

## Selectman's Energy Conservation Committee

### Review of the Proposed design for the Department of Public Works

Hi, I'm Steve Kropper, secretary of the ECC. The ECC very supportive of a new DPW building, mindful of the cost in delays and focused narrowly on our energy oversight mission.

You may be pleased to hear that your Energy Conservation Committee has no opinions on the color of the carpet, the selection of exterior materials, or the proper French pronunciation of certain architectural features. However, we do have strong opinion and conviction on energy matters.

The ECC believes that meeting the state building code and LEED standards does not adequately address energy cost concerns. We are also aware that significant savings to construction and operating costs are available through integrated design. Following ECC scrutiny, the proposed heating system was changed just eight weeks ago, AFTER the building design was settled. We have not seen evidence that the building's energy usage has been properly addressed. We have expressed this concern to PBC and the architects, to little effect. We would like that to change. We believe that the ECC needs to be more closely involved in the design process to provide the DPW building with better energy performance than the Town's other recent building projects.

An appropriate approach to energy design would have two additional components, beyond the approach taken to date on the DPW project.

First, based on best practices in building design, PBC should set a maximum design energy usage for each of the spaces. This can be a value in Btus or in dollars. We recommend 154,000 BTU/SF for the administration building. This ceiling should be compared to the results of the energy models run by the architects and engineers as design progresses.

Second, the architects and engineers should examine the full range of energy-conservation designs, from changes in building features (e.g., day lighting, shading) to specifications of materials and equipment (e.g., daylight-sensitive lighting controls, higher insulation levels, reflective roofs and paved areas, higher-efficiency windows, high-efficiency HVAC equipment) to energy generation, to integration of the options, to identify items and combinations that are cost-effective for the Town over the building's design life, taking into account the available utility conservation incentives.

If the current A/E team cannot do these analyses, the PBC should ensure that adequate expertise is added to the team, perhaps through the utilities' new-construction conservation program. Without this information, the ECC cannot determine whether the design would saddle the Town with higher-than-necessary energy costs. Experience at LHS, Diamond, Cary Library and Harrington has demonstrated that the importance of proper commissioning of new and renovated buildings will be required to keep operating costs (and comfort levels) as projected. Installing the right equipment will do us no good if the settings on the controls are wrong, the thermostats are improperly positioned, and various pieces of equipment do not communicate properly. PBC should build appropriate commissioning into the construction specifications for the DPW and all future projects.

Regarding the decision to heat, or not to heat the garage, we find the discussion on both sides to be rife with rumor, weak science and passionately held on the job experience. Until this changes, we recommend going with the option that costs less to build and operate.

Thank you.

Steve Kropper, Secretary  
Selectman's Energy Conservation Committee

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