

**FROM COMMITMENT TO ACTION:  
LESSONS LEARNED FROM LOCAL GOVERNMENT SUSTAINABILITY EFFORTS**

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**Executive Summary**

Elected officials are making public commitments to local government sustainability efforts. The next step is for local government employees to act on these commitments in ways that serve the public interest, make good use of limited financial resources, and achieve environmental goals. The purpose of this research is to learn strategies local government practitioners use to implement successful sustainability efforts in government operations. The research charts six common barriers local government officials in North Carolina face during sustainability efforts and matches the barriers with strategies and incentives to address them. Local government practitioners tasked with sustainability can use this research as a starting point for building or improving sustainability efforts.

## Introduction

Elected officials are making public commitments to local government sustainability efforts. The next step is for government employees to act on these commitments in ways that serve the public interest and make good use of limited financial resources. The purpose of this research is to learn what local government practitioners are doing to implement successful sustainability efforts in operations. Examples of internal government sustainability efforts are adding hybrid cars to fleets, adopting greenhouse gas reduction plans, and applying green building techniques. The research investigates incentives local government employees have to pursue sustainable practices, barriers to implementation, and strategies for success.

The literature identifies two factors driving interest in local government internal sustainability efforts. First, awareness of climate change is rising and the federal government is hesitant to act. Local governments step in to fill the void. Second, businesses save money by rethinking operations in terms of sustainability.<sup>1</sup> Local governments now look for similar savings.<sup>2</sup> In a survey of government managers in the United Kingdom, managers expressed frustration at barriers, specifically lack of funding and motivation.<sup>3</sup> The authors cited a need for more research on barriers and success strategies. Several reports cite the value of local government action on big-picture environmental issues.<sup>4</sup> Local leaders have more immediate access to tools and the ability to take action more quickly than national governments.<sup>5</sup> Local leaders can also explore creative finance tools to find money in a highly competitive environment.<sup>6</sup>

## Methodology

The research synthesizes what worked for local government officials leading sustainability efforts *in their own words* instead of through quantitative analysis.<sup>7</sup> The social nature of this design is useful in exploratory research because participants themselves set the tone and arrive at the analytical categories together. The researcher does not impose predetermined categories but instead relies on the themes that emerge during conversation. The Story Café design combines an element of Story Circles with the more structured format of World Café. In Story Circles, participants are invited to tell a story. The ground rules ask that participants not interrupt each other. During World Café, participants discuss particular questions. The goal is to evoke the collective intelligence of the group as participants interact.<sup>8</sup>

The Story Café design borrows the “tell me a story” element from Story Circles and uses it as a World Café conversation prompt. Four tables each have one question. A facilitator at each table takes notes during the rounds. Participants move among tables in an order designed by the researcher. After a round, each group records the themes of its conversation. Participants then change tables and talk with a different group, using the previous group’s list and the table’s conversation prompt as starting points. At the end of the rounds, the researcher guides the group in a brief discussion of key insights that emerged during the conversations.

Story Café Questions
<ul style="list-style-type: none"><li>• Tell a story about your local government’s internal sustainability efforts.</li><li>• What forces or incentives are and/or were promoting the effort?</li><li>• What forces and/or barriers present or presented challenges to the effort?</li><li>• What were/are your strategies for achieving success in the sustainability effort?</li></ul>

The research has some limitations. First, the research group is a convenience sample. Participants were identified through published reports on government sustainability in North Carolina and informational interviews. The researcher picked participants to secure a broad representation of project types, geographic areas, job titles, and sizes of governments. Second, smaller governments are under-represented. The researcher contacted several potential participants from smaller governments, but most were unable to attend. Third, participants needed to travel to the School of Government on a specific date and time at their own expense to take part in the conversation. Some potential participants were unable to attend because of this requirement.

## Results

The research design provided space for local government officials leading sustainability efforts to share stories with peers. Participants could explore the topic through dynamic conversation. The researcher

reviewed the conversations and identified the common barriers, incentives and strategies. Barriers are identified as challenges during implementation. Strategies are identified as stories about the way practitioners identified and adjusted to those challenges. Incentives are identified as the internal and external motivations mentioned as reasons to pursue sustainability efforts.

### Common Barriers

One barrier is a **misunderstood or unfocused definition of sustainability**. The common definition of sustainability is meeting the needs of the present without compromising the ability of future generations to meet their own needs.<sup>9</sup> The participants sought a more coherent, specific definition – one that would let them say which projects fit a sustainability effort. The assistant budget director for the city of Durham said her office asked departments to submit sustainability initiatives and was overwhelmed by the response. Departments classified all sorts of efforts as sustainable, and the budget office did not have criteria to separate the good from the bad. She said efforts needed focus to be meaningful to elected officials. The engineer from Durham County said the definition of sustainability was important. He said some departments define sustainability as recycling, and that’s it. The sustainability and facilities management superintendent in Chapel Hill expressed another challenge: to define sustainability in such a way that not everyone on the town staff reports to the sustainability manager. For the Chapel Hill facilities program, limiting the definition of sustainability to “widgets that are green,” such as green building technologies, provides better buy-in.

Common Barriers
<ul style="list-style-type: none"><li>• Misunderstood or unfocused definition of sustainability</li><li>• Lack of financial resources</li><li>• Scarce human or time resources</li><li>• Difficulty gathering data or establishing measurements</li><li>• Organizational structure</li><li>• Resistance to change</li></ul>

**Limited financial resources** are another barrier. Raleigh’s assistant city manager said he became excited about sustainability efforts during a conference, only to return home to reality and budget constraints. Financial resources are also a barrier when a cost-benefit analysis does not match public enthusiasm for a sustainability project. The general services director from Winston-Salem faced this disconnect when council wanted alternative fuel vehicles. His analysis showed that hybrids would not meet some fleet demands. He sought grants for alternative fuel vehicles where appropriate and reallocated funds as needed to meet council's request. The planners in Chapel Hill led a sustainability project that was modified after a feasibility study. The study showed using photovoltaic solar panels to power real-time information signs and safety lights at bus stops was too expensive. Solar panels large enough to power the signs and lights would cost \$6,000 to \$7,000 per stop with a long payback period. The town’s cost to construct an entire bus shelter was only \$5,000, and the cost to connect signs to the existing electrical grid was low because traditional power lines ran right over the bus shelters. The town investigated redesigning the signs to require less electricity and therefore smaller, less-expensive solar panels but was facing a deadline. The planners decided to install solar panels to power safety lights as a demonstration project at one bus stop and connect all the signs to the existing electrical grid. The results of the demonstration project will determine future investment in solar power at bus stops.

**Scarce human and time resources** also can be barriers. The environmental policy administrator from Mecklenburg County said she helps build programs through interdepartmental outreach and coordination, but many of the sustainability programs are still “small potatoes” because no staff members are specifically designated to implement them. The pace of change is also a challenge. The assistant city manager from Raleigh said you have to get staff comfortable with the changes so they do not think you are squandering resources. All this takes time, and time is in short supply.

Scarce human and time resource limitations dovetail with **difficulty gathering data or establishing measurements**. The transportation planner from Durham wondered whether city and county departments would commit human resources to tracking the data needed to measure progress on greenhouse gas reductions. The Durham County engineer cited another difficulty with measurement. He said Durham has gathered energy use data since the 1970s, but has not gathered data on usage per square foot by building

type. This means the county can look at one building’s energy use over time, but does not have a metric to compare across different buildings or building types.

**Organizational structure** can also be a barrier. Governments must decide whether to task sustainability to one employee or a department. If a position is created, the government must decide where to locate it. In Durham, the Greenhouse Gas Reduction Plan Committee and Environmental Affairs Board thought the position should be in the city or county manager’s office, which would give a sustainability manager instant authority. Concern remains about how effective the position will be operating from one department. The environmental policy administrator in Mecklenburg County is responsible for coordinating all the departments. She said she works with a committee of representatives from each department to encourage buy-in and provide credibility. For her, breaking down barriers between departments is a bigger challenge than where she sits or to whom she reports.

A barrier in all levels of the organization is **resistance to change**. The first time Durham County tried to buy hybrids, a commissioner voiced concerns based on a magazine article and urged caution. The Greensboro Coliseum director saw resistance when encouraging other government facility personnel to follow the Coliseum’s lead on performance energy contracts. Charlotte’s buildings maintenance superintendent met similar resistance. She said she would market a program and see change, but over time many employees reverted to old behavior.

### Common Incentives

A basic incentive for action is the **sense of a crisis**. North Carolina’s recent drought, growing awareness about climate change, and the rising price of fossil fuels are environmental wake up calls that participants said they felt compelled to answer.

This sense of crisis can bolster **political will to do the right thing**. The “right thing” is defined differently in each community but is often related to a sense of social justice. Council sets sustainability as a priority and tells the staff to “go do” because it will be good for the planet and the community. Elected boards will sometimes support sustainability even if it is more expensive than traditional methods.

Political will to do the right thing also lessens resistance to change. Charlotte’s buildings maintenance superintendent said employees tune in to the desires of elected officials, so their interest in conservation has a positive effect. The Durham County engineer said political will often trumps cost concerns. He told the governing board gas would need to cost \$5 per gallon before a hybrid vehicle would pay for itself. The urge to do the right thing led the county to invest in a hybrid anyway.

**Saving or making money** through sustainability is another incentive. Performance energy contracts and grants provide funding for efforts outside of the normal budget. The Greensboro Coliseum director used a performance energy contract to install new energy efficient heating and cooling equipment in the facility and decrease energy consumption. The projects will create \$4 million in energy savings over 12 years, which allows for the installation of \$3 million in capital equipment today. The director of utilities and engineering said he pitched Catawba County’s landfill gas reclamation project as an opportunity to make money. The economic argument was more powerful than the environmental argument. Private sector sustainability successes also influence local government. In Salisbury, the planning director said, the local government took notice when a major employer adopted a sustainability plan to save money.

**Personal motivation and commitment** also provides an incentive to act. Raleigh’s assistant city manager matched his personal commitment with a motivated utility superintendent who wanted to run his fleet on biodiesel. They paired up to sell the idea to decision makers and win a grant. In Mecklenburg County, the environmental policy administrator heard employees telling supervisors that they wanted an incentive to conserve. She used this sentiment to incorporate environmental goals into work plans with

Common Incentives
<ul style="list-style-type: none"><li>• Sense of a crisis</li><li>• Political will to do the right thing</li><li>• Saving or making money</li><li>• Personal motivation/commitment</li><li>• Leading by example</li><li>• Outside recognition programs or requirements</li></ul>

department directors and develop employee incentive programs to enhance volunteering for environmental efforts.

The Greensboro Coliseum director ties personal motivation to another incentive, **leading by example**. He said he encourages other city officials to use performance energy contracts for sustainable projects. In Durham, the county engineer said the school district’s success with energy savings urged the county board to look for savings in other county buildings. Also, projects that don’t pass a traditional cost-benefit analysis test can still gain support if they are highly visible. Chapel Hill’s sustainability and facilities management superintendent pointed to the bus stop demonstration project with solar panels. Elected officials and community members are supportive of the project even though it doesn’t have much “bang for the buck” in a traditional cost-benefit analysis sense. The local government is leading by example by adopting innovative technology.

The visibility of some projects relates to another incentive, **outside recognition programs and requirements**. Grassroots campaigns such as Cool Cities create peer pressure through healthy competition and lend credibility to efforts. Durham strives to earn certification for buildings from the U.S. Green Building Council’s program, LEED. Getting certification offers more impact than just “doing and showing” because LEED is an outside entity and familiar name that adds credibility to projects. The threat of federal penalties also encourages sustainability efforts. Salisbury’s planning director said failing to meet federal air quality standards drives many of the city’s efforts. The area could lose federal highway funds if it continues to miss targets.

### Common Strategies

A common strategy for success is to **attach monetary values to green projects**. The director of utilities and engineering from Catawba County explained the strategy in steps. First, get input from the manager and elected board. Second, design performance measures that reflect council priorities. Third, set goals accordingly. Finally, explain expected payback in dollars and environmental gains.

Grants and performance energy contracts are good ways to **find alternative funding sources**. Participants said grants are available from state, federal and private sources. If decision makers aren’t sold on the economics, alternative funding can persuade them to give it a try.

Common Strategies
<ul style="list-style-type: none"><li>• Attach monetary values to green projects</li><li>• Find alternative funding sources</li><li>• Measure and monitor</li><li>• Education and outreach</li><li>• Communicate, communicate, communicate</li><li>• Hire a full-time sustainability manager or contract with a consultant</li></ul>

**Measuring and monitoring** is a critical strategy. The assistant city manager of Raleigh said managers and elected officials often have ideas about what works based on anecdotes. The ideas have to be translated into local reality, and measurements are the best starting point. Creating a document that matches council goals and staff goals gives something for all stakeholders to agree on. From the document, set baselines, show the feasibility of projects, track progress, and document the savings. The environmental policy administrator from Mecklenburg County stressed the value of complementing long-term goals with short-term goals. The long-term goal sets the vision. The short-term goals allow you to chart performance and intermediate gains when the long-term goal seems far off.

The data from measuring and monitoring helps sustainability leaders **communicate, communicate, communicate**. Local practitioners should try to explain the sustainability effort to stakeholders in terms they understand and appreciate. If the audience thinks in money, push the cost savings. If they think it’s a moral responsibility, push the environmental savings. Pay attention to internal and external stakeholders up and down the line. In Catawba County, the director of utilities and engineering wanted to buy alternative vehicles for inspectors. He knew they would need a public meeting for approval because the extra money would have to come from raising the price of a permit. He involved external stakeholders early in the discussion and compromised to ease the approval. Chapel Hill’s sustainability and facilities management superintendent said another communication strategy is to think critically about the “so what”

of sustainability, especially when motivation for change is coming from the staff level. A sustainability project with a carefully constructed and deliberate communication plan is much more likely to succeed.

In Durham, the staff blended effective communication with **education and outreach**, another common strategy for success. The county engineer said he had support from commissioners to pay a little extra upfront to meet LEED requirements. He identified internal stakeholders, such as building end-users and maintenance staff, and reached out to them. His goal was to help them understand how to operate the sustainable features from day one. Tangible rewards also provide effective outreach. Two years ago, Charlotte completed its first green roof project on a city-owned building that houses Discovery Science Museums. Charlotte and Discovery Place received a lot of positive media coverage from the project. Repetition also works. Winston-Salem’s general services director suggests sending memos and getting face time with all stakeholders to keep reminding them that sustainability is important.

Finally, all these efforts take time and dedication. A common strategy for success is to **hire a full-time sustainability manager or consultant**. Durham’s greenhouse gas inventory and reduction plan took a year and a half to complete. The plan’s monitoring and measuring requirements prompted Durham city and county to create a shared sustainability manager position. The challenges of defining sustainability in a community, generating support, and following through may require full-time attention.

### Recommendations

Analysis leads to some general guidelines for approaching sustainability. The chart below synthesizes the common barriers participants identified with strategies that might be used to overcome the barriers. The chart also shows the incentives government employees can harness to improve their chances of success. Governments pursuing sustainability may see barriers similar to the ones participants identified. Local government employees tasked with sustainability can use this chart as a starting point for efforts.

Common Barriers	Successful Strategies	Helpful Incentives
<b>Misunderstood or unfocused definition of sustainability</b>	<ul style="list-style-type: none"> <li>● Hire a full-time sustainability manager or contract with a consultant</li> <li>● Measure and monitor</li> <li>● Communicate, communicate, communicate</li> </ul>	<ul style="list-style-type: none"> <li>○ Outside recognition programs or requirements</li> </ul>
<b>Lack of financial resources</b>	<ul style="list-style-type: none"> <li>● Find alternative funding sources</li> <li>● Attach monetary values to green projects</li> </ul>	<ul style="list-style-type: none"> <li>○ Political will to do the right thing</li> <li>○ Saving or making money</li> </ul>
<b>Scarce human or time resources</b>	<ul style="list-style-type: none"> <li>● Hire a full-time sustainability manager or contract with a consultant</li> <li>● Communicate, communicate, communicate</li> </ul>	<ul style="list-style-type: none"> <li>○ Personal motivation/commitment</li> </ul>
<b>Difficulty gathering data or establishing measurements</b>	<ul style="list-style-type: none"> <li>● Measure and monitor</li> <li>● Hire a full-time sustainability manager or contract with a consultant</li> <li>● Education and outreach</li> </ul>	<ul style="list-style-type: none"> <li>○ Outside recognition programs or requirements</li> </ul>
<b>Organizational structure</b>	<ul style="list-style-type: none"> <li>● Hire a full-time sustainability manager or contract with a consultant</li> <li>● Communicate, communicate, communicate</li> <li>● Education and outreach</li> </ul>	<ul style="list-style-type: none"> <li>○ Political will to do the right thing</li> <li>○ Personal motivation/commitment</li> </ul>
<b>Resistance to change</b>	<ul style="list-style-type: none"> <li>● Education and outreach</li> <li>● Communicate, communicate, communicate</li> </ul>	<ul style="list-style-type: none"> <li>○ Political will to do the right thing</li> <li>○ Leading by example</li> </ul>

Participants agreed that successful sustainability efforts are tailored to each community. Their advice is to develop strategies that fit each effort’s unique barriers and incentives. Lessons can be learned from looking to neighbors for best practices, but no single blueprint exists for local government sustainability.

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<sup>2</sup> Dietsche, T. (2000). Green building goes local. *Public Management* , 82 (10), A-13.

<sup>3</sup> Sparkes, A., & Peattie, K. (1998, Summer). The sustainable management challenge for local government: green revolution or business as usual? *Greener Management International* , 62.

<sup>4</sup> Kates, R. W., & Wilbanks, T. J. (2003). Making the global local: responding to climate change concerns from the ground. *Environment* , 45 (3), 12.

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<sup>5</sup> Holland, A. R. (2007). Achieving environmental sustainability in government operations: senior executives frankly discuss lessons learned and future challenges in adopting environmentally sustainable operations. *Public Management* , 34 (4), 21.

<sup>6</sup> Energy efficiency reduces local expenses and greenhouse gases. (2000). *Public Management* , 82 (8), 2.

Hatcher, K., & Dietsche, T. (2001). Manage energy uncertainty: use quick financing for energy efficiency projects. *Public Management* , 83 (4), 10.

<sup>7</sup> Stringer, E. T. (2007). *Action research*. Los Angeles: Sage Publications.

<sup>8</sup> Brown, J., Homer, K., & Isaacs, D. (2007). The World Cafe. In P. Holman, T. Devane, & S. Cady, *The change handbook : the definitive resource on today's best methods for engaging whole systems* (2nd ed., pp. 179-194). San Francisco: Berrett-Koehler.

<sup>9</sup> Mitra, A. (2003). A tool for measuring progress: the growing popularity of sustainable indicators in the United States. *National Civic Review* , 92 (3), 30.

## Appendix A: List of participants

<b>Name</b>	<b>Title</b>	<b>Government</b>
Barry Edwards	Director of utilities and engineering	Catawba County
David Bonk	Long range and transportation planner	Chapel Hill
John Newark	Sustainability and facilities management superintendent	Chapel Hill
John Richardson	Sustainability planner	Chapel Hill
Sue Rutledge	Buildings maintenance superintendent	Charlotte
Bertha Johnson	Assistant budget director	City of Durham
Ellen Beckmann	Transportation planner	City of Durham
Glen Whisler	Engineer	Durham County
Matt Brown	Coliseum director	Greensboro
Heidi Pruess	Environmental policy administrator	Mecklenburg County
Julian Prosser	Assistant city manager	Raleigh
Joe Morris	Planning director	Salisbury
Sandy Barfoot	General services director	Winston-Salem