A Decade of ‘No Growth’ in Energy and Water Use is Good News for Columbia’s Economy

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As it has for the nation as a whole, Columbia’s electrical usage has remained flat for the past decade. Even with a steadily growing population, Columbia’s per capita consumption declined from 32 kWh/d in 2006 to 27 kWh/d in 2015. This remarkable achievement may be a by-product of the adoption of new technology as well as community efforts to conserve and utilize electrical energy more efficiently.

However, where the Rubber Meets the Road …

Despite this encouraging news, Columbia failed to achieve a reduction in greenhouse gas emissions.

A decade ago, Columbia’s City Council had called for a program to achieve a modest 7% reduction in greenhouse gas emissions over the period, 2000 to 2012. Instead, despite the purchase of renewable energy for Columbia’s energy ‘portfolio’, greenhouse gas emissions had increased by 13% as of 2014.

Why did this progressive increase in emissions occur even as electrical energy consumption remained static? And how can we reverse this trend? The novel Water and Light Advisory Board, ‘2015 Report to the People and Council’ offers some specific guidance.

Columbia should:

• Enhance promotion of solar (both photovoltaic and thermal).

• Enhance promotion of heat pump systems.

• Enhance promotion and study the impact of a move to electric vehicles.

• Pursue city-owned photovoltaic installations.

• Define sustainability goals and track metrics.

• Continue to examine our rate philosophies and our rate structures (e.g., conservation, simplification, time-of-use, etc.)

• Set a goal of being one of the first sustainable water and electric utilities in the U.S.

• Have each council member attend one W&L Advisory Board meeting each year.

• Enhance utility assistance programs (CASH, HELP) and energy efficiency programs.
With direction and encouragement from our City Council, Columbia’s electric and water utility can be enabled to achieve dual goals of transitioning to those energy sources that contribute the least to the production of greenhouse gases and to encourage the most appropriate uses of our drinking water resource.

Large, locally-sited and municipally-owned photovoltaic installations will not only enable Columbia’s utility to disengage from costly long-term contracts for the purchase of coal-generated electricity, it will result in more of the dollars spent by Columbia residents for power to be recovered within our community. Increasingly, in the future, Columbians should both own and control the means of power production locally as well as benefit financially from its consumption and sale.

In seeking to optimize financial benefits to the citizens of Columbia, Council must also clearly define our environmental goals and utility rate philosophies. They should modify our utility rate structures so that we maximize incentives to encourage - and reward - conservation and innovation in energy use. Not only should ‘cost-of service’ rates apply equally to all constituencies in our community, but those consumers that contribute to significant peak demands should bear the financial burden of the excess generation capacity and external contractual purchases required to meet those excursions.

The people of Columbia are fortunate to have Columbia Water and Light. But just because the City owns these excellent public utilities doesn’t mean that individuals can abdicate personal responsibility. Transitioning to sustainable water and energy systems will be one of the greatest challenges of our time—not only for water and energy systems professionals, but for all of us who rely on and benefit from the use of these systems.

Columbians need to step up to this challenge today, so that future generations can continue to enjoy the safe, reliable energy and water that we currently take for granted. To do so may require us to move beyond the mindset of having all the electricity and water we could possibly want, at any and all times, for any reason at all, or for no reason whatsoever. Rather than forcing our utilities to maintain the illusion of limitless resources and meet every conceivable future demand, we Columbians need to moderate our demands as part of our effort to develop sustainable, affordable sources of water and energy.

If we can learn to use our resources more wisely and minimize the frequency of multi-million dollar utility system capacity expansions, Columbians will be richer for it in the long run.