energy efficiency, renewable energy, zero-emission transportation/technology, etc.), financing options (incentives, vouchers, etc.), and resiliency (for wildfire, floods, drought, etc.) for individual residents and entities like small businesses.

This program could issue competitive grants to third-party organizations (such as universities, nonprofits, etc) who would use their staff to oversee customized work in their communities. Program staff would support outreach and education throughout the state. This could include steps like utilizing sustainable living demonstration “show homes.” Programming could include tours, workshops, one-to-one assistance (over the phone, in person, etc), and annual community programs aimed at lowering the cost of equipment upgrades for all households, and providing heavily subsidized/free options for moderate-income and LIDAC households. The program would support Utah residents and small entities in making the change to net-zero, resilient living on their timeline and budget.

Other states/municipalities currently or have previously implemented this type of program.⁸

This project was identified by one or more stakeholders and/or UDAQ staff. UDAQ is seeking feedback on program design and quantification of costs, emission reductions, and other program parameters.

2. Estimate of GHG and criteria pollutant emissions reductions

More information needed.

3. Implementing agency or agencies

As envisioned, the program would be administered by UDAQ and/or third parties in Utah through a competitive RFP process. Other eligible entities in Utah could apply for and administer this or a similar program.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed

⁸ Examples include the [I Heart My Home CT program](#) and a City of Ann Arbor pilot program.

by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

5. Implementation schedule and milestones

More information needed.

6. Geographic location

Statewide implementation.

7. Funding sources

a. *Funding needed to implement:* Approximately \$3,000,000

b. *Complementary Funding:*

- IIJA 41007 - Wind Energy Technology Program
- IRA 60107 - Low Emissions Electricity Program
- IIJA - Solar Improvement Research and Development
- IIJA - Technology and Innovation Deployment Program
- IRA 60201 - Environmental and Climate Justice Block Grants - Change Grants

c. *Funding pursued by state or secured for implementation of this project:*

■ More information needed.

d. *How additional implementation grant dollars are necessary to fund the measure:*

■ More information needed.

8. Metrics for tracking progress

For this measure, we use the following metrics to track progress: number of individuals and entities receiving assistance, vehicle or piece of technology life, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

Based on stakeholder input, UDAQ assumed staffing/programming costs for a total project budget of approximately \$3,000,000. Future implementation grant proposals from eligible entities, including UDAQ, may vary depending on selected project parameters.

10. LIDAC Benefits/Analysis

Many if not all of the emission reduction strategies focused on energy efficiency and zero-emission technology will not be fully realized without trusted staff that engage in outreach and education directly with community members and small entities to implement programs and projects. Multiple LIDAC stakeholders expressed support for an Energy Assistance-type program.

By enabling greater adoption of the other strategies, this program catalyzes the general benefits associated with other projects (see the LIDAC Analysis section of this Priority Plan).

For detailed information about UDAQ LIDAC engagement, see the Coordination and Outreach section of this Priority Plan.

Project #2 - Workforce Training

1. Project Description:

Many if not all of the emission reduction strategies focused on energy efficiency, zero-emission technology, and more will not be fully realized without a Utah workforce that is trained with the skills needed to implement the programs and projects. UDAQ could work with stakeholders like industry, other state agencies, state universities, colleges and technical colleges, businesses, nonprofits, and others to help identify funding to support workforce training and development for lower-carbon industries. Emissions reduction strategies can be job creators, with opportunities in fields like electricians, HVAC work, construction, auto maintenance, forestry, water conservation, and others that can offer career opportunities and may not require a 4-year college degree.

This project was identified by one or more stakeholders and/or UDAQ staff. UDAQ is seeking feedback on program design and quantification of costs, emission reductions, and other program parameters.

Measure #12 - Carbon Sequestration and Storage

This measure intends to leverage CPRG funds to develop Carbon Sequestration and Storage (CSS) resources including a CSS resource survey, or a Utah specific characterization, of potential CCS storage resources available within the state. Additionally, this measure intends to leverage available funding for potential CSS projects that utilize these resources.

Project #1 - Utah Carbon Sequestration and Storage Survey

1. Project Description:

This project would characterize potential CSS storage resources for the long term storage and sequestration of CO₂ within the Basin and Range formation located in Milford, Beaver and Iron counties. With the resources identified through the survey, this project aims to capture and store CO₂ emissions from a Direct Reduced Iron (DRI) processing facility that is currently under construction, as well as the CO₂ emissions captured as part of the Red Rock Direct Air Capture (DAC) hub, both of which are located in the survey region.

The University of Utah Energy and Geoscience Institute (EGI) has identified the need for the cataloging of potential CSS resources within the state of Utah and has further identified several, either ongoing or under construction, sources of CO₂ that could benefit from the utilization of such resources. Therefore the program represents the development of new, scalable, CSS resources that could result in the direct capture and reduction of emissions from ongoing projects.

Funds received from CPRG would be utilized to develop site assessments, characterization, and permitting of Class VI injection wells and necessary monitoring wells to ensure success of the CSS project. Funds would also be utilized to assist in the cost assessment, permitting and construction of the infrastructure necessary to pipe captured CO₂ emissions from the facilities to the sequestration storage site.

This project was identified by one or more stakeholders and/or UDAQ staff. UDAQ is seeking feedback on program design and quantification of costs, emission reductions, and other program parameters.

2. Estimate of GHG and criteria pollutant emissions reductions

The stakeholder estimated GHG emission reductions based on assumptions made for an example program that would incentivize and deploy carbon capture from two facilities within the survey region. The stakeholder estimates an annual sequestration of 800,000 metric tons of CO₂ per year once operational. Actual emissions reductions will vary depending on selected program parameters and the start date of operations, the accumulated 2030 and 2050 emissions identified in the table below assuming the beginning of CSS operations from both facilities in the calendar year of 2028.

GHG and Criteria Emissions Reductions (metric tons)						
	NOx	SO2	PM2.5	VOCs	NH3	CO2e
By 2030						2,400,000
By 2050						18,400,000

EGI estimates of total indirect emission reduction potential; project is for characterization of storage

3. Implementing agency or agencies

EGI has proposed this project, and therefore the University of Utah in collaboration with EGI would be the implementing agency, with the UDEQ providing assistance where appropriate.

4. Review of authority to implement

Under Utah Code 19-1-201, the department [UDEQ] may perform the administrative functions of the boards established by Section 19-1-106, including the acceptance and administration of grants from the federal government and from other sources, public or private, to carry out the board's functions. Also under Utah Code 19-1-202, the [UDEQ] executive director may, with the approval of the governor, participate in the distribution, disbursement, or administration of any fund or service, advanced, offered, or contributed by the federal government for purposes consistent with the powers and duties of the department.

Utah Code 19-1-105, creates the Utah Division of Air Quality to administer 19-2, Air Conservation Act. Under Utah Code 19-2-107, the [UDAQ] director may accept, receive, and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions of the Air Conservation Act. Furthermore, UDAQ is eligible to apply for assistance under this solicitation, in accordance with 42 U.S.C. 16131 and CFDA 66.039.

Under Utah Code 53B-7-103, the board [Utah Board of Higher Education] is the designated state educational agency authorized to negotiate and contract with the federal government and to accept financial or other assistance from the federal government or any of its agencies in the name of and in behalf of the state of Utah, under terms and conditions as may be prescribed by congressional enactment designed to further higher education.

Subject to policies and procedures established by the board, an institution of higher education and the institution of higher education's employees may apply for and receive grants or research and development contracts within the educational role of the recipient institution. A program [as described above] may be conducted by and through the institution, or by and through any foundation or organization that is established for the purpose of assisting the institution in the accomplishment of the institution's purposes.

An institution or the institution's foundation or organization engaged in a program authorized by the board may enter into contracts with federal, state, or local governments or their subsidiary agencies or departments, with private organizations, companies, firms, or industries, or with individuals for conducting the authorized programs. One may also accept contributions, grants, or gifts from, and enter into contracts and cooperative agreements with, any private organization, company, firm, industry, or individual, or any governmental agency or department, for support of authorized programs within the

educational role of the recipient institution, and may agree to provide matching funds with respect to those programs from resources available to the institution.

5. Implementation schedule and milestones

The project has three distinct phases with specific deliverables:

Deliverable #1: CSS survey of the proposed region.

Deliverable #2: Construction of necessary infrastructure for CSS operations.

Deliverable #3: Start of CSS operations.

Year 1	Year 2	Year 3	Year 4	Year 5
CSS Survey	More information needed.	More information needed.	More information needed.	More information needed.

6. Geographic location

The three counties to be included in the initial CSS survey, Milford, Beaver, and Iron counties, are located in central western rural Utah. Therefore, the three deliverables that are part of the proposed project would be deployed and developed within these rural counties.

7. Funding sources

Funds necessary to supplement the implementation of the CSS resources survey would be \$2.25 million, representing 20% of the total necessary funding. Funds necessary from CPRG to implement the remaining deliverables, including the construction of necessary infrastructure, would be an additional \$9.0 million, resulting in a total of \$11.25 million.

a. Complementary Funding:

- IIJA 40209 - Advanced Energy Manufacturing and Recycling Grants
- IIJA 40303 - Front-End Engineering and Design Program Out Activities Under Carbon Capture Tech Program 962 of EPA (Sec 40303)
- IIJA 40342 - Clean Energy Demonstration on Current and Former Mine Land
- IIJA 41004 - Carbon Capture Demonstration Projects Program
- IIJA 41004 - Carbon Capture Large-Scale Pilot Programs
- IRA 13104 - Extension and Modification of Credit for Carbon Oxide Sequestration (45Q)
- IIJA 41005 b - Commercial Direct Air Capture Hub Technology Prize Competition (41005, b)

b. Funding pursued by state or secured for implementation of this project:

- More information needed.

c. How additional implementation grant dollars are necessary to fund the measure:

- More information needed.

8. Metrics for tracking progress

For this project, the following metrics to track progress could be utilized: number of sources utilizing the CSS resources, lifetime of CSS infrastructure, and number of performance years for implementation in order to quantify emissions reductions.

9. Quantitative cost estimates

The stakeholder reported a need for a total budget of \$11.25 million, of which \$2.25 million would be utilized to assist in the development of the CSS survey, and the remaining \$9.0 million used to help develop the infrastructure needed for CSS operations at the two participating facilities.

10. LIDAC Benefits/Analysis

More information needed.

DRAFT