

Green Technology Firms and Sustainable Public Purchasing

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Abstract—For green technology firms, government's shifting preference for sustainable products and services is likely to become an increasingly important market factor. Green technology firms are thus in an excellent position to respond to greater calls for environmentally friendly products and services and derive market advantages from doing so. Moreover, green technology firms possess the knowledge, expertise, and experience that can increase local governments' SPP adoption and implementation success. Drawing from the results of two recent studies, this paper presents five reasons why green technology firms should care about local governments' recent trend toward SPP adoption.

INTRODUCTION

LOCAL government sustainable purchasing policies (SPPs) are garnering increasing attention as local governments try to mitigate the negative environmental impacts of their activities (Preuss, 2009; Brammer and Walker, 2011). One important reason is that government spending accounts for 17.1% of global gross domestic product (World Bank, 2017) and is the largest single marketplace across the globe (World Bank Group, 2016). In the U.S., between 25% and 40% of all state and local tax dollars are spent on the purchase of goods and services (Coggburn, 2003). At the local level, U.S. government spending accounts for \$1.72 trillion annually—or approximately 10 percent of the gross domestic product.

SPPs can take on a variety of forms. They might consist of formal, stand-alone policy vehicles, such as legal frameworks, ordinances, executive orders, resolutions and administrative directives. Alternatively, SPPs might also include less formal approaches that involve adding sustainable purchasing requirements to existing or complementary policies (e.g., sustainability or energy conservation plans).

SPPs are being endorsed by international governing bodies and professional networks worldwide. For instance, the United Nations Environmental Programme and the Organisation for Economic Co-operation and Development (OECD) are promoting SPPs in their guidance documents (UNEP, 2013; OECD, 2007). Professional networks such as the Sustainable Purchasing Leadership Council, the International City/County Management Association, the Responsible Purchasing Research Network, the International Green Purchasing Network, and the International Council for Local Environmental Initiatives promote local governments' use of SPPs, and many more private consulting companies are endorsing SPPs.

For green technology firms, government's shifting preference for sustainable products and services is likely to become an increasingly important market factor. Green technology firms are thus strategically poised to respond to greater calls for environmentally friendly products and services and derive market advantages from doing so. Moreover, green technology firms possess the knowledge, expertise, and experience that can increase

local governments' SPP adoption and implementation success.

This article presents five reasons why green technology firms should care about local governments' recent trend towards SPP adoption. We draw from data we collected from focus group interviews (Darnall et al., 2018) and a nationally representative survey (Darnall et al., 2017) to make our case (see Box 1 for a description of the studies).

REASON #1: CURRENT DEMAND FOR SUSTAINABLE PRODUCTS AND SERVICES IS NOT BEING MET

While cities have adopted SPPs, it is clear that their demand for products and services is not being met. Among U.S. cities with an SPP:

- Only 57% of directors agree that their vendors or suppliers offer environmentally friendly products and services.
- Only 50% of directors believe that their vendors are able to help them learn about environmentally friendly products and services.
- Only 18% of directors agree that their vendors are active in promoting environmentally friendly products and services.

These findings suggest there is a critical gap between local governments that prefer purchasing sustainable products and services and firms that can meet this demand. Green technology firms that develop more sustainable products and services may, therefore, benefit from reaching an untapped market. These firms are uniquely positioned to develop strategies that identify how existing products can be modified to be more environmentally sustainable. They are also distinctly qualified to partner with suppliers and vendors to identify products whose technical specifications are consistent with local governments' SPP objectives.

Such partnerships are important because existing products may not address local governments' sustainable product demand.

REASON #2: LOCAL GOVERNMENTS NEED INFORMATION BROKERS

A critical gap identified both in the results of our U.S. survey and our focus groups is that while many local governments have a preference to purchase more sustainable products and services, they lack access to information enabling them to do so. For instance, in cities with SPPs:

- Only 45% have access to an environmentally friendly product or service list.
- Only 51% have access to information on the environmental impacts of products.
- Only 47% have access to ecolabels or other types of product warranting information.

The results also suggest that many local governments continue to rely on information provided directly by vendors about the environmental impacts of products (Darnall et al., 2018).

Green technology firms can help close this information gap. They should increase the availability of information about their companies' sustainable products to vendors and local governments directly. Green technology firms can also increase the probability that local governments use this information by identifying and organizing key sources of information that local government purchasing agents can use to meet their sustainable purchasing goals.

REASON #3: LOCAL GOVERNMENTS NEED HELP MAKING THE BUSINESS CASE

In our survey and interviews, we found that the initial purchase price is

often the number one driver of local governments' purchasing decisions. However, sustainable products and services often have a higher purchase price than other options, which puts these products at a competitive disadvantage.

Green technology firms are exceptionally qualified to communicate information about the life-cycle costs of more sustainable product and service options as well as other technical benefits they might offer. In many cases, when the life-cycle cost of a product or service is accounted for, either no cost difference may exist, or the cost of the sustainably preferred option is actually less. Firms that understand product technology are often better able to explain these tradeoffs and can be an important resource to local government officials trying to make a business case for choosing environmentally preferred products. Green technology firms are also uniquely poised to communicate information about other technical benefits of more sustainable purchasing options (such as improved health) and how these benefits should be considered at the point of purchase because they can offset other types of organizational costs related to worker health.

REASON #4: MEASURING PERFORMANCE AND IMPACT

Organizations manage what they can measure. Local governments that track their spending on sustainable products, therefore, are more likely to elevate the importance of sustainable purchasing in their organizations and integrate these values into their standard operating routines and practices. By tracking spending related to environmentally friendly purchases, local governments are better positioned to reduce costs related to energy, water, fuel and other expenditures. Other tracking

approaches might involve monitoring the quantity of environmentally friendly products purchased or the percentage of total spending allocated towards more sustainable purchasing options. Furthermore, monitoring sustainable purchases creates opportunities for local governments to develop goals and targets around sustainable purchasing, and recognize departments and employees who are meeting or exceeding (along with failing to meet) sustainable purchasing expectations.

However, identifying *what* to measure, *how* to measure it, and the *frequency* of measurement is more complicated than it seems. The results of our research suggest that purchasing officers often lack technical training and expertise related to measuring sustainability outcomes. Green technology firms can assist by partnering with local governments to identify the means and metrics to track the environmental performance of their products and services. Doing so may also increase a local government's commitment to purchase products from companies and vendors that work with them to demonstrate their achievement of SPP goals.

REASON #5: OPPORTUNITIES EXIST TO SHAPE BROADER SUSTAINABLE PURCHASING DISCUSSIONS

As more local governments adopt and implement their SPPs, opportunities are created to learn from best practices. Professional networks, such as those mentioned earlier, have emerged to support local governments' sustainable purchasing activities and are taking the lead to define these best

practices. Green technology firms can contribute to these discussions by offering important context about how the products they develop can lead to successful sustainable purchasing outcomes. Moreover, by participating in discussions about best practices, these firms can help address challenges that arise from the fact that often government purchasing officers are not the product user and often lack important information about the actual performance of more sustainable products or services. Green technology firms can provide information about sustainable products and services and their performance expectations. This perspective can help shape the broader discussion about sustainable purchasing that improves local governments' SPP success and facilitates the best practices that get advanced throughout their professional networks.

CONCLUSION

SPPs are increasingly being endorsed by international governance bodies such as United Nations (UNEP, 2013) and the OECD (OECD, 2007), as well as by professional networks worldwide. Local governments are responding accordingly but often experience significant barriers when adopting and implementing their SPPs. Our research underscores the reasons why green technology firms are critical to local governments' SPP adoption and implementation success. We offer five justifications for why these firms should care about sustainable public purchasing. We suggest that green technology firms can help support local governments' SPP adoption and implementation success by offering critical technical knowledge

about the sustainability attributes of products and services. They can also help identify opportunities to substitute existing products and services with those that are more environmentally friendly and track the environmental impact of these purchasing options. Additionally, as SPPs proliferate, green technology firms can serve as a critical voice in the purchasing process, bringing technical knowledge and understanding that informs discussions about SPP best practices.

Box 1. Description of Studies Assessing SPP Adoption and Implementation in Local Governments

Focus Groups—In fall 2016, we worked with the City of Phoenix's Office of Environmental Programs to identify focus group participants and conduct three group interviews with 14 City of Phoenix purchasing employees who represented five different departments (Darnall et al., 2018). Our goal was to identify existing facilitators and barriers to SPP adoption and implementation.

National Survey—In spring 2017, we extended our focus group study by sending surveys to 1,825 department directors in 791 U.S. cities to examine facilitators and barriers to SPP adoption in a nationally representative sample. A total of 585 of the 1,825 department directors responded to our survey. In the final set of respondents, 48.2 percent were finance directors, 36.5 percent were public works directors, and 15.3 percent were environment directors. At least one director responded from more than 50 percent of the cities we contacted.

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