



Raging Inexorable Thunderlizard for Change

Talk about an Opportunity

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If you are looking for evidence that the green revolution is underway, do it now. On May 17 of this year, the Clinton Foundation announced a \$5 billion effort to retrofit buildings in 16 major cities around the world. Three of those cities are in the U.S. and one is in Canada. London and Johannesburg RSA are included. Colleges, universities and K-12 schools in those cities are not only allowed, but encouraged to participate.

Imagine what is now possible!

The Clinton Foundation operates what may be the world's largest purchasing consortium. It secured the \$5 billion credit commitment from five of the biggest banks in the world and from four premier energy services corporations (ESCOs): Johnson Controls, Honeywell, Siemens and Trane. The program includes the private and public sectors, and will work with minority contractors and local ESCOs. The goal is to improve building efficiency and attack the source of more than 50 percent of greenhouse gas emissions. It begins with an energy audit and follows with discrete steps known as *energy conservation retrofits*.

What Is an Energy Conservation Retrofit?

It involves incorporating energy-saving devices, technologies, materials and tactics into older buildings to make them more energy efficient and thus more economical.

What Is Energy Performance Contracting?

It is a construction method that allows a building owner to make energy-saving improvements, using the saved utility costs as the means to pay for those improvements. In our instance above, the outlays are provided by the banks. The cities will then pay back those outlays (along with the interest) using the savings from the *guaranteed* reduction of energy consumption. The building owner

typically issues a Request for Qualifications (RFQ) and then evaluates responses, ultimately resulting in negotiations with the highest evaluated respondent (usually an ESCO). The ESCO and the building owner then do a detailed analysis of energy usage, categorization of the building inventory, identification of retrofitting options, cost-benefit analysis and prioritization of potential projects. Upon agreement, the work is performed within the terms of the financial arrangement. During construction, monitoring equipment is put in place to measure the integrity of the work against agreed expectations. The building owner recovers the cost through the savings enabled by the improvements. The owner's protection is the contractor's guarantee that the savings will at least equal the payments to service (principal and interest) the related borrowing for the cost of the improvements.

Setting Priorities

There will be many different approaches to doing this, but we will likely end up with three main ones. *Quick fixes* get the low-hanging fruit such as lighting retrofits, occupancy sensors, incandescent lamp replacements and device conversions from high- to low-voltage. *Routine upgrades* include replacing roof insulation, windows, lighting controls, data acquisition systems, hot water systems, pumps, fans and motors. *Capital projects* might require replacing chillers, central controls and transformers. It could mean replacing air-cooled condensers with cooling towers or implementing central plumbing for hot water. It could also mean power factor correction capacitors and peak load-shaving technologies.

Commissioning and Ongoing Maintenance

To get the most out of these initiatives, it will be important to properly commission the work, train the maintenance staff and secure long-term funding for training and operations. The promised benefits must endure.


Presidents' Climate Initiative

The green revolution may be happening on your campus too. Recently, twelve institutions have signed the American College & University Presidents' Climate Commitment. These campuses have committed to comprehensive planning for climate neutrality. As of last count, presidents and chancellors at 284 institutions have also signed. Higher education is responding!

In the Private Sector

General Motors and Ford Motor Company are speeding up production of their electric cars. Wachovia Bank announced it will build 300 LEED®-certified banks throughout the U.S. (LEED = Leadership in Energy Efficiency Design.) Dell revealed that it will begin building the "greenest P.C. on the planet." Coca-Cola® has committed to increasing its recycling of water to conserve resources worldwide.

Some of these announcements seem unlikely and, for some, I am sure they are unimaginable. Corporations are actually competing on environmental issues! Who would have thought it? And so quickly! Wal-Mart, in partnership with General Electric, has caused more change in the last six months than all the rest of the world's activity in the prior 10 years.

I say again, baby steps do count. What are yours on *your* campus? Remember: you, too, can do great things! 



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