

## Huntsville Utilities Climate Pollution Reduction Grants – Implementation Grants Budget Narrative

### a. Budget Detail

#### Measure 1:

A budget summary of the direct costs associated with implementing this measure is provided below and in tabular form at the end of the narrative. The total five-year budget for EV deployment by Huntsville Utilities is estimated to be \$4,247,714. Of these costs, the two largest drivers are the purchase of 14 electric vehicles (\$845,930) and the construction of Level 2 charging stations and DC fast charging stations at the three primary Huntsville Utilities operating facilities (\$2,472,720). Other required costs to facilitate operations and maintenance are also included (\$929,064). Cost assumptions are based on online and physical research of historical costs and current pricing.

#### Measure 2:

Below is the high-level summary of the work that will begin and be completed within each year for Measure 2:

First Year: Preliminary design will be conducted to interconnect the Battery Energy Storage Systems (BESS) and microgrids, a consulting engineer will be contracted to assist with planning and preparation, site preparation will commence (prepare final site plan for all three (3) sites, install conduits, and install concrete pads), construction firm will be contracted to do the labor and installation, and fiber to the Gurley site will be designed.

Second Year: Installation of the BESS (3.9 MW / 15.7 MWh at a cost of \$7,011,890) at 5760 Stringfield Rd will begin and be completed within the second year. Fiber will be installed to 387 Gurley Pike (12 miles of fiber at \$40,000 a mile = \$480,000).

Third Year: Installation of the BESS (3.9 MW / 15.7 MWh at a cost of \$7,345,789) at 387 Gurley Pike will commence and be completed within the third year.

Fourth Year: Installation of the BESS at 1100 Pulaski Pike will commence and be completed within the fourth year.

#### i. Personnel

#### Measure 1:

Huntsville Utilities currently employs eight fleet technicians that work strictly on internal combustion, gasoline powered vehicles. The average annual base pay for those technicians is \$65,269. As part of this measure, funds will be utilized to attract and retain a fleet technician that has experience working with electric vehicles who can assist with the repair and maintenance workload for the EVs as well as facilitate EV related training for the other technicians. The availability of technicians with those skills will depend partly on market penetration of EV in the greater Huntsville, Alabama, area and if the pay offered by the utility is competitive with local auto dealerships, garages, and body shops. Partnerships with local technical schools and community colleges will also be explored to expand the pool of qualified candidates. The estimated starting salary for Year One for this fleet technician is \$80,000, and a 3% adjustment is made for subsequent years to accommodate performance and cost of living increases. This salary is subject to market adjustments suggested by the Human Resources Department of the organization to

maintain internal equity and/or remain competitive with local wages. The total projected salary over the first five years is projected at \$424,731.

**Measure 2:**

Huntsville has been growing at a rapid pace and is now the largest city in the State of Alabama. Huntsville Utilities has the staffing and expertise to serve not only Huntsville, but the surrounding county and the cities contained within. We do not anticipate hiring any new personnel for the successful implementation of Measure 2, but we will contract the services of an engineering consultant, especially for the parts of Measure 2 we have yet to embark on as a utility, namely the BESS. To date, HU has only been directly involved with one BESS, and it was 11.4 kWh (14000 Watt hours), whereas the smallest battery we wish to seek funding for is 7.8 MWH (7,800,000 Watt hours).

The following personnel are those that either will or are likely to spend some portion of their work hours towards this project:

Stacy Cantrell – VP of Engineering

Anyama Tettey – Engineer II

Roli Grigg – Engineer II

Tanner Monroe – Engineer I

Matt West – Electric Engineering Services Manager

Albert Bordelon – Fiber Engineering Services Manager

Teron Prince – Senior Fiber Designer

Jeff Stubblefield – Fiber Operations Manager

Chris Taylor – Electric Underground Line Manager

Dion Duffey – Substation Manager

Jaaron Honea – Electric Overhead Line Manager

Corey Dean – SCADA Systems Supervisor

Randy Shuman – SCADA Technician II

Barry Posey – System Operations Manager

Melanie McClure – Purchasing Supervisor

John Lones – Contract Administrator.

*ii. Fringe Benefits*

**Measure 1:**

Huntsville Utilities offers a competitive benefits package for its employees that would apply to the EV fleet technician mentioned above. This includes employee and family health insurance coverage, accrued leave, life insurance, contributions to the Alabama state retirement system, and retiree healthcare. Most of the benefit costs are shared among the organization and employee. The estimated value of these benefits is currently estimated as 62% of the employee's base pay. The annual cost that would be covered by this grant funding would range between \$49,600 to \$55,825 per year and is based on the starting projected salary of \$80,000. The total projected fringe benefits paid over the first five years is projected at \$263,333.

**Measure 2:**

Fringe benefits for Measure 2 for Huntsville Utilities employees are calculated at 62% of the base salary. The "TOTAL FRINGE BENEFITS" in the Optional Budget Worksheet is a result of multiplying the 62% by the amount we plan to spend on HU salaries for year one (1) through year four (4).

iii. Travel

**Measure 1 & 2:**

No travel costs are included in the budget for each of these measures, as travel is not required for the performance and completion of this project.

iv. Equipment

**Measure 1:**

Capital purchases over \$5,000 for this measure are limited to the purchase of electric vehicles and a mobile generator. Huntsville Utilities deploys a wide variety of equipment from many different manufacturers for utility operations. For many of the standard-size pickups and smaller vehicles there is a familiarity with Ford products, and that is the basis for this budget.

Online pricing estimates were obtained for a 2023 Ford F-150 Lightning Pro electric pickup buildout that is commensurate with gasoline vehicles currently operated by the utility. Greenhouse gas emission comparisons used through the workplan are based on comparison of the electric and gas-powered trucks. The cost estimate per EV truck was \$53,135. For each truck placed into utility service a package of accessories that includes a brush guard, winch, strobe lighting, toolboxes, bedliner and other smaller items needs to be added to the base cost. Estimates based on prior prices and invoicing is \$8,000 per truck. Twelve trucks are being included in this budget and the purchases will be spread evenly over three years. Year One costs for the purchase of four trucks is \$244,540. Year Two truck costs include an inflationary adjustment of 3% and are \$251,876. Year Three costs include an inflationary adjustment of 3% over the prior year and are \$259,432. Overall, \$755,849 is projected to be spent on the purchase of trucks. The trucks will be allocated to the Engineering and Operations departments based on the discretion of management but will deploy to support the entire service area.

Online pricing estimates were obtained for a 2023 Mustang Mach E Select electric passenger vehicle. Although no vehicles of this nature are currently deployed in the Huntsville Utilities fleet, there are Ford Explorers in service and were used as the basis for comparison related to greenhouse gas emissions. The estimate per electric vehicle was \$39,375. Since these two vehicles will be deployed to the Public Relations section of the utility for marketing purposes that promote the environmental benefits of EVs, some additional items such as a vehicle wrap and a lighting package need to be added to the base cost. Estimates based on prior prices and invoicing is \$5,000 per vehicle. Two of the Mach E vehicles are being included in this budget with one being purchased in Year One and the second being purchased in Year Two. Year One costs for the purchase of the EV is \$44,375. Year Two costs include an inflationary adjustment of 3% and are \$45,706. The total cost estimate for the purchase of the two EVs is \$90,081. The vehicles are planned to assist with utility messaging and high visibility activities and will deploy to support the entire service area.

A mobile diesel-powered generator that can be deployed by the Fleet group to assist with charging vehicles that become inoperable in the field is being included in this budget. Depending on the model and voltage selected, the generator will be able to produce between 84 to 100 kilowatts of power. The cost estimate of \$60,000 in Year One is based on prior pricing for similar units purchased by the utility.

**Measure 2:**

With the exception of the batteries, most of the equipment that this measure plans to use is an item Huntsville Utilities already has in stock or an item the company has used before. Huntsville Utilities' item numbers and purchased prices are given below.

Step up transformer – 408845 – 2500 kVA Transformer, Pad-mounted, 12 kV primary, 480Y/277 secondary. \$75,000.

Switchgear – 307022 – Switchgear, Pad-mounted, two (2) – 600 A source ways and two (2) – 600 Amp protected ways. \$54,955.

Recloser – 307105 – Recloser, 1000 Amp, Viper. \$26,803.

Communications cabinet – 79" x 28" x 30" – climate controlled (\$3,300) with mini automation controller (\$1,200), satellite clock (\$1,700), radio, cables, connectors, etc. \$10,000.

v. Supplies

**Measure 1:**

Supplies included in this budget are completely related to operations, repair and maintenance of the electric vehicles and are largely best guess estimates at this point. Because the fleet technicians are primarily familiar with gasoline and diesel-powered vehicles, additional research will be required to fully understand what additional electric specific tools are needed. A placeholder of \$50,000 is included in Year One because it is assumed that significant purchases will be required, but Year Two through Year Five are estimated at \$5,000 per year to cover replacement tools. The five-year cost of tools is projected at \$70,000. Based on discussion with Ford personnel and online research, it is assumed that the current vehicle diagnostic software will also work on electric vehicles but may require upgrades or enhancements. To cover this cost, \$20,000 is added in Year One and annual software maintenance cost of \$1,800 for the diagnostic software is included in each year of the budget. The five-year software costs are estimated at \$29,000.

**Measure 2:**

There are no other necessary supplies anticipated for this measure outside of what has been budgeted under the "Equipment" category. Therefore, there are not costs to list or detail under this category for Measure 2.

vi. Contractual

**Measure 1:**

The largest costs associated with this measure will be construction of the Level 2 and DC fast charging facilities at Huntsville Utilities' three primary locations: the Chase Electric Operations Center, the Triana Water and Gas Operation Center, and the Downtown Administrative Building. A similar Level 2 dual EV charging facility was contracted out for construction by Seven States Power Corporation and Huntsville Utilities at the US Space and Rocket Center in Huntsville, Alabama, in 2020. The structure includes solar panels, battery storage and two chargers. The project took approximately three months from contract execution to final completion. The same approach is being considered here. The estimated cost for Year One, which would include the construction at the Chase Operations facility, would be \$300,000. Year Two would include the construction at the Triana Operations facility and includes a 3% inflationary adjustment from the prior year with the projected cost at \$309,000. Year Three would include the construction at the Downtown Administrative facility, includes a 3% inflationary adjustment to prior year costs, and is projected at \$318,270. Total budgeted costs for all three Level 2 chargers are \$927,270.

The DC fast chargers will be contracted separately. Given the urgency of utility operations, fast chargers are necessary to lower response times in emergency situations. The cost is more significant and is tied to additional construction related to grid connection. Each fast charger will need a pad-mount transformer, the size of which may depend on the number of charging ports. The cost in Year One for the fast-charging structure at the Chase Operations Center is estimated at \$500,000. Year Two would be focused on the Triana Operations facility and includes a 3% inflationary adjustment for a cost of \$515,000. Year Three

will be the Downtown Administrative facility, will include a 3% inflationary adjustment from prior year costs, and is estimated at \$530,450. Total budgeted costs for all three DC fast charging structures are \$1,545,450.

**Measure 2:**

HU plans to have a contract for an engineering consultant to help us plan every detail of the work to be completed. There will also be a construction contract to get the sites ready for the batteries. A separate contract will be required to have a crane set the batteries into place. Lastly, there will be a contract with the battery manufacturers.

*vii. Other*

**Measure 1:**

Ford offers onsite training for Fleet technicians that will be required as workforce development to get the current staff acclimated to working on electric vehicles and covers the latest technological advances and vehicle upgrades. The classes are two days in length and can accommodate up to 30 technicians per session. The cost is \$12,000 per session and it would be offered twice in one calendar year. The budget includes \$24,000 in Year One, Year Three and Year Five. Supplemental training is included in Year Two and Year Four that would be offered to new employees or areas of interest or vehicle specific training. Primarily this training would be obtained via webinars or off-site conferences or seminars.

**Measure 2:**

Since HU has never owned or operated a BESS, we anticipate renting test equipment to ensure the BESS, charging, discharging, switching, and communications all work correctly. We expect for the test equipment to be able to be rented for approximately \$10,000. We have this amount included for year two, year three, and year four, which are the years we plan to install a BESS.

*viii. Indirect Charges*

**Measure 2:**

Huntsville Utilities does not have a negotiated Indirect Charge rate and will therefore utilize the standard 10% for any indirect costs associated with Measure 2. Due to the nature of Measure 1 and there not being any other work of a similar nature underway at the company at this time, we do not expect any indirect costs to be incurred for this measure.

**b. Expenditure of Awarded Funds**

**Measure 1:**

Any grant funds awarded to Huntsville Utilities for this measure will be received by the Finance Department under the direction of the company Controller and the Chief Financial Officer (CFO). Grant funds can be tracked separately through the creation of a general ledger account or planning project to ensure that funds are not comingled with those designated for other tasks associated with daily operations. The utility prepares an annual budget and five-year capital plan that is published on the company website, [www.hsvutil.org](http://www.hsvutil.org), that provides guidance for operational activities. The budget policy is also available on the website ([FM 11 BudgetPolicy.pdf \(hsvutil.org\)](#)), and it indicates that the CFO will implement processes for budget monitoring. The Engineering department would appoint management to oversee the construction of the charging stations, and the Purchasing department would coordinate vehicle purchases, but both would establish purchase orders that must go through proper approvals based on dollar amounts before funds are disbursed.

**Measure 2:**

The only party responsible for implementing Measure 2 is Huntsville Utilities. We are not members of a coalition, and we will be handling the contractors ourselves. As stated above for Measure 1, all grant funds will be received by the Finance Department under the direction of the company Controller and Chief Financial Officer (CFO). These funds can be tracked separately through the creation of a general ledger account or planning project to ensure that there is no comingling of grant funds with other operating funds. The CFO will be in charge of implementing the budget monitoring for all grant funds, and the Engineering Department would appoint management to oversee the construction and implementation of Measure 2. All purchasing and procurement will be overseen by the Utility's Purchasing Department, which will comply with all State of Alabama and Federal procurement and bid requirements.

The capital expenditures and milestones HU is planning to make are outlined below:

First Year: Preliminary design to interconnect the BESS and microgrids, get a consulting engineer under contract, Site preparation (prepare final site plan for all three (3) sites, install conduits and concrete pads), get a construction firm under contract, Design Fiber to the Gurley site.

Second Year: Install BESS (3.9 MW / 15.7 MWh at a cost of \$7,011,890) at 5760 Stringfield Rd, install fiber to 387 Gurley Pike (12 miles of fiber at \$40,000 a mile = \$480,000).

Third Year: Install BESS (3.9 MW / 15.7 MWh at a cost of \$7,345,789) at 387 Gurley Pike.

Fourth Year: Install BESS at 1100 Pulaski Pike.

**c. Reasonableness of Costs****Measure 1:**

After conducting research on all the materials and equipment needed to complete this project, as well as previous experience with installation of electric vehicle charging stations, we are confident that all costs associated with Measure 1 in this application are reasonable.

In 2020 we were partners with the US Space and Rocket Center and Seven States in installing a solar canopy with 29.5 kW-DC of solar panels. There was an 11.4 kWh battery for energy storage, and there were also two (2) dual port EV chargers. We reached back out to the solar installer for confirmation of the pricing we submitted for this grant as well. We also reached out to a local Ford dealer for pricing on the Ford Lightnings that are a major component of Measure 1.

**Measure 2:**

After extensive research, Huntsville Utilities believes the costs for Measure 2 are very reasonable. The Electric Power Board (EPB) in Chattanooga, TN, has installed several Battery Energy Storage Systems (BESS) over the last few years. We have met with them, toured one (1) of their installations, and they shared their planning and budgeting spreadsheet with us. The spreadsheet seems very inclusive of the work that needs to be done and also helps plan out what year the work needs to be completed. HU feels like the costs are reasonable, and at the same time, we know costs are likely to go up. Since the batteries are the single most expensive component and such a large part of the pricing, we added 5% for each year after 2024 in anticipation of the prices rising.