

October 24, 2022

Members of the Energy and Environmental Action Plan Task Force:

We appreciate the efforts of the Energy and Environmental Action Plan Task Force to create the current draft Action Plan. The present draft rightfully covers many bases – buildings, transportation, renewables, climate equity and climate adaptation. Because buildings compromise 59.5% of our city's energy use, our focus is upon Section B of the plan. If Alexandria does not get this part – the most difficult part—right, we will never achieve our 2030 goals.

In the building sector we need to accomplish two basic things in the next seven years: we must halve the emissions of existing buildings and we must make all new buildings net zero energy buildings. If we cut back on one of these efforts, then we must become more stringent with the other. It is that simple.

The Action Plan acknowledges that, except in the case of DSUP's and City-owned buildings, the City cannot simply mandate these goals. A strong Green Building Policy, promotion and education on the benefits of green banks and PACE are good, but owners will only act when they have a financial incentive to do so. It is the incentives piece which will determine the success or failure of the whole Action Plan. The city must make the cost of ownership of a building equal or lower for the owner/developer in order for him or her to do the right thing.

Getting owners to that tipping point will take a lot of money. Costs associated with halving energy use in existing homes can run between \$25 and \$50/sf, depending upon size and complexity. Those numbers go down with larger and simpler commercial buildings. For example, an upgrade to Passive House level performance for a standard 20-year Level 3 renovation of a multifamily apartment building would run around \$15/sf. The greatest task for the City, and for the new City Climate Officer, is in determining where the tipping points are and how to incentivize these kinds of investments. Below are more specific questions and comments regarding the various pillars of the effort to reduce GHG in Alexandria buildings.

B1.A: Support opportunities for a City or regional green bank.

Will the City back the bank financially? How does the city plan to make this happen at a meaningful scale? Have the consultants evaluated what percentage of GHG reductions a green bank can effectively back and at what cost? The report mentions there are over \$800,000,000 in green bank loans in place around the country today. That works out to about \$2.40 per person or \$6 for the average household. We have a long way to scale up if this is going to make a dent in our GHG emissions.

A promising alternative might be to look into the Inflation Reduction Act (IRA) provision for a \$24 billion [national green bank](#) administered by the EPA.

B1.B: Promote C-PACE financing

C-PACE financing is great, and particularly so in these times when interest rates are rising, but what will make local commercial building owners take advantage of it? None have done so to date, and it has been on the books in Alexandria for two years now. The Action Plan speaks of education and promotion, but how far will that go without other incentives for taking advantage of CPACE here?

New York and Washington are benchmarking buildings' energy use and imposing fines for non-compliant buildings; that is the driver of C-PACE projects in those cities. Alexandria cannot legally do that. Has the task force investigated the feasibility and legality of benchmarking all buildings and requiring letter grade scores at the building entry, as NYC is doing? Shame and praise, coupled with education and promotion, might get more traction.

B1.C: Establish an incentive program(s) that encourages Green Building renovations of existing buildings

As discussed above, this is the key piece. What would the program look like? Has the city evaluated where the incentives will come from? Has the City evaluated how much in dollars per residence or commercial building will be needed to get building owners to make the decision to cut their emissions by 50%? We understand that Ithaca, NY has begun just such an incentive program. Has the Task Force investigated how their program works?

The Inflation Reduction Act has authorized significant funds for retrofit programs in cities. Has the Task Force investigated this?

B-2.A: Support compliance with the City Green Building Policy

The draft Action Plan states: "Compliance with the City's Green Building Policy has been fundamental to reducing greenhouse gas emissions from new private development." The opposite is true. The current Green Building Policy's only building-related energy requirement is LEED-Silver certification. In recent studies in [Chicago](#) and [Washington, DC](#), LEED buildings have been demonstrated to perform below basic code buildings from an energy standpoint. In other words, the current Green Building Policy essentially codifies BAU construction. When the Planning Commission and the Environmental Policy Commission have asked developers to create high performance buildings at North Potomac Yards, at Landmark, and most recently at the Mirant site redevelopment, developers have used the GBP against the City, stating that they are only required to meet LEED-Silver certification. Until the Green Building Policy is amended to require specific Energy Use Intensity (EUI) maximums for each building type, the policy will remain worthless from an energy standpoint. Case in point: Hilco stated last summer that the EUI of their buildings will be no lower than 45 kbtu/sf/yr, when Passive and other high-performance buildings use around 20-25 kbtu/sf/yr. Those extra GHG emissions are now locked in for the life of those buildings, thanks to the current GBP.

The draft plan further states: "Green buildings tend to be more complex and incorporate newer technologies, which can lead to higher design and construction costs than less sustainable buildings." This statement may have been true ten years ago, but it is not true today, on two counts. Architects and builders are now creating Passive and high-performance buildings with proven off-the-shelf products, and they are doing so in many cases at or below the cost of standard construction. Anyone who questions this might want to listen to our [BuildOurFuture webinar](#) with Tim McDonald, an affordable housing developer in Pennsylvania. Our upcoming webinar on November 4 with Dattner Architects, a developer of high rise affordable Passive House buildings in New York, will further explore why high-performance buildings make sense not only from a climate standpoint but from an investor's standpoint. Incentives recently passed in the Inflation Reduction Act of up to \$5,000 per home or multifamily unit for achieving Zero Energy Ready Home certification further make the case for high performance, low EUI buildings even stronger.

An amended Green Building Policy, to be relevant to the task at hand, should include not only EUI requirements for individual building types (e.g. commercial office, multifamily, etc.), but also requirements covering site-wide energy demand and emissions, site-wide district energy, on-site renewable energy and electrical storage, and building-to-grid integration. These topics are covered

in depth in [the NREL Guide to Energy Master Planning of High Performance Communities and Districts](#) and the [Advanced Energy Design Guide for Multifamily Buildings ~ Achieving Zero Energy](#).

B2.B: Design and implement a program to support residential and commercial energy efficiency and beneficial electrification.

We applaud this program but question whether it should be a stand-alone program or be integral to the incentives program under B1.B. This might eliminate duplication of staff, stovepiping, and confusion among the public as to the two programs.

RMI is completing a pilot decarbonization education program: “Electricity Cohort,” of which Alexandria was a part. Are there takeaways from that that could be applied here?

B-3.A: Increase energy supply from resource recovered gas and hydrogen

We question whether setting up such a pilot program for “renewable” gas is the highest and best use of City resources. It is true that the City today cannot ban use of gas in buildings. But is that a reason to encourage development of a new gas industry, one which continues to put GHG emissions into the atmosphere? Natural gas is natural gas; to call it renewable is misleading. Further, the market trends indicate that the growing electric heat pump technology will continue to drive down natural gas use.

B-4: Accelerate implementation of all feasible decarbonization measures for City-owned buildings

This is the one lever the City has full control over and it is admirable and absolutely necessary if the City is to remain true to its 2030 commitments, and in the process set an example for its citizens. But we should not delude ourselves that this is more than a drop in the bucket regarding the reduction of total Alexandria GHG emissions.

Again, we appreciate the time and effort you have put into creating this document, and we ask you to explore the links we have included and consider our concerns in the final draft. Most importantly, we urge you to set the Action Plan’s priorities fully in line with the actions that make the most difference in GHG reductions: dealing with our existing buildings and new construction.

Sincerely,

Scott Barstow

Stephen Koenig

David Peabody

Build Our Future

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