

Developments in space-sourced energy systems will have been under way well before 2080. In fact, the Defense Department is already thinking about such a system. The National Security Space Office released a study in October 2007 entitled "Space-Based Solar Power as an Opportunity for Strategic Security." It states:

The magnitude of the looming energy and environmental problems is significant enough to warrant consideration of all options, to revisit a concept called Space Based Solar Power (SBSPP) first invented in the United States almost 40 years ago. The basic idea is very straightforward: place very large solar arrays into continuously and intensely sunlit Earth orbit, collect gigawatts of electrical energy, electromagnetically beam it to Earth, and receive it on the surface for use either as baseload power via direct connection to the existing electrical grid, conversion into manufactured synthetic hydrocarbon fuels or as low-intensity broadcast power beamed directly to consumers. A single kilometer-wide band of geosynchronous earth orbit experiences enough solar flux in one year to nearly equal the amount of energy contained within all known recoverable conventional oil resources on earth today.

By 2050 early installations of this new solar technology should be in place, and the crisis of 2080 will propel development forward. A significant drop in energy costs will be essential to the implementation of the robotics strategy, which is, in turn, essential to maintaining economic productivity during a period of long-term population constraints. When population doesn't grow, technology must compensate, and for this technology to work, energy costs must come down.

So in the United States after 2080 we will see a massive effort to extract energy from space-based systems. Obviously, this will have begun decades before, but not with the intensity required to make it the primary source of power. The intensifying crisis of 2070 will move the project forward dramatically. As with any government effort, the cost will be high, but by the end of the twenty-first century, when private industry starts taking advantage of the vast public investment in space, the cost of energy will drop sub-

stantially. Robotics will be evolving quickly and dramatically. Think evolution of home computers between 1990, when most homes and still did not even have e-mail, and 2005, when literally billions of were sent daily around the planet.

The United States will be one of the few advanced industrial countries experiencing a temporary surplus in its population. The economic iverive of the previous fifty years—encouraging immigration by all possible—will have run its course, and it will have become the first rather than the solution. So the first step toward solving the crisis limiting immigration, a massive and traumatizing reversal that will crisis, just as the shift toward attracting and increasing immigration fifty years before.

Once immigration has been halted, the United States will have 1 age the economic imbalance caused by its population surplus. Layr unemployment will strike disproportionately at the working population, particularly the Mexican population in the borderlands. Serious fore iver issues will then arise. Add to this picture soaring energy prices, a the catalysts for the crisis of the 2080s are in place.

#### MEXICO'S ECONOMIC DEVELOPMENT

Mexico's economy is currently ranked fifteenth in the world. Since nomic meltdown in 1994, it has recovered dramatically. Mexico's p GDP, measured in terms of purchasing power, is a little over \$12,000 which makes it the wealthiest major country in Latin America, ar Mexico in the ranks of developed, if not advanced, economies. And to remember that Mexico is not a small country. It has a population of about 110 million, making it larger than most European nations.

Will Mexico's economic strength increase substantially over sixty or seventy years? If it does, considering its starting point, Mexico then become one of the world's leading economies. Given Mexico's political instability, outflows of population, and history of economic ivers, it is difficult to imagine Mexico in the top tier of nations.