

Areas of Interest	Educational Programming	Community & Business Challenges	Planning & Zoning	Cost Cutting	Beyond Our Scope	Barriers to Overcome	
Comprehensive Green Building Strategies	<p>Develop a comprehensive green building workshop/seminar program that runs throughout the year hosted by the planning department or by the AmeriCorps volunteer. For example, the City of Alexandria hosts a series of workshops. View the link for an example</p>	<p>Develop a comprehensive green business or green resident challenge similar to programs at the City of Williamsburg. In Williamsburg, residents are challenged to be considered a Green Residence, they complete a simple form that lists a variety of green actions. If they can check off at least 12 activities they're currently doing in any or all of the following areas:</p> <ul style="list-style-type: none"> • Waste Reduction • Water Conservation • Energy Conservation • Transportation <p>They are then labeled of a Green Residence and noted on Williamsburg's website and entered into a random drawing to win a prize of "green" stuff.</p>	<p>Require a LEED-AP specialist or equivalent on the design team of site plans for new buildings/renovations that meet certain criteria and thresholds</p> <p>Require a commercial, non-profit, or locally designed green building checklist be submitted with site plans for new buildings/renovations, but not require certification.</p> <p>Provide bonus when a third party reviewer says that the building looks like it is going to achieve a green building certification</p> <p>Appoint a regional task force of volunteer experts from PSU, Codes, and the Builders Association to develop an environmentally responsible prescriptive (points based) zoning incentive. The task force would also act as an appeals board for the use of innovative techniques not prescribed by the point system.</p>	<p>Cost cutting incentives include, vbut are not limited to the following options: Expedited permit processing, tax reductions, density bonuses, expedited plan review, direct monetary payment from the municipality (grant, rebate or reimbursement), full or partial refunds for development fees, and access to revolving loan funds</p> <p>Partner with local companies to get discounts for residents to obtain green building materials and services</p> <p>A new lending program from Enterprise and the National Housing Trust Community Development Fund provides non-profit owners and developers capital (up to 50,000 in low-interest loans) to jump start green retrofits of older affordable rental communities. Click the link for details</p>	<p>Require, through a mandate, that new buildings receive commercial, non-profit, or locally designed green building certification through a third-party verification program such as LEED</p> <p>The Town of Epping has a mandatory green building ordinance that highlights all of the topics of greatest concern in Resolution 944, but the Borough may not have the expertise to enforce this ordinance.</p> <p>Meet with local builders, developers, architects, and realtors to find solutions to market based barriers to green building. For example, the Builders Association of Central PA has expressed interest in surveying its members on what would be the best way to encourage green building from the perspective of the builders. The Centre County Association of Realtors may be able to add green features to their listings</p>	<p>1. Disjoint between tenant and owner when it comes to incentives for building green</p> <p>2. Lack of knowledgeable staff to oversee comprehensive green building certifications and lack of enforcement options for mandatory green building programs</p> <p>3. Lack of education among developers and builders on environmentally responsible building practices</p> <p>4. Properly prioritizing the green building options in a comprehensive program that will have the most impact in this community.</p>	
	Conservation	<p>Publicize West Penn Power's Watt Watchers Program (Online Analyzer) *Program scheduled to end in 2013</p>	<p>Develop an energy conservation challenge for local businesses like Arlington Virginia's "Green Games"</p>	<p>Require new homes and businesses to meet standards on "building orientation," "building design and shading," and "landscaping" for passive solar</p>	<p>Provide subsidies for home audits (\$350 per audit from SEDA-COG is an example of potential cost to borough)</p>	<p>Require building energy ratings be provided to renters upon signing lease and to home-buyers at sale of home (Mandatory Disclosure Policy).</p>	<p>the major barrier to overcome with conservation is human behavior modification, which is best achieved through education and challenges in what is called behavior change social campaigns</p>
		<p>Publicize programs such as EnergyCAP's Green Quest online application for documenting utility usage to become more aware of energy usage</p>	<p>Develop an energy conservation challenge for local residents (e.g. "Green Home Challenge"), Residents can share their utility usage using a program like Green Quest.</p>		<p>Provide subsidies for commercial audits (priced by sqft - can cost approximately \$450 - note: Interfaith Power and Light is working on a deal with a local company to provide reduced cost commercial audits for churches)</p>	<p>Incentivize the installation of smart meters so that people are actively aware of their energy usage.</p>	
<p>Develop workshops or seminars on energy conservation for residents and businesses utilizing tools such as EPA ENERGY STAR programming, Repower at home, DIY weatherproofing</p>		<p>Further publicize events such as "Earth Hour" which highlight people all over the world reducing their energy consumption or adopt a program that Penn State is doing to the SCB community</p>	<p>Create partnerships with the National Energy Leadership Corps at Penn State, Interfaith Power & Light or local businesses to assist residents with weatherproofing through volunteer labor, DIY training or reduced cost programs</p>		<p>Incentivize the installation of occupancy sensors</p>		
Energy	Efficiency	<p>Publicize West Penn Power's Watt Watchers Program (Overall Program) *Program scheduled to end in 2013</p>	<p>The borough or the region could adopt the 2030 Challenge for Planning developed by a non-profit, non-partisan, and independent organization by architect Edward Mazria in 2002. Current adopters include the USGBC, the U.S. Conference of Mayors, ICLEI and the American Institute of America as well as many others. The Challenge requires setting a goal of a 60% fossil fuel reduction standard below the regional average for fossil fuel operating energy in new buildings, additions starting today, with additional reductions by 2015, 2020 and 2025, ultimately leading to carbon neutrality by 2030. This would be a goal upon which we base incentive programs and community challenges</p>	<p>Provide incentives for new construction using Homes Designed for Energy Star</p>	<p>Publicize Keystone HELP for residential loan programs</p>	<p>Improving efficiency requires three components: time, money, and/or skilled labor. Not all residents and business owners will need assistance with all three components to improve energy efficiency. Those with less time may benefit from subsidized skilled labor. Those with more time may benefit from DIY projects. Independent of the type of assistance provided, performance measurement is necessary to measure the success of the project.</p>	
		<p>Develop workshops or seminars on energy efficiency for residents and businesses utilizing tools such as EPA ENERGY STAR programming or Repower at Home</p>	<p>***Incentivize commercial buildings to "Design to Achieve ENERGY STAR." Architects would input information into EPA's Target Finder, those projects that receive a rating of 75 or greater would then be able to request an increase in gross floor area based on the rating, higher ratings would receive a proportionally greater square footage incentive. Developers would submit with their site plans the "Statement of Energy Design Intent" as proof of their design rating.</p>	<p>Publicize the Pennsylvania Green Energy Loan Fund (GELF) for commercial construction (6 million out of 12 million in funding is still available, on a first come first serve basis. TRF told us to act fast)</p>	<p>**Adopt the most recent version of ASHRAE 90.1 and 90.2 or IECC 2012 in the borough of regionally. To do so would require the municipality to prove that the municipality is significantly different from the rest of the state if this hurdle can be met, then the borough would need to be prepared for an eventual lawsuit if that criteria is met and the codes are adopted locally</p>		
		<p>Expand the State College Borough Housing Rehab Program to have enough funding to pursue energy conservation improvements</p> <p>Publicize West Penn Power's Watt Watchers Program (Free CFL bulbs and rebates for programmable thermostats and energy efficient appliances)</p>	<p>*MN CERT offers a cost cutting program for energy efficient Vending Machines. We could also offer this or combine it with a cost saving option for light switch sensors</p>				
Renewables	<p>Develop workshops or seminars on how to install renewables such as solar PV, solar thermal, geothermal, and small wind technologies, financing, and compatibility/design</p>	<p>Develop a renewable energy tour of the community or awards program/seal for households that have installed renewable energy technologies on-site in the Centre Region</p>	<p>Develop a special provision for wind installations allowing for increased height above the building height than currently allowed for roof installations. College and Halfmoon Township have provisions for Wind Energy Facilities.</p>	<p>Develop a revolving loan fund for on-site renewable energy installations (New Leaf Initiative would like to partner with the Borough to develop a program similar to Kiva for energy projects)</p>	<p>Some cost cutting measures such as creating an Energy Financing District, PACE program or a Homeowners Tax Abatement requires legal authority from the state in order to pursue. Lobby the state for this enabling legislation.</p>	<p>The major barrier to overcome with renewable energy is cost of renewable energy credits and the upfront cost/long payback periods for on-site renewables. The second barrier is convincing the public that renewables are a significantly better option to justify the cost.</p>	
	<p>Provide information on how to purchase renewable energy options and why (Brochure already developed)</p>	<p>Develop a Green Power Communities Challenge to encourage the community to purchase or install renewables for 3% of total energy consumption</p>	<p>Publicize federal tax credits for on-site renewable energy (PA has a very limited number of financial incentives still available for solar PV and solar thermal)</p>	<p>Lobby at the state and federal level for greater funding subsidies and loan programs for on-site renewable energy installations in smaller metropolitan communities. For example, the federal government recently developed a program to install solar pv on military homes across the U.S.: A similar program could be created for municipalities that partner with another government entity if we can market the borough to these agencies a pilot community</p>			

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Water	Conservation	Publicize EPA's WaterSense Partnership Program	Obtain pledges from residents to take shorter showers, fix leaks, water lawns less, etc. Providing estimated savings.	The borough could create its own incentive program for new homes based on EPA's Water Sense program draft single family homes water conservation design program. The intent of this specification is to reduce indoor and outdoor water usage in new residential homes. EPA's goal is that WaterSense labeled new homes will use approximately 20% less water than a standard new home by using a combination of prescriptive and performance-based approaches	*Purchase 1.28 gallon, dual flush toilets, discount them to home owners (discount payable when old toilet returned), and then dispose of the old toilets to a local recycling facility who would grind them up (all metal must be removed) & use them in street paving. The borough could also consider other bulk buys such as(spray valves, showerheads, & faucet aerators.		Again, behavior change is the prime barrier to conservation. However, it is more difficult to make the case in State College of the importance of water conservation since drought is a rare occurrence and since the State College Borough Water Authority has already seen a decrease in water usage in the past year without any significant campaigns to reduce water usage
		Publicize State College Borough Water Authorities Conservation Page and make the public aware of how good our water is and the importance of keeping it clean and maintaining the current volume.	Any new home that achieves the WaterSense label could be publicized on the borough's website along with steps on how existing homes can achieve the label or a similar achievement award developed by the borough based on EPA's criteria		*Encourage State College Borough Water Authority to offer water efficient appliance rebates or a bulk buy program. SCBWA currently offers educational materials only. This would require finding grant funding (Water Sense has a listing of other cities and water utilities that offer rebates)		
	Stormwater Management	Develop brochures and workshops on landscaping projects homeowners can do to reduce stormwater	Publicize Clearwater Conservancy's Annual Clean-up Day with a month long clean up your neighborhood/stormwater pollution reduction neighborhood led campaign	Develop a program similar to Seattle's Green Factor for establishing a new criteria for open space requirements	*Bulk buy of rain barrels or a partnership with State College High School construction class to build and sell rain-gardens-in-a box		
Air Quality	Outdoor	Increase education on public transit, biking and walking as ways to reduce pollution and the need for decreased impervious surface to counteract the heat island effect	Publicize CATA's efforts and CRBC's efforts to reduce vehicle traffic through bike to work week and the Commuter Challenge week	Incentivize LEED-ND projects, which focus on decreasing pollution from transportation sources or revisit parking regulation in zoning to encourage transit. Revisit the topic of parking to encourage the use of public transportation			Pollution comes from multiple non-point mobile sources that are not necessarily local sources under our control; 2nd, behavior change and infrastructure
	Indoor	Educate residents on the importance of checking your home for radon, installing low VOC indoor materials and mold prevention		Incentivize the EPA Indoor airPLUS program	Market the fact that free radon detection kits are available for Centre County residents		The majority of indoor air pollution problems are in existing homes, new construction often uses mold resistant lumber, low VOC products, and duct work designed to vent radon.
Materials Management	Household Waste	Partner with Center County Solid Waste Authority to develop workshops/brochures that would increase the rate of recycling and reuse	Develop a challenge designed to increase the diversion rate by encouraging recycling, home composting, reuse, and freecycling		Public works is currently pursuing a new program that will increase the diversion rate by collecting food waste borough wide and offering a discount to residents who choose to use trash receptacles that are half the normal size	Require apartment owners to provide storage for discarded lamps, batteries and other household hazardous waste. Require buildings to be designed or constructed to accommodate recycling	In the borough, due to the large number of dumpsters, public works cannot use many market based incentives such as pay-as-you-throw programs to decrease the amount of waste disposed of in the landfill
	Construction & Demolition Waste	Provide information on how to recycle construction and demolition waste to all residents and developers who submit to the zoning office for permits	Adopt the 2030 Challenge for planning requiring a 50% reduction standard for the embodied energy consumption of construction materials in new buildings and additions (symbolic action/goal setting)	Alter an Adaptive Reuse Ordinance to focus on retaining a certain amount of materials from the site in the new construction	Offer residents an example of a Design for Reuse Agreement as a guide for their architect, which will assist them in estimating the return for reusable/recyclable materials for inevitable deconstruction	Require deconstruction rather than demolition on all end of life projects in the Borough with a mandatory set diversion rate	The barriers are cost and time, For example, an average 1,500 sqft wood-framed house can take an average of 320-480 man-hours to deconstruct whereas it may take only 32-60 man-hours to demolish
		Develop a What You Need to Know Guide for working with demolition contractors		Construction & Demolition Debris Diversion Program (planning)		Construction & Demolition Debris Diversion Program (public works)	
Materials Reuse	Lead by example by reusing materials in Borough buildings and highlighting providers of reuse materials in borough outreach materials	Hold a recycled art contest to raise awareness about reuse.	Alter an Adaptive Reuse Ordinance to focus on retaining a certain amount of materials from the site in the new construction	Publicize non-for profit groups like Habitat for Humanity Restore and Interfaith Mission, which provide low cost reuse items to the community			The major barriers are time and contracting expertise
Design Aesthetics and Productivity	Lighting	Educate residents and businesses about lighting and effect on productivity and health	Challenge residents and businesses to decrease their energy usage while still maintain appropriate lighting for productivity and health	Consider adopting the Model Lighting Ordinance	*Bulk purchase lights that are more environmentally friendly than CFLs and offer at a discounted price	Lobby the Uniform Construction Code Review and Action Committee (RAC) to adopt the latest IECC in 2012	The major barrier to overcome is the opposing viewpoints on lighting from a safety perspective and from a health and aesthetic perspective
	Daylighting	Educate residents and businesses about daylighting and effect on productivity and health				Lobby the Uniform Construction Code Review and Action Committee (RAC) to adopt the latest IECC and IgCC in 2012	The major barriers to daylighting include: • Lack of knowledge regarding the performance of advanced daylighting systems and lighting control strategies, • Lack of appropriate, user-friendly daylighting design tools, and • Lack of evidence of the advantages of daylighting in buildings.
	Climate Control	Educate residents and businesses about proper ventilation and temperature control of individual rooms and their effects on productivity and health	Provide businesses with a survey to access employee comfort in the work place. Based on results recommend changes that may increase productivity and decrease health insurance costs			Lobby the Uniform Construction Code Review and Action Committee (RAC) to adopt the IgCC 2012	Almost everyone involved in building construction is rewarded for minimizing initial cost as opposed to life-cycle cost. Climate control options that increase productivity of employees over the long-term are therefore, often overlooked

*Note on Bulk Buys - The Borough of State College participates in a bulk-buy program through the state that would allow for discounts on certain construction and energy efficiency items depending upon the current state contracts with preferred vendors. We can participate in this, however, selling the items we receive, sans sales tax, to residents causes some conflicts. Staff does not recommend that the Borough host a bulk buy program directly. However, if there is significant interest, it is recommended that it be pursued only as scheduled one-time event and not over an extended period time to reduce increased burdens on staff work time and potential tax conflicts.

** The State is required to update the Uniform Construction Code with the ICC family of codes, specifically the International Building Code, the International Residential Code, the fuel gas code and the accessibility related codes. Codes such as the IECC and IgCC would come in by reference. It is highly unlikely that the IgCC and IECC will be put into place in their entirety. The Review and Action Committee can deny many of the energy efficiency and green related codes based on perceived economic impact.

*** This option and some of the other options listed would not guarantee performance or that the developer follows through with the process. To do so would require a much more burdensome process on the developer, extended time for project completion, and may not result in verification of results prior to the zoning officer providing certificate of occupancy.