

New York State Healthy and Green Procurement Act



**Columbia University, School of International and Public Affairs
Master of Public Administration in Environmental Science and Policy
Workshop in Applied Earth Systems Management II
Fall 2015**

Final Report

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Preface

This report concludes the work of the Workshop in Applied Earth Systems Management, a two-semester core course for the Master of Public Administration in Environmental Science and Policy at Columbia University's School of International and Public Affairs. During the summer semester, the group analyzed the environmental problems addressed by the New York State Healthy and Green Procurement Act. During the fall semester, the group examined how this procurement policy would be implemented if the legislation were enacted. This report represents the work of both semesters and serves as an example of how a procurement program could be designed, implemented and monitored.

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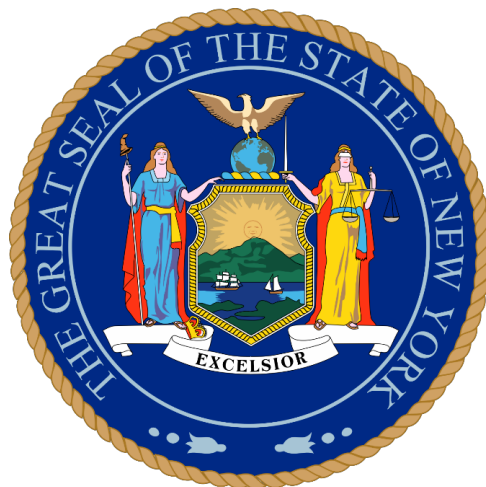


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An aerial photograph showing the edge of Central Park on the left, with its trees in autumn colors, and the dense skyscrapers of Midtown Manhattan on the right, separated by a busy street with traffic.

Executive Summary

The S.3625 Bill titled “New York State Healthy and Green Procurement Act,” aims to create a healthy environment and move New York State towards a green economy by providing a legal framework for green public procurement. The Act, introduced on February 13, 2015, seeks to incorporate environmental and human health issues into the existing procurement process by making amendments and additions to the state finance, economic development, and environmental conservation laws. Although this Act has not yet passed, this report is presented as if it has been passed. Therefore, a program design and first year implementation strategy was created for the S. 3625 Bill.

The program design proposed to green New York State purchases complements the mandates of the bill and will ensure that the main objectives of the bill are met. These objectives are to protect public health and environment, reduce costs and spur growth of green businesses. The five key aspects of the program design are to:

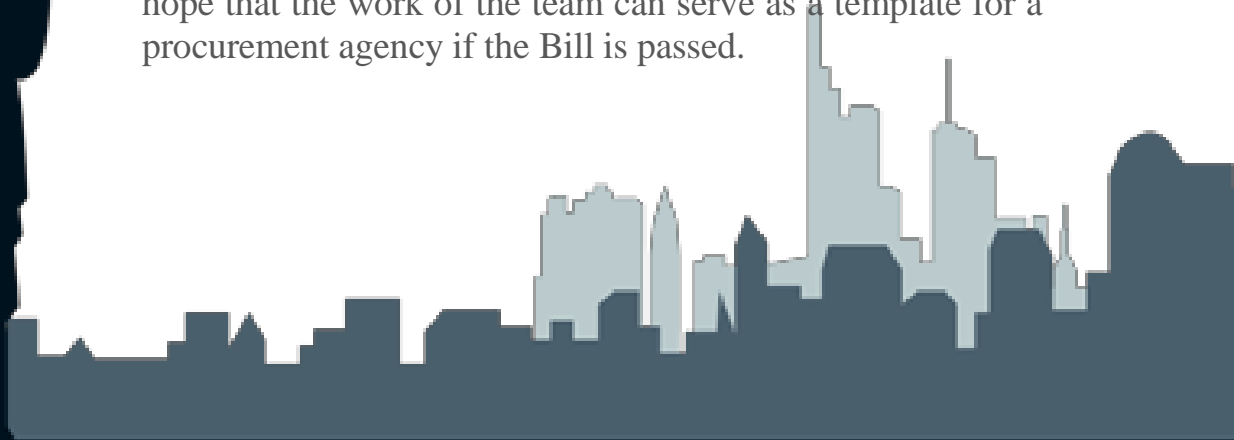
- Establish a Healthy and Green Procurement Office (as a new division of the Office of Procurement Services in the New York State Office of General Services)
- Perform inventory of existing procurement and practice
- Select target green products and services
- Establish green procurement criteria
- Establish minimum environmental specifications for procurement

Additionally, this management simulation creates an organizational structure and detailed staffing plan for the Healthy and Green Procurement Office and a first year budget and master plan to implement the program design. The report also provides a performance management system to monitor and evaluate the success of the new procurement program.

Section I: Introduction

New York State is a major consumer of goods and services, purchasing approximately \$8 billion annually (Greening New York State 2014). By incorporating public health and environmental conditions into the State's procurement criteria, the state government can play an integral role in driving innovation and development of green businesses and in job creation. The purpose of the S.3625 Bill titled "New York State Healthy and Green Procurement Act," is to ensure that the goods, services and commodities procured by New York State do not harm public health and the environment. It also provides a legal framework for green public procurement.

This report assumes the Act has passed and thus, documents our attempt to establish the institutional framework for building capacity with respect to green procurement in New York State. It is divided into four key sections. The first section highlights the four major procurement categories that we are focusing on and the associated problems. Solutions are also proposed, based on the act and incorporates our work from the summer semester. Next, the legislative context for the bill is also discussed. The second section outlines our program design and the key mandates from the Bill. The third section focuses on how we will implement the program design. It showcases the new procurement agency staffing plan, the first year budget, a calendar of key implementation tasks and ways to measure and monitor the success of the program. The report concludes with the hope that the work of the team can serve as a template for a procurement agency if the Bill is passed.



Legislative Context



Prior, to the New York State Healthy and Green Procurement Bill being introduced by Senator Brad Hoylman, its legacy Bill (S875) was presented by Republican Senator Mark Grisanti on January 2013 (J. Odessky, personal communication, September 17, 2015). S875 was discharged by the Finance Committee in January 2013, and additionally, Senator Mark Grisanti left office in 2014. In February 2015, Senator Brad Hoylman, who became the highest ranking democrat on the Environmental Conservation Committee, reintroduced the Bill as S3625 (J. Odessky, personal communication, September 17, 2015). The Act, introduced on February 13, 2015, seeks to incorporate environmental and health issues into the existing procurement process by making amendments and additions to the state finance law, economic development law, and environmental conservation law.

S.3625 was submitted to the Finance Committee in February 2015; however the Bill was never put on the agenda to be voted on. Assuming it is placed on the agenda, the earliest expectation for a vote would be January 2016 (J. Odessky, personal communication, September 17, 2015). The present political climate in New York State appears to be unfavorable for environmental bills because lawmakers show no real commitment to executing them. Oftentimes, bills are passed in one house and then die in another—sometimes they are not even put on the agenda of the committee for a vote. According to ELP/Environmental Advocates, “it is a challenging time in the halls of the New York State Capital to advance strong standards to improve public health and the environment. Advocates spend too much time swatting away the bad ideas from one party or another, or beating back deals for special interests.”



Case Study

UNITED NATIONS SUSTAINABLE PROCUREMENT SYSTEM

While the United Nations is not a state or a country, reviewing its sustainable (green) procurement system can still be used to illustrate how purchasing takes place in a high level organization, much like a state. The Sustainable United Nations (UN) team has developed “best practice guidelines for interested procurers and requisitions” through working with relevant UN agencies (United Nations Environmental Programme, UNEP, 2011a). These agencies have different capabilities and interests in implementing sustainable procurement, and procurement differs depending on the office location and product being sought (UNEP, 2011b). Therefore, the UN has different guidelines for Region 1 and Region 2 agencies. Region 1 describes countries where sustainable products are more readily available. Whereas, Region 2 describes countries where sustainable products are not readily available (UNEP, 2011b). Moreover, based on the level of determination to achieve green procurement, the Sustainable United Nations team has divided the guidelines into basic and advanced procurement criteria (UNEP, 2011a).

According to United Nations (UN), sustainable procurement practices “integrate requirements, specifications and criteria that are compatible and in favor of the protection of the environment, of social progress and in support of economic development, namely by seeking resource efficiency, improving the quality of products and services and ultimately optimizing costs”(UNEP, 2011a).

Seeking these goals, the UN has developed guidelines for procurement of goods, civil works and services, based on a *detailed background report* and a *practical product sheet*. The *detailed background report* provides a comprehensive information to its staff, in order to purchase products and services in an “environmentally-friendly and socially-responsible” (UNEP, 2011a) way. For example, the identification of the key environmental impacts and social considerations, and the legislation related to these goods and services.

The *practical product sheet* provides the sustainability criteria required by the UN for the procurement of these goods and services: the detailed proposal and subject; the technical specifications (or terms of reference, for services); the evaluation criteria of suppliers; and the contractual clauses.

Besides these two main tools, the procurement has to be classified as *basic* or *advanced* sustainability criteria. The *basic* sustainability criteria address “the most significant environmental and social impacts and require minimum effort in verification and minimal increases (if any) in price” (UNEP, 2011a). The *advanced* sustainability criteria are “intended for use by procurers who seek to purchase the most advanced environmentally-friendly and socially-responsible products available on the market, and may require additional administrative effort or result in a price increase as compared to other products fulfilling the same function.”

The UN has developed the Sustainable Procurement management cycle that includes 6 steps:

- Step 1: Obtaining high-level commitment to Sustainable Procurement
- Step 2: Setting up a Sustainable Procurement Working Group
- Step 3: Assessing sustainability risks in procurement and prioritizing spend areas
- Step 4: Developing a Sustainable Procurement Policy
- Step 5: Setting targets
- Step 6: Implementing a Sustainable Procurement Action Plan

According to the United Nations Sustainable team, when agencies are ready for sustainable procurement, they need to conduct sustainability impact assessments throughout the life cycle of the procured products, then identify social, economic and environmental costs for the life-cycle (UNEP, 2011b). Next, agencies need to have procurement planning that aims to understand the procurement pattern and seeks to change procurement to a sustainable alternative or to change needs to unsustainable products (UNEP, 2011b). They also need to define the minimum sustainability criteria, and determine whether to use environmental and social labels to encourage green procurement (UNEP, 2011b). Furthermore, agencies have to identify green products’ sourcing through assessing the environmental and social performance of suppliers, their appraisal and short-listing. Agencies are also advised to develop sustainability criteria that could determine the suppliers to bid (UNEP, 2011b). The last step is the evaluation of the green procurement. During the evaluation, agencies need to understand the financial cost using whole-life costing, develop the evaluation matrix and performance indicators, and manage supply lists and their production chain, and also have site inspections for green procurement offices (UNEP, 2011b).





The Problem: Toxic and Cancer Causing Chemicals

Traditionally, procurement criteria for New York State has been defined by lowest price, best value, quality, cost and efficiency. The New York State Healthy and Green Procurement Act, seeking to transition from traditional products, services, and commodities that may cause harm to consumers, includes the criteria that products, goods and services must positively impact public health and the environment.

Manufacturing and technology, the construction of buildings and services that utilize toxic chemicals pose environmental and health risks due to the exposure and

release of persistent, bio-accumulative toxic and cancer causing chemicals. These chemicals find their way into everyday goods and waterways causing environmental pollution, resource mismanagement and compromising public health. To address these concerns, the Act primarily focuses on the goals of increasing energy efficiency, reducing waste and establishing green procurement criteria targeting key product categories currently included in the state's procurement portfolio.

We selected the categories of paper, vehicles, buildings and electronics as they are specifically mentioned in the bill and constitute a large portion of New York State's procurement budget. The primary environmental challenges of these categories are: the production and use of paper, vehicular emissions, building materials and energy use and the toxic lead found in electronic waste.



PAPER: Problems

The chlorine used in the bleaching process is the most hazardous toxin in paper. It has numerous negative impacts. Workers frequently exposed to chlorine in factories experience dizziness and nausea among other health issues due to the inhalation of the gas. The Bill proposed the use of one hundred percent chlorine-free paper and xerographic paper with at least thirty percent post-consumer waste recycled content.

These solutions address both the toxins in paper and as a bonus reduces paper wastage, contributing to the efficiency of resource use. However, there is still room for more specificity in terms of defining exactly what is meant by one hundred percent chlorine free. Paper can be totally chlorine free (no chlorine or chlorine derivatives used), elementally chlorine free (no chlorine gas used but chlorine derivatives used), and process chlorine free or secondarily chlorine free (recycled paper that is produced with no chlorine or chlorine derivatives). The paper used in the first instance could also have been made with chlorine or a chlorine derivative (Meis, 2011).



VEHICLES: Problems

New York State procures a sizeable number of vehicles for use in carrying out the duties of the state. The Bill stipulates that consumption of petroleum should be reduced. One of the primary uses of petroleum is in motor vehicles. These vehicles are harmful to the environment due to high emissions of noxious pollutants. Many of these vehicles are also not energy efficient which is another concept addressed in the Bill. Therefore, greener, less harmful transportation solutions that lower the demand for petroleum include increased procurement and use of hybrid and electric vehicles.

Helmars and Marx (2012) assert that electric vehicles are essential to “phasing out dependence on oil” and decreasing future emissions and energy usage. These vehicles are already a staple in many European countries and now New York State wishes to adopt similar practices to remain competitive and protect its populace and environment.



BUILDINGS: Problems

Buildings and its use of materials are complex and can pose environmental problems during demolition, construction and renovation as well as the extraction, manufacturing and use of materials. Energy use and its efficiency can be controlled by the systems installed along with the operation and maintenance of the building.

In terms of building construction, the Bill specifically recommends avoiding the use of polyvinyl chloride, PVC, broadly used as a building material, particularly for piping and flooring. Versatile uses in construction of buildings include, as piping, floorings, sidings and doors and windows and much more. While PVCs are widely used because they are relatively inexpensive and easy to work with, PVC is toxic from production, to use, to disposal. Most PVC ends up in landfill waste with less than 1% being recycled. Avoiding PVC reduces exposure to air toxins emitted during production or through incineration releasing dioxins, an EPA identified human carcinogen (EPA, 2000), and hydrogen chloride gases. Eliminating, not avoiding, PVC for potable water is critical as PVC has been found to leach carcinogenic phthalates and dioxins into the water supply. As an alternative to PVC, high density polyethylene, HDPE, a plastic based product, has also come under scrutiny as potentially being hazardous. Vinyl flooring should also

be avoided as it has been found to release phthalate plasticizers which may be endocrine disruptor suspects. Children under the age of three are the most susceptible causing hormonal imbalances (Akingbemi et al, 2004).

Buildings consume 73% of total energy produced and are responsible for 38% of all CO₂ emissions (USGBC, 2015). As a heavy user of raw and manufactured materials, buildings use 40% of the raw materials produced globally (3 billion tons annually) (USGBC, 2015).



ELECTRONICS: Problems

A large percentage of the New York State budget is spent on the procurement of electronics. The environmental challenges of electronics are specific to disposal, exposure to toxic chemicals (particularly lead) and its energy use. Electronic disposal is one the largest growing waste streams in the United States. To stem this stream, discarded electronics are being shipped overseas where they are dismantled exposing workers to cancer causing chemicals of lead, mercury, beryllium, arsenic, cadmium and chromium. If discarded in a landfill, these same chemicals can leach out and into the soil contaminating surface and subsurface waters directly affecting water quality and the health of people who depend on it for their drinking water. The lead used in the soldering process of these electronics poses one of the biggest threats to human health and the environment.

One of the proposed Act's intent is to increase energy efficiency and to reduce pollution concurrently improving human health and safety. The rising demand for electronics increases energy use and emissions of greenhouse gases.

The Solution: Procurement of Green Products

Current procurement requires improved solutions to reduce harmful emissions throughout the lifecycle of products. Additionally, consumers must be protected from the harmful health effects caused by the production and manufacturing of these goods. Solutions to problems associated with paper, vehicles, building materials and electronics are examined more closely below.



PAPER: Solutions

The effectiveness of purchasing post-consumer recycled content paper is just as important as decreasing the volume of paper that otherwise might end up in a landfill. This adheres to a key directive in the bill, to reduce the environmental and health impacts at the source instead of at the point of use. Addressing the production of paper, the bill specifies chlorine free. However, there are three levels that could be defined as chlorine free. Elemental Chlorine Free, (ETF) reduces the use of chlorine but does not eliminate it. Totally Chlorine Free, (TCF), uses only non-chlorine bleaching processes, including oxygen, peroxide and ozone bleaching systems eliminating dioxins and chlorinated toxic pollutants. Processed Chlorine Free, (OCF), follows the same process as TCF only using recycled paper that was processed through the TCF process. During the first year of the program, the new office will select which definition to use.



VEHICLES: Solutions

The recommendation for New York State to purchase hybrid and electric vehicles aligns with the bill's expressed intent to reduce the consumption of petroleum. This directly contributes to reducing greenhouse gas emissions, a driver of climate change. Electric vehicles, in particular significantly reduce air pollution by eliminating emissions of volatile organic compounds, hydrocarbons, carbon monoxide, ozone, lead, and various oxides of nitrogen (Zehner and Ozzie 2013). Simple to construct and maintain with less moving parts, electric cars do not use gasoline. Some drawbacks are that they are more complex to build requiring initial higher production energy. In addition, the mining, production and disposal of the lithium battery is environmentally negative. The electrical power source can be mixed including fossil fuel, coal, nuclear and renewable.



BUILDINGS: Solutions

Many alternatives exist for materials that can be used instead of PVCs. Alternatives to PVC piping include copper, cast iron, steel and concrete vitrified clay. Copper is the preferred solution. Lasting up to 80 years, it is more resistant to corrosion and rust and scale build-up than galvanized steel piping (Varone and Varsalona, 2005).

Flooring solutions that are more environmentally friendly include bamboo, ceramic tiles and linoleum. Linoleum is an excellent replacement as it is made from flaxseed which is a renewable material. More durable than oil-based products with a long life expectancy, it is biodegradable and releases no harmful toxins. Siding, windows and doors are better constructed from certified sustainably harvested wood Forest Stewardship Council (FSC). However, depending on the geographic location of the project, this might add significant costs.

Energy efficiency and sustainable green building design can be determined by applying the U.S. Green Building Council, USGBC, LEED Silver certification standard or equivalent to state owned properties. This will ensure that buildings are more energy efficient and contain materials with no harmful effects to human health and the environment.



ELECTRONICS: Solutions

The purchase of lead-free electronics, managing the waste stream of electronics and reducing the energy required to operate them, are all part of the solutions to tackle the environmental challenges posed by electronics. Many companies are starting to produce and demand lead-free electronics realizing that this is a necessary action to address the problems associated with its use. While currently there are no viable alternatives for lead, potential options could include a combination of tin, bismuth, silver and copper. Electronics manufactured with less materials, using post-consumer recycled content (PCC) aids in reducing landfills and e-waste. Additionally, establishing and implementing a guide for greener electronics and procurement of Energy Star electronics must be a part of any solution to further improve energy efficiency.



Section II: Program Design

New York State Healthy and Green Procurement Act covers a wide range of environmental issues that involves a diverse group of stakeholders. The goal of the first year program design is to establish a healthy and green procurement framework and increase the green procurement capacity of New York State. The program design includes the mandates of the Bill and the options that complement its implementation. The program design will:

- Establish a Healthy and Green Procurement Office
- Perform an inventory of existing procurement and practice
- Select target green products and services
- Establish green procurement criteria
- Establish minimum environmental specifications for procurement

Establish Healthy and Green Procurement Office

A State Healthy and Green Procurement Office will be established in The Office of General Services (OGS). This office will be responsible for the identification of the target categories, development of criteria for evaluation and creation of the approved healthy and green supply list. It will also spearhead the evaluation of state agency's procurement status, development of the environmental audit program, development of guidelines for public participation and consideration of additional toxic pollutants. Additionally, they will be charged with the design and implementation of training and education programs, development of metrics, preparation of annual reports on green procurement and advising the Governor and the Legislature on the implementation of green and healthy procurement.

Perform inventory of existing procurement and practice

The category of goods and services New York State purchases can range from office supplies, lighting, vehicles, food, software, buildings, railways and roads. In order to select target categories of green procurement, New York State must consider what it purchases and how much is spent on each good and service. Therefore, New York State will perform an inventory of existing procurement and practices to determine what the State procures most, and what is currently being purchased green.

Select target green products and services

OGS will perform a cost benefit analysis to evaluate the life-cycle costs of the green purchases in comparison to the existing procurement practices. Based on the life-cycle analysis, OGS will identify a minimum of three target categories of green commodities, services and/or technologies. To ensure the State's existing cost and quality standards are met, State agencies will not be required to purchase items that cost more than 10% of an alternative commodity or service.

Establish green procurement criteria

Upon selection of the target categories for the associated green supply list, the Office of Healthy and Green Procurement will establish the green procurement criteria for each category. The green procurement criteria will consider the protection of public health and the environment, protection of water, air and ecological systems, prevention of pollution, avoidance of toxic substances, and positive life cycle attributes.

Establish minimum environmental specifications for procurement

One year after the effective date of the Bill, all state agencies will be required to comply with the minimum specifications for healthy and green procurement. During the first year, the Office of Healthy and Green Procurement will establish the minimum environmental specifications for green procurement. Minimum environmental specifications will include the use of 30% post-consumer recycled content paper, waste reduction in packaging and products, energy reduction with the goal of achieving the purchase of at least 25% renewable energy by 2020, and meeting the green building criteria for new buildings and any additions or renovations to existing buildings.



Section III: Program Implementation

The primary agency involved in procurement is the OGS. It was established in 1960 to facilitate the work of New York State agencies, the Legislature and Judiciary; supports local governments, eligible nonprofits, school districts, and public authorities. OGS manages and leases real property, designs and builds facilities, contracts for goods, services, and technology, and delivers a wide array of support services. Other state agencies are also involved in the implementation process. External consultants are integral in providing sound advice in the program design, implementation, and monitoring process.

Staffing Plan

Based on the program design, a staffing plan was created that included the establishment of a Healthy and Green Procurement Office. This office will be added to the New York State Office of Procurement Services. The Healthy and Green Procurement Office will be supervised by one Healthy and Green Procurement Officer who will be supported by fourteen full-time equivalents (FTE) and seven external consultants. The Healthy and Green Procurement Office will be divided into three main units: the Green Planning and Operations Team, the Compliance and Monitoring Team and the Stakeholder Engagement Team. See Figures 1 and 2 for the organizational structures regarding the existing green procurement structure and the additions to the existing procurement structure and the proposed new office. Additionally, Appendix A contains the job descriptions of each team.

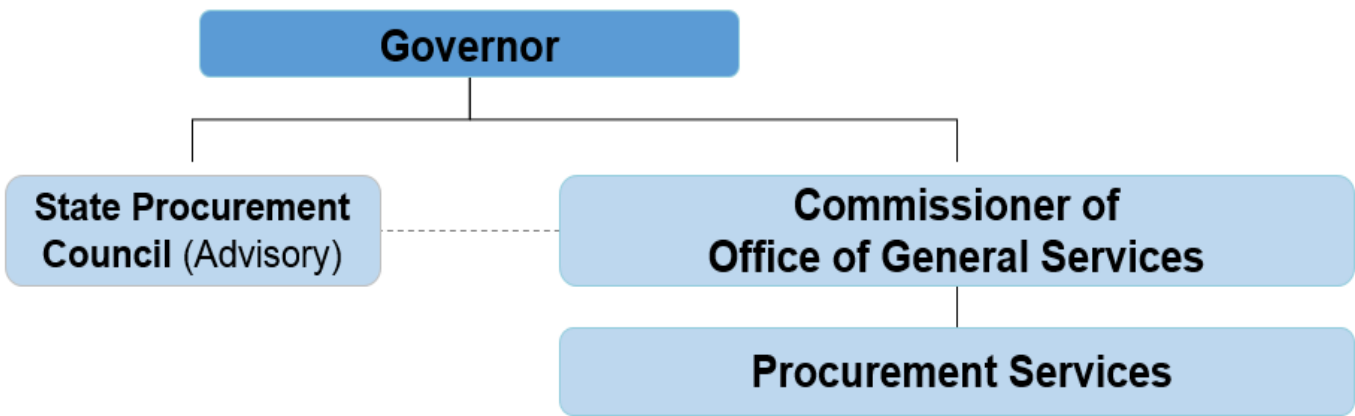


Figure 1. Current Organizational Structure of the Office of General Services

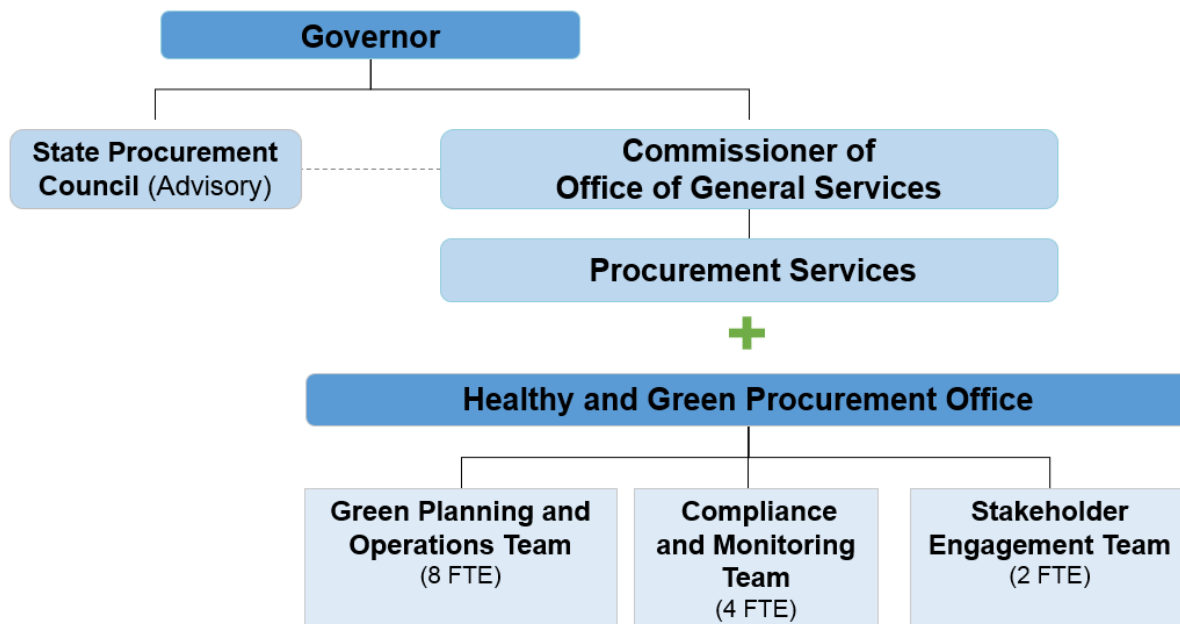


Figure 2. Proposed Organizational Structure of the Office of General Services

Team Descriptions

(Appendix B is the positions descriptions for each full-time equivalent employee and Appendix C is the staffing plan for each team)

Healthy and Green Procurement Officer

The new Healthy and Green Procurement Office will be headed by the Healthy and Green Procurement Officer. The duty of this employee is to assist the Commissioner with the development and establishment of a healthy and green procurement framework.

Green Planning and Operations Team

This team includes two Senior Analysts (Business and Procurement), a Senior Economist, and five mid-level and entry staff (Procurement Specialist, Financial Analyst, Assistant Procurement Specialist, Information Technology officer and Sourcing Analyst). The main duties of the team are to conduct inventory management at each state agency, data management, select targeted green categories and services, create approved healthy and green supply lists, establish green procurement criteria, select outsourcing team, conduct cost benefit analysis and market research and to develop guidelines for public participation.

Compliance and Monitoring Team

The Compliance and Monitoring Team will be designed to respond to the plans and policies developed by the Planning and Operations team and therefore, not be fully functioning until the third phase in which they will organize their efforts to enable and enact compliance monitoring systems. The Compliance Team, composed of a Senior Compliance Officer, an Assistant Compliance Officer, a Monitoring Officer and an Evaluation Officer, will collaborate with the Office of Procurement Service. They will conduct regular evaluation of each state agency, determine if agencies meet the qualifications of the procurement contract, track the process in implementing the healthy and green procurement policy and develop the environmental audit program.

Stakeholder Engagement Team

The Stakeholder Engagement Team's task is to find ways to make palatable to both the private and the government procurement entities, changes that are taking place which will affect legal, policy, compliance and monitoring of procurement actions. They will design and offer live workshops, develop online and onsite professional development coursework and webinars. The Stakeholder Engagement Team is comprised of a Communication Specialist and an Administrative Support Personnel. They will promote inter-agency cooperation, raise public awareness, develop guidelines for public participation, and organize regular meetings for Sustainable Procurement Coordinators within each state agency.

External Sourcing

In total, the Green Procurement Office will contract with 7 external consultants. The estimated value of the contract will be one million dollars. This one million dollars includes: seven full -time equivalents (FTE) fees, overhead, benefits, other than service personnel for the first year's analysis and implementation plan. The external consultants will be paid based on projects completed. The seven external consultants will include one legal expert to draft and negotiate contracts for procurement of goods and services. Additionally, four healthy and environmental conservation personnel will be hired to conduct biological, toxicological and related studies for cost benefit analysis. There will also be two training and education personnel to educate and train state agency employees to improve their understanding of green procurement.





Program Budget

Current New York State spending on commodities, services and technology is approximately \$8 billion per year. The OGS budget is \$1.27 billion per year. The total projected operating costs for this new procurement office for the 1st year of operations is estimated to be \$2,440,466, a small percentage of the total budget of the OGS. Although these projections are based on diverse and limited data, they allow the transformation of the abstract goals of S.3625 into concrete policy outcomes. As such, the design of the performance management system and the developing of the master calendar were built from this budget. See Table I below which is the line item budget and shows the breakdown of the entire program by personnel and other than personnel services. About half of the total operations cost will be used for personnel services.

Line Item Budget		
Personal Services		
Salaries		727,776
Fringe Benefits		571,824
	Total Personal Services	1,299,600
Other Than Personal Services		
Office Costs for Program Personnel		73,466
Consulting Services		985,000
Travel Associates Costs		82,400
	Total Other Than Personnel Services	1,140,866
	Total Budget	\$2,440,466

Table 1: First year line item budget

Total funding for the Second Year of Operations is roughly \$2.2 million. This reflects all personnel at 100% and the addition of 2 officers in the Compliance and Monitoring Team: Assistance Compliance Officer (2) and Monitoring Officer (2). This increase in personnel was assumed as the result of a change in the start-up’s mission orientation from initial integration/operation in the first year to a mission more focused on compliance and monitoring in the second year.

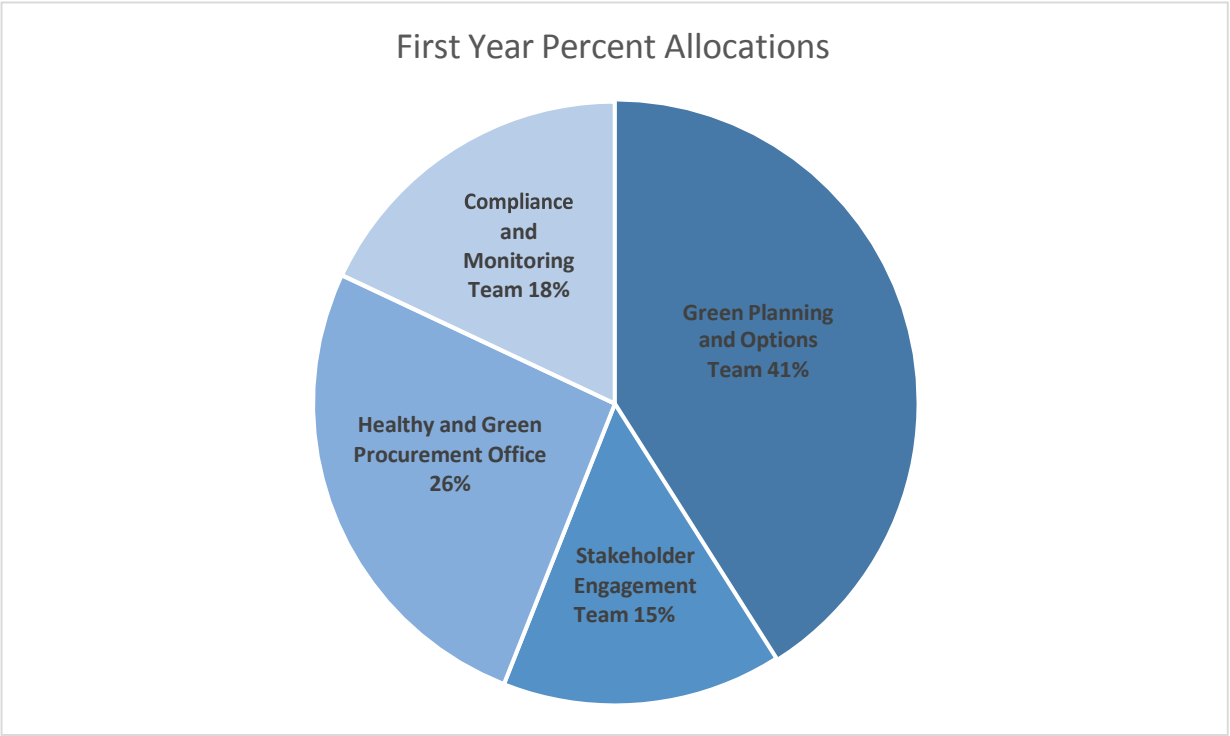


Figure 3: Pie chart of first year budgetary allocations

Master Calendar

In preparation for the implementation of the bill, a master calendar was developed based on the program design, organizational staffing plan, and program budget plan. There are four specific goals needed to implement the first year program design. These are to: hire employees and experts, establish a healthy and green procurement framework, raise awareness and educate and to increase green procurement capacity. Key progress reports will be submitted three times during the first year in April, June and November. Table 2 below depicts the key activities and task that will be completed during the first year.

Tasks	Monthly Schedule												
	1	2	3	4	5	6	7	8	9	10	11	12	
Hire staff & experts	█												
• Appoint State Healthy and Green Procurement Officer	→												
• Appoint Sustainable Procurement Coordinators	→	→											
• Hire core team personnel	→	→											
• Hire external consultants				→	→	→							
Establish healthy & green procurement framework			█										
• Conduct procurement inventory at each state agency				→	→								
• Review existing procurement laws			→	→									
• Cost-benefit analysis and market research						→	→	→					
• Develop metrics, monitoring & evaluation programs											→	→	
Increase green procurement capacity						█							
• Select target green categories						→							
• Establish procurement criteria and supply list per category						→	→	→	→	→	→	→	
• Develop green vendor/contractor list											→	→	
Raise public awareness and education stakeholders			█										
Reporting & inter-agency meetings				█			█				█		

Table 2: First year master calendar



Defining the Success of the Program

The success of the program is measured by the creation of a list of key indicators that represent the fulfillment of the main objectives of the bill. These indicators of success can be defined in three ways:

1. They increase the amount of green products, goods, services purchased by the state of New York.
2. They sensitize state agency personnel to what green and sustainable products are and train staff in identifying these products easily.
3. They ensure products, services and commodities purchased by the state do not harm public health and the environment. Table 3 shows how the success of the program will be measured.

Goals	Indicators of Success	Ways to Measure	Measurement and Frequency
Increase recycled content in paper purchased by state agencies	30% post-consumer recycled content in procured paper	Analyze purchase orders to determine type, brand, and supplier of paper	Consultants - Semi-Annually
Increase renewable energy alternatives	25% increase in renewable energy used by 2020	Count the number of contracts awarded for procurement of renewable energy alternatives and analyze the details of said contract to determine increased renewable energy capacity	Sustainable Procurement Coordinators - Annually
Promote use of energy efficient appliances and office equipment	25% increase purchase of Energy Star appliances and office equipment	Analyze purchase orders to determine type, brand, and supplier of appliances and office equipment	Consultants - Monthly
Increase amount of state buildings with LEED Silver certification or equivalent	100% of state buildings are certified	Analyze state building managers' report on progress made towards attaining certification in all buildings	Consultants - Quarterly
Create green procurement criteria	Creation of Healthy and Green Procurement criteria	Healthy and Green Procurement Criteria submitted to Healthy and Green Procurement Director for final approval	Healthy and Green Procurement Director - will be measured upon creation
Increase procurement knowledge and purchasing capacity of state agencies	At least 50% products purchased fulfilling new healthy and green procurement guidelines	Analyze purchase orders to determine type, brand, and supplier of goods, service and technology purchased	Sustainable Procurement Coordinator - Quarterly
Educate Sustainability Coordinators and agency staff	Training and educational workshops organized Coordinator and agency employees	Count the number of educational workshops organized and verify knowledge gained by employees scores on tests	Compliance and Monitoring Team - Semi-Annually
Create green vendor list	Creation of green vendor list	Green vendor list submitted to Healthy and Green Procurement Director for final approval	Healthy and Green Procurement Director - will be measured upon creation

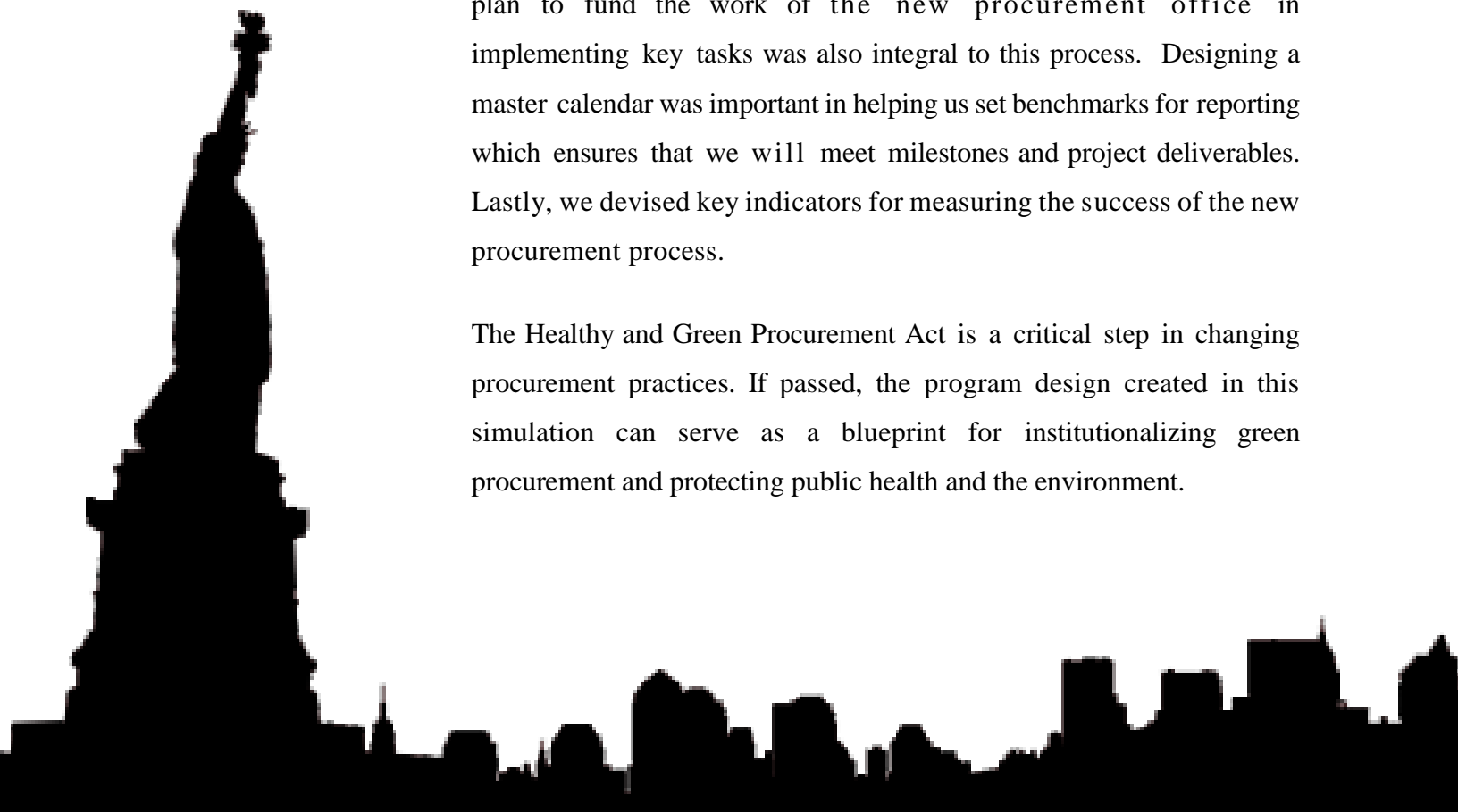
Table 3: Indicators of program success

Section IV: Conclusion

New York State is one of the first governments (NASPO, 2015) in the United States to establish a state green procurement and agency sustainability program. Building on this leadership role, The New York State Healthy and Green Procurement Act is designed to increase green procurement of goods and services that do not harm humans or the environment. Following the mandates of the Bill and analyzing the science behind the problems and solutions, we sought to construct a green procurement framework that capitalizes on New York State's \$8 billion dollar annual procurement budget. This level of investment can spur growth in green businesses, green jobs and increase access to high quality green products potentially reducing associated costs.

An essential component of that framework was the creation of The Healthy and Green Procurement Office. Facilitated and coordinated through the Office of General Services, our formal program design can meaningfully engage the many state agencies and increase their purchases of green goods and services. Additionally, creating a first year budget plan to fund the work of the new procurement office in implementing key tasks was also integral to this process. Designing a master calendar was important in helping us set benchmarks for reporting which ensures that we will meet milestones and project deliverables. Lastly, we devised key indicators for measuring the success of the new procurement process.

The Healthy and Green Procurement Act is a critical step in changing procurement practices. If passed, the program design created in this simulation can serve as a blueprint for institutionalizing green procurement and protecting public health and the environment.



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Appendix A: Job Descriptions

Healthy and Green Procurement Program Head Office	
Director, Healthy and Green Procurement Officer	
The Healthy and Green Procurement Officer will be responsible for assisting the commissioner with the development and provision of guidance for healthy and green procurement.	
Program Operations Section	
Green Planning and operations Team	
<ul style="list-style-type: none"> • Conduct inventory management at each state agency • Data management • Select targeted green categories and services • Create approved healthy and green supply lists • Establish green procurement criteria • Select outsourcing team • Conduct cost benefit analysis and market research • Develop guidelines for public participation 	
Compliance and Monitoring Team	
<ul style="list-style-type: none"> • Collaborate with Office of Procurement Service • Conduct regular evaluation for each state agency • Determine if agencies meet the qualifications of procurement contract • Track the process in implementing the healthy and green procurement policy • Develop the environmental audit program 	
Stakeholder Engagement Team	
<ul style="list-style-type: none"> • Inter-agency cooperation • Raise public awareness • Develop guidelines for public participation • Organize regular meetings for coordinators within each state agency 	

Appendix B: Position Descriptions

Healthy and Green Procurement Program Head Office	
Director, Healthy and Green Procurement Officer	
The Healthy and Green Procurement Officer will be responsible for assisting the commissioner with the development and provision of guidance for healthy and green procurement.	
Program Operations Section	
Green Planning and Operations Team	
Senior Business Analyst	
<ul style="list-style-type: none"> • Provide internal management advisory support to the Healthy and Green Procurement Officer and the leadership team • Identify and investigate opportunities for continuous improvement across the procurement function • Conduct trend analytics to provide insights into the Green Procurement Office 	
Senior Procurement Analyst	
<ul style="list-style-type: none"> • Select targeted green categories and services • Establish green procurement criteria • Conduct life-cycle cost analysis • Conduct inventory management at each agency • Select outsourcing team 	
Senior Economist	
<ul style="list-style-type: none"> • Conduct market analysis • Provide economical knowledge 	
Procurement Specialist	
<ul style="list-style-type: none"> • Create approved healthy and green supply lists • Purchase selected products and services for state agencies • Provide customer service 	
Sourcing Analyst	
<ul style="list-style-type: none"> • Identify, plan, execute, and manage strategic sourcing initiatives for targeted categories of goods and services • Execute category management activities including contract management and supplier relationship management 	
Financial Analyst	
<ul style="list-style-type: none"> • Conduct cost benefit analysis • Conduct market research 	
Assistant Procurement Analyst	
<ul style="list-style-type: none"> • Assist the Procurement Analyst 	
Information Technology	
<ul style="list-style-type: none"> • Data management • Technological support 	

Appendix B: Position Descriptions (Continued)

Compliance and Monitoring Team	
Senior Compliance Officer	
•	Collaborate with Office of Procurement Services
Assistant Compliance Officer	
•	Conduct regular evaluation for each state agency
Monitoring Officer	
•	Track the process in implementing the healthy and green procurement policy
Evaluation Officer	
•	Determine if they meet the qualifications of procurement contract
Stakeholder Engagement Team	
Senior Compliance Officer	
•	Collaborate with Office of Procurement Services
•	Report to Healthy and Green Procurement Officer
Assistant Compliance Officer	
•	Conduct regular evaluation for each state agency
•	Conduct compliance reviews of the state agencies and community colleges
Monitoring Officer	
•	Track the process in implementing the healthy and green procurement policy
•	Develop the environmental audit program
Evaluation Officer	
•	Determine if they meet the qualifications of procurement contract
•	Evaluate the state agency procurement practices

Appendix C: Staffing Plan for Teams

Healthy and Green Procurement Program Head Office	
Director, Healthy and Green Procurement Officer	
<ul style="list-style-type: none">○ Salary Grade: Non-Statutory (NS)-Not fixed, but decided by the director of the division○ Requirements: 15-20 years of related experience and minimum of a masters degree	
Program Operations Section	
Green Planning and Operations Team	
<ul style="list-style-type: none">● 3 Top-level supervisory positions (Senior Business Analyst (director of the team), Senior Procurement Analyst, Senior Economist)<ul style="list-style-type: none">○ Salary Grade: Non-Statutory (NS)-Not fixed, but decided by the director of the division○ Requirements: 5-10 years of related experience and minimum of a master’s degree● 3 mid-level positions (Procurement Specialist, Sourcing Analyst, Financial Analyst)<ul style="list-style-type: none">○ New York State Salary Grade 24○ Requirements: 3-5 years of related experience and minimum of a bachelor’s degree● 2 entry level positions (Assistant Procurement Analyst, Information Technology)<ul style="list-style-type: none">○ New York State Salary Grade 15○ Requirements: 3-5 years of related experience and minimum of a bachelor’s degree	
Compliance and Monitoring Team	
<ul style="list-style-type: none">● 1 mid-level position (Senior Compliance Manager (director of the team))<ul style="list-style-type: none">○ New York State Salary Grade 24○ Requirements: 5-10 years of related experience and minimum of a bachelor’s degree● 3 entry level positions (Assistant Compliance Officer, Monitoring Officer, Evaluation Officer)<ul style="list-style-type: none">○ New York State Salary Grade 15○ Requirements: 3-5 years of related experience and minimum of a bachelor’s degree	
Stakeholder Engagement Team	
<ul style="list-style-type: none">● 1 mid-level positions (Communications Specialist –director of the team)<ul style="list-style-type: none">○ New York State Salary Grade 24○ Requirements: 5-10 years of related experience and public relations degree● 1 entry-level position (Administrative Support Personnel)<ul style="list-style-type: none">○ New York State Salary Grade 15○ Requirements: 3-5 years of related experience and minimum of a bachelor’s degree	

Appendix D: Budget Assumptions

S.3625 program and line item budgets are a best guess estimate of expenses for the first year of operations. The budget is consistent with the first year program design actions of the plan and is based on organizational and staffing requirements. General schedules and executive and administrative pay scales were derived from the State of New York Salary Schedule and were used to determine personnel costs for the Healthy and Green Procurement Office Team, the Green Planning and Operations Team, the Compliance and Monitoring Team and the Stakeholder Engagement Team. The Director's salary was based on the salary of Sergio Paneque, Governor Cuomo's 2014 appointment as Director of Procurement. Between 5% and 7% was added to reflect step increase in 2016 salaries. All employees were given an average of 44% fringe benefits in accordance with New York State standards. Information on the average fringe benefits was obtained from the State University of New York Buffalo fringe benefits rate. Other technical costs listed as 'Other than Personnel' were determined from different current estimates, as follows: (1) the assumptions for office space were derived from averaging workspaces from Benchmark 4, U.S. General Services Office; (2) assumptions for furnishings, telecommunications, ITT and Mobile ITT mostly came from U.S. General Services Administration, which creates a cost per person model for government agencies; (3) allowances for costs of meals were also found on the U.S. General Services Administration; (4) travel costs were estimated based on "Forecasted Corporate Travel Costs for 2015" found at certify.com – these may conflict with State allowances from Office of State Comptroller, but were used to ballpark the line items; and (5) rent for office space was not included in the budget with the understanding that the new program will initially operate within already existing space in the Office of Procurement Services of the State of New York which will provide in-kind contributions.

Appendix E: Individual Team Budgets

Healthy and Green Procurement Office Program Budget

The monies allocated to the Healthy and Green Procurement Office are divided into four phases, with the first phase requiring the heaviest application of funds because of the need for rapid setup and deployment of the three operational teams. In the first phase the Director will enlist legal and policy advisors to assure that the nascent organization follows the applicable laws and applies its energies to the appropriate policy areas. He/she will use consultants to find the most appropriate hires for the senior positions on the operational teams. The budget for the second, third and especially, fourth phases, reflect the shifting of his/her roles to more the traditional executive functions of directing the organization and assuring that sound legal and policy decisions are being made.

\$626,947 will be allocated to the Health and Green Procurement Office in the first year as follows:

Function	Quarter One - Initiate	Quarter Two - Integrate	Quarter Three - Education	Quarter Four – Operate	Total per category
Personnel	54,000.00	54,000.00	54,000.00	54,000.00	216,000.00
Office Costs					
<ul style="list-style-type: none"> • Furniture • Telecommunications • Information Technology ITT • Mobile ITT 	4,897.76	0	0	0	4,897.76
Consulting					
<ul style="list-style-type: none"> • Legal • Policy Analysts 	165,000.00	68,333.33	68,333.33	68,333.33	369,999.99
Travel	20,600.00	5,150.00	5,150.00	5,150.00	36,050.00
Total	244,497.76	127,483.33	127,483.33	127,483.33	626,947.75

Table 1: First-year operating budget for the Health and Green Procurement Office

Green Planning and Operations Team

The Planning and Operations Team will become functional in the second phase with the hiring of the three senior managers who will develop an implementation plan to integrate the entire green procurement office into the larger procurement system. Their three areas of expertise will be reflected in the plan. They will hire outside consultants where necessary and promulgate their plan during the third phase and move to operational status in the fourth phase.

\$996,192 will be allocated to the Green Planning and Operations Team in the first year as follows:

Function	Quarter One - Initiate	Quarter Two - Integrate	Quarter Three - Education	Quarter Four – Operate	Total per category
Personnel	15,840.00	229,680.00	245,520.00	245,520.00	736,560.00
Office Costs					
<ul style="list-style-type: none"> • Furniture • Telecommunications • Information Technology ITT • Mobile ITT 	4,897.76	29,386.56	4,897.76	0	39,182.08
Consulting					
<ul style="list-style-type: none"> • Legal • Policy Analysts • Professional Development Trainers • Environmental Scientists 	0	68,333.33	68,333.33	68,333.33	204,999.99
Travel	0	5,150.00	5,150.00	5,150.00	15,450.00
Total	20,737.76	332,549.89	323,901.09	319,003.33	996,192.07

Table 2: First year operating budget, Green Planning and Operations Team

Compliance and Monitoring Team

The Compliance and Monitoring Team will be designed to respond to the plans and policies developed by the Planning and Operations team and therefore, not be fully functioning until the third phase in which they will organize their efforts to enable and enact compliance monitoring systems. First monitoring efforts will take place during the fourth phase.

The Compliance Team, composed of a Senior Compliance Officer, an Assistant Compliance Officer, a Monitoring Officer and an Evaluation Officer, will collaborate with the Office of Procurement Service to: conduct regular evaluation for each state agency, determine if agencies meet the qualifications of the procurement contract, track the process in implementing the healthy and green procurement policy and develop the environmental audit program.

\$437,321.03 will be allocated to the Compliance and Monitoring Team in the first year as follows:

Function	Quarter One - Initiate	Quarter Two - Integrate	Quarter Three - Education	Quarter Four – Operate	Total per category
Personnel	0	44,640.00	76,320.00	76,320.00	197,280.00
Office Costs					
<ul style="list-style-type: none"> • Furniture • Telecommunications • Information Technology ITT • Mobile ITT 	0	9,795.52	9,795.52	0	19,591.04
Consulting					
<ul style="list-style-type: none"> • Legal • Policy Analysts • Professional Development Trainers • Environmental Scientists 	0	68,333.33	68,333.33	68,333.33	204,999.99
Travel	0	5,150.00	5,150.00	5,150.00	15,450.00
Total	0	127,918.85	159,598.85	149,803.33	437,321.03

Table 3: First year budget, Compliance and Monitoring Team

Stakeholder Engagement Team

The Stakeholder Engagement Team’s task is to find ways to make palatable to both the private and the government procurement entities, changes that are taking place which will affect legal, policy, compliance and monitoring of procurement actions. They will design and offer live workshops, develop online and onsite professional development coursework and webinars.

The Stakeholder Engagement Team is comprised of a Communication Specialist and an Administrative Support Personnel. It will promote inter- agency cooperation, raise public awareness, develop guidelines for public participation, and organize regular meetings for coordinators within each state agency.

\$380,005 will be allocated to the Stakeholder Engagement Team in the first year as follows:

Function	Quarter One - Initiate	Quarter Two - Integrate	Quarter Three - Education	Quarter Four – Operate	Total per category
Personnel	15,840.00	44,640.00	44,640.00	44,640.00	149,760.00
Office Costs					
<ul style="list-style-type: none"> • Furniture • Telecommunications • Information Technology ITT • Mobile ITT 	4,897.76	4,897.76	0	0	9,795.52
Consulting					
<ul style="list-style-type: none"> • Legal • Policy Analysts • Professional Development Trainers • Environmental Scientists 	0	68,333.33	68,333.33	68,333.33	204,999.99
Travel	0	5,150.00	5,150.00	5,150.00	15,450.00
Total	20,737.76	123,021.09	118,123.33	118,123.33	380,005.51

Table 4: First year budget, Stakeholder engagement Team