Submitted By: Athens-Clarke County Resident
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Project Classification: Environmental Protection
Project Focus: Basic Facilities & Infrastructure
Project Type: Alternative Energy Systems

Previously Submitted and Rejected: No
Continuation Project: Yes - SPLOST 2011 - Energy Sustainability Project.

Project Total Cost: $ 18,309,000

Total Operating Cost: $ (1,300,000)

Project Description: The 100% Renewable Energy SPLOST proposal is intended as a source of gap funding for a variety of projects that would serve to move Athens-Clarke County toward 100% renewable energy usage. The total funding request for the proposal is $17,000,000. This proposal is not intended to be a substitute for any other SPLOST 2020 proposals that would meet a similar goal. Since there are a variety of projects that will require funding once a more clearly defined framework for the shift to 100% renewable energy in Athens takes shape, we will provide some examples of suitable projects below.

The types of suitable projects for this proposal primarily fall under three main categories: providing funds to allow new ACC buildings funded through SPLOST or other means to achieve net zero energy; providing funds to increase the energy efficiency of existing ACC facilities; and providing funds to electrify the ACC vehicle fleet.

Current SPLOST proposals include several requests for new buildings. The competition for funding within SPLOST often leads to projects being pared down to allow funding for other uses. The funding provided by this proposal may be used to ensure that any additional design and construction costs required to achieve a standard of net zero energy on a building project could be met outside of the original project funding.

Many routine maintenance requirements for existing ACC facilities could provide opportunities to increase the energy efficiency of the facility. For example, adding additional insulation to roof decks or installing solar arrays when a building has its roofing replaced, or purchasing a more expensive but more efficient HVAC system when system replacement is warranted. Other upgrades to lighting and control systems, fenestration, or other energy systems in existing facilities, where the energy savings would be significant, could also be considered.

As renewables and carbon-free sources make up an increasing share of the electric power supply for Athens, transitioning ACC to an all-electric vehicle fleet will be a necessary but costly part of getting to 100% renewable energy. This proposal could fund some of that transition. With electric vehicle purchases through SPLOST, department operating costs will fall since the electricity required will be cheaper than gas or diesel. This will allow departments to concentrate their spending on improving or expanding services at the same time that their carbon emissions drop.

Project Mission Statement/Goals & Objectives: The 100% Renewable Energy SPLOST proposes to set aside 10% of SPLOST funds to make on-site clean energy production and retrofits (to improve efficiency) possible throughout the ACC government. These funds will be available to entities within ACC to include plans for renewable energy in new construction, renovation, and infrastructure projects. As the unified government invests in projects to create a more just, equitable, and efficient community, this SPLOST will provide critical gap funding to improve the sustainability of all projects and begin developing the infrastructure for a community-wide shift to renewable energy. As various departments within the ACC Unified Government develop plans for upcoming projects, they will be able to access this separate source of funding to include measures for independent energy production such as rooftop solar, methane capture, and EV infrastructure, to help our community reach the goal of producing 100% renewable energy.

The goal of this SPLOST Proposal is to give the ACC Unified Government a source of funding to achieve 100% Renewable Energy production and consumption.

Objective 1: Provide funding for new ACC government buildings to achieve a standard of net zero energy use.

Objective 2: Provide funding to retrofit ACC government buildings for the lowest energy consumption and highest percentage of on-site energy production possible.

Objective 3: Provide funding for the additional costs incurred by the unified government to purchase electric vehicles to replace ACC fleet vehicles run on fossil fuels.

Projected Useful Life of Project: The projected useful life of the projects funded through this proposal is varied, due to the different natures of the projects themselves. Insulation and other passive improvements to building efficiency would last the useful life of the building, fifty or more years. Other building systems would last twenty or more years. Solar panels would last twenty or more years; electric vehicles or buses would last fifteen to twenty years.

To meet the Project Goals & Objectives, when should this project be completed? This 100% Renewable Energy SPLOST will be completed when the ACC Unified Government achieves 100% renewable energy production and consumption.

The Leadership in Energy and Environmental Design (LEED) Green Building System compliance: Even the most energy efficient buildings consume electricity from an energy infrastructure that is detrimental to the environment. LEED certification uses a scoring or points system that encourages and recognizes increasing levels of on-site renewable energy self-supply in order to reduce environmental and economic impacts associated with fossil fuel energy use. By utilizing this renewable energy SPLOST set-aside fund for onsite renewable energy projects, local construction and retrofits will be better able to score LEED points and achieve LEED status. They will also provide valuable local clean energy as opposed to offsetting energy use with renewable energy credits purchased from clean energy generators that are far away from Athens.

How will this project help meet the Public Safety, Basic Facilities/Infrastructure, and/or Quality of Life needs in Athens-Clarke County? The 100% Renewable Energy SPLOST will promote both economic and energy resiliency throughout the entire ACC community. By funding onsite energy production for such locations as libraries, public buildings, and transportation we would be hedging against future inevitable increase in energy costs for the community.

The long-term monies saved by continued clean energy production would contribute to increased flexibility in the face of energy outages or shortages caused by storms or extreme weather conditions. Community centers could continue to function normally even during major power outages, allowing for seamless services for the entire community. It would directly benefit populations in the community that may have temporary or permanent housing insecurity by reducing the additional stress of disrupted services or normal work and routine for citizens and county employees. An energy independent transportation system would allow for, among other things, fare-free rides to further support the longevity and health of the public transportation system.

When ACC governance moves public energy use closer to 100% renewable self-supply, it allows our municipality to maintain a stable and controlled growth process making Athens a stronger and more vibrant community.

How is this Project recommended/included in any approved ACCGOV Land Use Plan, Master Plan, Study, Service Delivery Plan, Envision Athens, etc.? Not Applicable

Triple Bottom Line Impacts

Positive Benefits for the Prosperity of Athens-Clarke County: This project will have the following positive benefits:

(1) Reducing the money spent by the ACC government on energy. This money goes almost exclusively outside ACC, so reducing these costs will result in more money spent locally. Research indicates that a dollar spent in ACC should have a multiplier effect of approximately $2.50 added to the Clarke County economy.

(2) Local jobs will be created, including solar power installers and skilled craftspeople on energy efficiency retrofits and zero-net energy construction. These jobs are expected to have their own multiplier effect, helping to create additional jobs in the county. There are already existing programs in the Athens Technical College curriculum to train workers for these jobs. By evolving a renewable energy economy, we will be able to retain these skilled workers within our community.

(3) If Athens gains a reputation as an environmentally conscious community, we will be able to attract new employers who seek to make socially ethical investments in their new production facilities.

(4) Projects that utilize this funding to decrease fossil-fuel consumption will contribute to improved health outcomes for Athens' residents, thereby reducing the amount of money spent by residents and public services on treating chronic respiratory illnesses, which are exacerbated by air pollution.

Detrimental Impacts to the Prosperity of Athens-Clarke County: There are no detrimental impacts to the prosperity of Athens-Clarke County expected from this SPLOST proposal.

Positive Benefits for our Citizens and Visitors: This project would have the following positive benefits for citizens and visitors:

(1) Finance and create renewable energy business activity, especially with respect to assessment, installation, distribution & maintenance. This would increase job opportunities for citizens.

(2) Support existing renewable businesses in the area and attract new ones, which would diversify the business base of the county.

(3) Fund energy supply diversification, thereby increasing energy independence and reducing our reliance on imported fuel.

(5) Help improve power supply reliability thereby reducing financial and insurance risks associated with interrupted supply. This is an important consideration in light of increasingly unpredictable and extreme weather events attendant with climate change, which could negatively impact local businesses and result in lost business revenue for the county.

(6) Incentivize local organizations, businesses and communities to invest in local renewable energy businesses and enterprises, thereby stimulating the local economy.

(7) Contribute to a greater sense of civic pride and well-being for citizens, who will gain a sense of agency with the knowledge that our community is working towards meeting climate change challenges.

(8) Establish Athens as a flagship city in the region for renewable energy, thereby adding to its list of attractions for visitors.

(9) Reduce the carbon footprint of both citizens and visitors.

(10) Liberate funds that would be saved by renewable energy production to spend in critical government projects.

These positive impacts will be enhanced if our citizens at every economic level see evidence that the ACC government is looking out for their well-being.

Detrimental Impacts for our Citizens and Visitors: No detrimental impacts are expected from this SPLOST proposal.

Environmental Benefits, including but not limited to Positive impacts on existing Infrastructure/Systems: The 100% Renewable Energy SPLOST would benefit Athens-Clarke County in a number of impactful and long-lasting ways.

The proposal will enable Athens-Clarke County to meet a global mandate to convert to 100% renewable energy, slashing pollution to safer levels for the environment and for public health.

Additionally, for the three classes of project that this SPLOST would fund, significant and positive environmental impacts are anticipated. Firstly, providing funds to increase the energy efficiency of existing ACC facilities would save the county and residents money. In a separate proposal, the Sustainability Office has a renewable energy program that could save ACC approximately $365,000 per year in operating costs. By providing completion funding for projects throughout ACC, the 100% Renewable Energy SPLOST could extend comparable economic benefits county-wide. Secondly, this SPLOST would provide additional funding to allow new ACC buildings to achieve net zero energy. This sets a standard for energy-efficient government operations that would reduce our dependence on fossil fuels. Finally, this SPLOST could be used to electrify the ACC vehicle fleet, which would significantly contribute to the reduction of local air pollution and greenhouse gas generation, thereby making the county a healthier place to live. Additionally, electrifying the fleet would reduce the operating costs of all departments that purchase fuel for vehicles.

This proposal will reduce the county's dependence on nuclear energy. Since nuclear waste can never be fully remediated, moving away from nuclear energy over time must be included in the long-term vision of a safer, cleaner and non-toxic environment.

The foresight and timely action of transitioning to 100% renewable energy will help mitigate current and future environmental impacts that occur due to our dependence of fossil fuels, instead, generating a positive environmental future. The preservation of an unpolluted and fecund natural environment is our moral obligation and a birthright for future generations.

Detrimental Impacts for the Environment, including but not limited to Negative impacts on existing Infrastructure/Systems: No detrimental impacts are anticipated from the 100% Renewable Energy SPLOST proposal, because it creates a framework for the entire community to expand population and economic growth without contributing to environmental degradation due to climate change. However, there are

significant detrimental impacts associated with continuing our reliance on fossil fuels.

Grave hidden costs are associated with fossil fuel dependence that go far beyond market prices and are a threat to the health and preservation of life in all communities globally, including ours. In the absence of leadership on this issue at the state and federal level, it is incumbent upon municipalities and local governments to take timely action. This SPLOST proposal provides an opportunity to do just that.

Positive/Negative Impacts on ACCGOV Departments, Agencies, or other Organizations, if not covered in one of the above questions: This project will simplify the budgeting process of ACC government departments, by providing additional funding to allow them to upgrade purchases and construction processes to the highest and most sustainable option. Additionally, it will save departments money, allowing them to have increased flexibility with their budgets, expand and enhance their services, and provide a better quality of life for the residents of Athens.

Project Costs

Detailed project capital budget costs (to be funded from SPLOST 2020 only):

Project Costs (round to thousand)		Amount
1. Land Acquisition / ROW / Easement:	$	-
2. Design Fees: (Min.12% of New Const.; 14% of reno,; 16% for LEED proj.)	$	500,000
3. Miscellaneous Fees: (Min. Minimum of 3% of Construction Costs – used for permitting, etc. Utilize minimum of 10% if land acquisition if necessary.	$	150,000
4. Fixtures, Furniture, and Equipment (for a facility): A detailed estimate is preferred – but dependent upon the specific project, utilize at a minimum $15 to $20 per square foot.	$	-
5. Construction:	$	10,000,000
6. Construction Contingency: (10% of the Construction line item)	$	1,000,000
7. Acquisition of Capital Equipment:	$	3,700,000
8. Testing:	$	100,000
9. Project Management: (4% of the total budget line items above)	$	618,000
10. Project Contingency: (10% of the total budget line items above)	$	1,607,000
11. Public Art: Calculated at 1% of the Construction line item.	$	11,000
12. Other 1:	$	
13. Other 2:	$	-
Project Subtotal:	$	17,775,000
14. Program Management (3% of Project Subtotal):	$	534,000
SPLOST 2020 Project Total:	**$**	**18,309,000**

Operating Cost

Total Annual Net Operating Costs when Project is complete:

Only identify additional or net operating costs to be paid by ACCGOV. Identify the additional or net costs needed above ACCGOV's current operating budget to operate the requested project and any additional project related revenues that would be generated. Provide budget costs for each identified category below.

Operating Costs (round to thousand)	Estimated Impact for Annual Operating Expenditures
TOTAL PROJECTED REVENUES FROM PROJECT	-
PROJECTED EXPENDITURES	
1. Personnel Costs: from Appendix A	-
2. Annual Utilities:	
• Gas:	-
• Electrical:	(1,300,000)
• Water:	-
• Sewer:	-
• Phone:	-
• Solid Waste Collection:	-
• Other:	
3. Operating Supplies:	-
4. Equipment Maintenance:	-
5. Facility Maintenance:	-
6. Fuel:	-
7. Other:	-
8. Other:	-
9. Other:	-
TOTAL EXPENDITURES	(1,300,000)
NET OPERATING COSTS OF PROJECT:	**$ (1,300,000)**

Project Financing

Is the proposed Project to receive funding from source(s) other than SPLOST 2020? No

100% Renewable Energy SPLOST Budgetary Impacts:

The budgetary impacts of the 100% Renewable Energy SPLOST would come as avoided operational cost from reduced expenditures on energy and fuel. The savings expected would depend on the specifics of the projects funded, but rates of return between 5% and 15% should be achievable. This would mean a savings to Athens-Clarke County of $1,000,000 per year if the full $17,000,000 is approved and utilized.

100% Renewable Energy SPLOST

The following is a more detailed explanation of the environmental benefits of providing a pathway to increase renewable energy production in Athens-Clarke County, and decreasing our reliance on other forms of energy.

This SPLOST project would benefit Athens-Clarke County in a number of impactful and long-lasting ways:

1. Enable Athens-Clarke County meet a global mandate to convert to 100% renewable energy, slashing its pollution levels to safer levels for the environment and for public health

The true costs of fossil fuel dependence go far beyond market prices and are a threat to the health and preservation of life in all communities globally, including ours. Grave hidden costs are included in the following:

(i) extraction processes that generate air and water pollution that harm local communities, contribute to land degradation and accelerate ecosystem disruption; to possible accidents and spills during transportation;

(ii) fuel combustion that emits global warming gases such as carbon dioxide, carbon monoxide, nitrogen oxides and sulfur dioxide, which increase the formation of acid rain that is harmful to aquatic environments (including creeks, rivers and lakes) and catalyzes the leaching of aluminium from soil clay particles which then flow into lakes and streams; and contributes to air pollution that advance chronic respiratory illnesses such as asthma; cancer, and certain neurological disorders;

(iii) hazardous wasteproduction that is detrimental to the environment and to public health. These include offshore oil spillages and other industrial biohazards that lead to the death of coastal and river wildlife.

2. *Reduce pressure to expand coal mining activities in the Appalachian mountians, thereby helping preserve local topological structures and their dependent ecosystems; while reducing population exposure to hazardous wastes & topological degradation*

A move away from fossil fuel dependence would reduce the pressure to expand the coal mining industry in the Applachian Mountains, as more than 500 mountaintop removal sites for surface mining currently exist throughout the Appalachian region, detrimentally impacting nearly 1.4 million acres of land. For example, surface mining displaces excess rock and soil, which are then typically dumped into adjacent valleys and streams, altering their ecosystems and diverting the natural flow of streams. This leads to long-term environmental degradation as coal sites can pollute local drinking water sources with toxic chemicals like arsenic, hydrogen sulfide, iron, manganese, lead and selenium. Coal removal sites are also left with poor soil that typically

only supports exotic grasses, and predispose the environment to increased flash-floods, mudslide and landslides. Thus, this form of fossil fuel is corrosive to both natural and human-made infrastructures.

3. *Reduce the county's dependence on nuclear energy and apply selective market pressure on utilities providers to move towards becoming renewable energy providers, and promote the phasing out of nuclear power*

Nuclear waste can remain radioactive for between decades and thousands of years, and notwithstanding sophisticated radioactive waste management systems currently in place (including interim storage facilities and deep geological repositories), accidents can and do happen that threaten the long-term health and survival of many species of animal, plants and humans. Therefore, a move away from the utilization of nuclear energy over time must be included in the long-term vision of a safer, cleaner and non-toxic environment.

The foresight and timely action of transitioning to renewable energy would help mitigate such current and future environmental impacts that occur due to our dependence of fossil fuels, instead, generating a positive environmental future. The preservation of an unpolluted and fecund natural environment is our moral obligation and a birthright for future generations.