

Global Covenant of Mayors for Climate and Energy

Why you should join

Hampton Roads is poster child for climate change.

Norfolk's Mayor Kenny Alexander signed on last week, VA Beach and Mayor Sessoms have so far shown warm reception to Covenant, and Richmond is already embracing renewables and vowing to cut carbon.

The three Virginia cities that have already signed the Covenant have a network of city staff that are sharing knowledge, methods, ideas and details. Hampton could greatly benefit by having the environmental and resiliency officers tied into this network.

See notes from all three cities. From Blacksburg, the mayor was initially not interested in signing the Covenant, but City Council voted for it. Once he had signed, he found that it was extremely beneficial for him – he got a lot of positive press hailing him as a visionary and leader, and was invited to international conferences, and got to travel and network with a whole new community of leaders. All three cities have had the utilities at the table in the task force discussions, and there has been no negative feedback from the utilities.

Job creation. Both solar and wind can provide a big increase in local jobs, and the market is booming so these jobs skills will be extremely valuable in the future. Local solar companies could take on and train young graduates from Norfolk State to give them the technical skills to excel in the new renewable energy economy. Job creation and skills training will also occur with investment in energy efficiency measures and equipment upgrades.

Economic development. To quote Arlington's plan: This can be a catalyst for new economic development and sustainable growth. A growing number of businesses are focused on the energy sector, on both the supply and demand sides of the equation. Clean energy and innovations in efficiency are among the fastest growing economic sectors today; this sector can be an important element of a diversifying and sustainable economic base.

Timing. Signing the Covenant does not commit the city to anything in the near term. There would be no investment necessary in the time that Mayor Alexander is in office. Signing the Covenant means the city commits to taking a carbon inventory, making a plan, and setting goals. The timing is very relaxed, and several of the cities have been slower than the planned time with no issues.

Local resources to leverage:

- Virginia Coastal Energy Research Consortium – allow researchers to implement pilot programs in other types of renewable energy such as tidal, wave or algae at no cost to the city. Use their ties to leverage student time.
- ODU and Norfolk State – reach out to local universities to get graduate students involved, who can help cut staff time by researching options, and doing input of

data into spreadsheets. ODU is already part of VCERC – could also use VT students who are also part of VCERC. This is easy zero-cost labor to help out existing staff.

- NASA Langley – start pilot programs and allow researchers to mount vertical axis or high altitude wind turbines on city buildings to provide energy and research data.
- Military – DoD has fully embraced renewable energy and moving away from fossil fuels and would be willing to team with the city on installations that would help support local bases.
- Knowledgeable local non-profits – utilize time and expertise from Sierra Club volunteers, CCAN, Hampton Roads Solar Group, VA SUN, National Council for Solar Growth (DC).

Some easy possible wins in cutting carbon:

- Get federal or state grants for resilient shelters – solar with battery backup on shelters that cuts their utility bills, but also provides constant power in case of weather-related power outages, so that people who need power at the shelter (medical equipment, oxygen machines, warming baby food, reading lights, etc) can have power. See list of good resilient shelter sites.
- Encourage biking by adding bike racks to businesses that are on the bike trails but don't have bike racks.
- Encourage telecommuting – people have more time at home, less time on the road, less time stuck in traffic, less traffic congestion, and less carbon emission from cars.
- Get PACE financing for low income community solar.
- Use zero-interest loans from community members to install solar on low-income homes to cut their utility bills – start with my offered loan. Each \$1M loan can put solar on 200 homes at no cost and be repaid in ~10 years.
- Implement city-wide plan to have computers and monitors go into sleep mode when unused – DOE EnergyStar folks have a great program to help with this, will provide tech support, software, and telecons:
<https://www.energystar.gov/products/reduceitenergycosts>
https://www.energystar.gov/products/low_carbon_it_campaign/put_your_computers_sleep
- Offer incentives to residents to do energy efficiency and renewable investments in their homes, including items like sealing and weatherstripping.
- Direct Energy is a possible 100% renewable energy provider that is entering the Virginia market – this could provide a simple way to cut the carbon footprint of Hampton with no financial burden.
- Install a large solar array at the airport with grant or zero-interest loan. As an example, Indianapolis has a 25 MW array at the airport that was a collaboration between the city and the utility.
- Write into the city plan to upgrade the energy efficiency of city equipment and facilities at every opportunity.
- Find grants or loans to change inefficient lights to LED. Add motion detectors in municipal common areas.
- 65% of energy is wasted in electricity transmission – Arlington in particular has made great strides in improving the grid to avoid these losses, and is more than

willing to share knowledge and methods.

- Example from Roanoke: Business Coalition. The mission of the Coalition was to identify and implement environmentally sound business practices. These practices included the development of sustainable business plans, the tracking of carbon emissions, recycling, and mentoring other businesses in the community with regards to sustainability practices. In 2008, the coalition announced a goal of 20% carbon emissions reduction collectively over a period of five (5) years (an average of 4% per year).
- Perform a community-wide analysis of commercial properties to determine solar capacity of existing commercial roof space.
- From Blacksburg: Incentives for Commercial Energy Upgrades: Establish incentives, financing tools, and other resources that would enable local businesses to cost-effectively pursue energy efficiency upgrades in their buildings and operations.
- From Blacksburg: Raise the profile of all types of renewable energy by offering information (online resources, tours, workshops, community discussions) regarding renewable energy potential and opportunities in Hampton.
- From Blacksburg: Perform a community-wide analysis of municipal buildings and public properties to determine sites that might be suitable for a municipal solar array or solar water heating system.
- Change school bus routes to eliminate left-hand turns (UPS uses this to save millions of gallons of fuel per year). Possibly do this for city buses as much as possible also.

Possible funding sources

- Loans from city residents
- Loans from foundations
- Local residential utility tax
- City annual capital funds
- Federal and state resiliency grants
- Bank and solar company financing
- Talk to local committed wealthy individuals about startup of offshore wind company
- Cost savings from cutting city energy cost could be utilized to fund other resiliency programs.

Sample goals:

Arlington: The Plan establishes the framework for reducing greenhouse gas (GHG) emissions in the County from 2007 carbon emissions level of 13.4 mt CO₂e/capita/year to 3 mt, a reduction of over 70%.

Blacksburg: The long-range goal, established by Town Council in 2007, is to reduce community-wide greenhouse gas emissions by 80% below 1990 levels by 2050.

Roanoke: Reduce greenhouse gas emissions from municipal operations by a total of 12.5% over a 5-year period between January 1, 2009 and December 31, 2014. Also established a goal to reduce community-wide greenhouse gas emissions by 10% over a 5-year period during the same time frame