

Chard on the Green? S.F. in a post-oil future

Imagine shelves bare because of gas prices

Tim Holt

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Acres of chard and lettuce in Golden Gate Park? The Marina Green with community gardens? Wind turbines on top of the Bank of America Building?

Welcome to the post-oil future.

Depending on which expert you believe, we have already reached or will reach in the next few years the point when worldwide oil demand starts to exceed supply -- and gas prices really go through the roof. If cities like San Francisco are to survive as viable places to live, they will have to redesign themselves in ways barely imaginable now.

It's hard to overstate the impact the looming oil squeeze is going to have. A lot of people are going to be left stranded in the suburbs, and a lot of grocery store shelves are going to go empty as supply lines collapse due to rising fuel costs. Many folks are going to lose their jobs as our oil-dependent economy withers. But there will be a greater need for farmworkers, as petroleum-fueled factory farms give way to smaller, labor-intensive operations. In general, human energy will replace machine energy, and there will be an increased demand for craftspeople with time-honored skills: shoemakers, soapmakers, glassblowers, seamstresses.

It will be a wrenching transition as we go from a passive consumer society to one in which each of us will need to play an active role in providing our basic needs. It's easy to see why there are already predictions of economic chaos, widespread violence and looting, and the imposition of martial law if we fail to begin planning now for a post-oil future.

"Without timely mitigation, the economic, social and political cost (of spiraling fuel prices) will be unprecedented," the U.S. Department of Energy warned in February, before the hurricanes and the big run-up in oil prices.

Denial, resistance, and placing our hopes in techno-fixes like hydrogen-fueled cars won't delay the day of reckoning -- it will require fossil fuels, after all, to produce hydrogen -- but they will keep the fantasy of cheap and easy mobility alive for a while longer.

The reality is that in the very near future we will no longer be a mobile society. We are already seeing the

beginnings of this, with rising fuel prices squeezing commuters, taxi drivers, independent truckers, and the entire aviation industry. The post-oil era will see our transformation from a transient society to one that focuses on home and neighborhood. Sprawl development will give way to compact, walkable environments. Suburbs will disappear altogether. Those in direct proximity to cities will be replaced by farms; those farther out will gradually be reclaimed by nature.

So, in many ways, the end of oil could be a very good thing for American society, prompting changes that will strengthen communities, humanize our cities and create a healthier population.

Cities, even individual neighborhoods, will need to become more self-sufficient. Agriculture will play a much more important role in everyday American life. Cities such as San Francisco will have to be creative in finding ways to feed their populations.

Richard Register of Oakland's nonprofit Ecocity Builders has spent the past 30 years writing and speaking on the subject of environmentally friendly and energy-efficient cities. With the looming oil crisis, his writings have taken on a greater sense of urgency. Nowadays, he grapples with the problem of how energy-depleted cities can provide food, water and other basic necessities for their populations. The creative touches that adorned his previous writings -- the rooftop tennis courts, the uncovered creeks meandering along urban streets -- have given way to the more practical: community gardens and greenhouses.

In describing the self-sufficient neighborhoods of the future, Register speaks of "urban fractals," neighborhoods that will contain in microcosm all the elements of entire cities, including housing, jobs, schools, shops, entertainment, and access to nature -- neighborhoods that minimize the need for auto or even transit use.

"Today, when you look at a section of a city it's like looking at a person with an arm or leg missing," Register observes. "In the future, neighborhoods will read as an entire organism."

How can San Francisco's neighborhoods be retrofitted for the post-oil era?

The basic principles are fairly clear: Bring jobs and housing in proximity, move away from auto-oriented sprawl. But the details will have to be worked out over time. For starters, it's impossible to foresee just how large a population the Bay Area can sustain from local and regional food sources. This will depend on how much urban land is available for cultivation, and how much food can be imported (using energy-efficient rail) from the nearby Central Valley and farming regions directly south of the Bay Area.

How tall can buildings be in an energy-conserving era? What sort of local manufacturing base can be developed?

The goal will be local self-sufficiency, but ideas for achieving it will come from all over the world. In Kuala Lumpur, architect Kenneth Yeang is designing energy-conserving skyscrapers. With functioning windows and an outer layer of movable louvers, they allow natural ventilation in the summer and provide an extra layer of insulation in the winter. Paolo Soleri's work in progress, the futuristic Arcosanti village in Arizona, features a compact, pedestrian-oriented environment that makes minimal use of fossil fuels and maximum

use of solar energy.

Dutch cities have created hundreds of "woonerfs," or neighborhood streets, designed as places to live and not just to drive through, festooned with gardens, street furniture and artwork.

Bay Area cities can learn a great deal from the experience of Havana, whose population faced slow starvation with the collapse of the Soviet Union, its principal trading partner. The country had to figure out how to quickly expand and diversify its agricultural production, without the cheap fuel it had previously imported.

In 1994, the government created an urban agriculture program that by last year had enabled Havana to grow its entire vegetable supply and a substantial portion of its rice and meat. This was accomplished by a resourceful effort that included placing raised growing beds over paved lots, growing food in city parks, and encouraging virtually every Havanan with any yard space to become a backyard gardener.

All of these approaches can be readily applied in the Bay Area, even without the spur of a dictatorial government. Vast stretches of parkland are already in public hands. Even public streets, as Register suggests, can be converted to cropland by replacing some traffic lanes with strips of community gardens. The Bay Area already has a start with its scattering of community gardens and small plots in some public schools.

Energy-draining water and sewage systems will have to be substantially revamped. Rainwater collectors will begin showing up on the roofs of buildings. Inside, compost toilets can provide fertilizer for urban gardens; filtered gray water from kitchens and bathrooms can be used to water them.

All this is in the talking and thinking stages in the Bay Area, which is still a long way from developing a comprehensive strategy for local self-sufficiency. But there are scattered efforts: Berkeley has created a Food Policy Council to promote local food production. An Office Of Sustainability in the Oakland mayor's office has the same goal. At least four citizens' groups are meeting regularly on both sides of the bay to discuss the region's post-oil future.

Post-oil awareness is spreading throughout Northern California. Citizen's groups have formed in Laytonville, Gualala, Philo in Mendocino County, and Nevada City in Nevada County. The most advanced planning is being undertaken in the little Mendocino County town of Willits, just east of Fort Bragg, where 60 residents have formed study groups to work out strategies for providing food, water, energy and health care for a population of 14,000. They estimate they'll need to convert all 4,000 acres of the town's vacant land to cultivation if they're going to feed themselves.

In the coming months, you're going to be hearing and reading some pretty scary stuff about the oil crisis. It may in fact take predictions of mass unemployment and starvation to get Americans and their political leaders past the denial and techno-fantasy stages.

But we shouldn't let the horror stories overshadow the benefits to a society weaned from oil.

We could well have stronger communities, with neighbors who develop bonds based on mutual

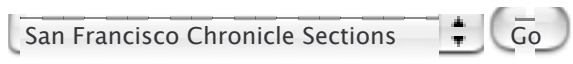
interdependence. By replacing isolating auto travel with walking and bicycling, we can build cohesive communities and will certainly help trim down an obese population. Not having to warehouse autos means we'll have more room in our cities for human spaces, for shops and cafes and schools. Streets and neighborhoods will be increasingly places that people live in, not just drive by. We'll have fewer gadgets and toys and, just possibly, more time for each other.

The Bay Area has long been an unofficial capital of the mobile society -- both a destination and a jumping-off point for fortune-seekers, immigrants and folks who couldn't fit in elsewhere. In the coming post-oil era, the city will become a new kind of destination: the end of a restless trail, a place to settle down and call home.

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