COMMENTARY

Socket to California

By VERNON L. SMITH and LYNNE KIESLING

Despite California's status as the world's fifth-largest economy, Arnold Schwarzenegger finds himself in a position more similar to governing occupied Iraq, a resource-rich but cash-starved state. Mr. Schwarzenegger rode to victory in large measure due to anger over Gray Davis's handling of the 2001 energy crisis. The governor now has a rare political opportunity to learn from the lessons of his predecessor's downfall while addressing the critical deficiency of the California energy system: unfair subsidy to costly peak power use from off-peak users.

In running for governor, Arnold promised that his administration would not be "government as usual." We offer a series of proposals -- based on more than a decade of economic experiments -- in the hope that California won't follow sterile economics as usual.

In California and elsewhere, the demand for energy at peak levels is more than twice the demand of off-peak levels. Yet the additional cost of producing a kilowatt of energy at peak demand can be three to 10 times the cost at off-peak demand. In a rational world, consumers could pocket this difference in price variation by shifting energy usage away from peaks and toward troughs. But current policy unfairly forces consumers to pay rates based on the average hourly cost of energy and industry capital investment. As a result, peak utility cost is much higher than what consumers pay, and off-peak and weekend cost is much lower than what consumers pay. The utility earns an abnormally high profit from off-peak consumption and loses money from peak sales. Peak period sales are thus subsidized by the implicit transfer of funds from the utility's high profit on off-peak users. In effect, utilities profit on energy needed to dry clothes at 6 a.m. and subsidize clothes dried at 4 p.m.

Relieving this disparity requires a significant shift in thinking and corrections in the regulatory environment. Under the current regime, local utilities enjoy a government-protected monopoly on energy and the wires for delivering it -- bundling the sale of energy with an additional charge for the rental of the facilities and wires leading to homes and businesses. Divesting these separable activities -- the market for energy and the market for delivery -- would create a competitive environment that benefits customers while opening opportunities for new market entrants and the development of new technologies.

The following proposals stem from the separation of energy and delivery and suggest simple regulatory changes that -- given California's budget constraints -- require effort but not state cash. Unlike regulated utility expansion and development that depend on taxpayer capital or increased utility rates, these proposals require entrepreneurs to risk their own capital.
• **Option 1:** Maintain a local, regulated wires delivery system and set a future date for all of the local utilities' customers to be provided energy by an alternative retail provider. Energy companies then compete for customers. Those customers who do not choose a provider by the target date are assigned a provider in proportion to the number of customers each competing company has signed up. This is the model Georgia followed for restructuring retail natural gas, and it has the advantage of defining an endpoint. As in Georgia, customers would be served by a single local, regulated delivery company and a number of competing retail energy supply companies.

• **Option 2:** Require local utilities to create separate companies for their energy and wires businesses. Then allow free entry of self-financed companies to compete only against the local utility's energy business. This scenario builds competition by exposing a single initial firm to entry pressures -- forcing the incumbent to price energy low enough to discourage competing entry but still allowing for new entrants to compete on price, service or alternative provisions such as "green energy." This approach stretches the restructuring process, providing a bridge between the current and future framework. It requires stringent oversight, however, to make sure competing suppliers have the same access to the regulated wires network as the incumbent supplier.

Under any of these options, competing energy suppliers also should be free to bypass both the distribution and transmission system wires by locating distributed generation sources -- small, local generators that can efficiently power homes or office buildings -- near the end-use consumer. Distributed generation provides for new developments motivated by potential profits while further relieving grid congestion, disciplining transmission prices and reducing dependence on grid capacity.

Customers are long overdue to benefit from the new technologies that can be developed when innovators are free to devise novel services, approaches and technologies -- and when energy companies recognize the profit opportunities resulting from a new business model. And while it will not be easy to institute major change in a charged political environment, there are opportunities for Mr. Schwarzenegger to work within the current regulatory scheme to provide improvement and serve as a bridge to delivering more vibrant benefits to Californians. These second order, less desirable solutions can be instituted in advance or alongside the more challenging changes required to create a dynamic, decentralized energy environment.

• **Option 3:** Allow wholesale prices to be passed on to any retail customers by giving all customers a choice between a fixed average price or one of the many time-of-use pricing program technologies, such as remote appliance switches, time-of-use metering or load management systems.

• **Option 4:** Allow customers to supply their own energy through a distributed generation source without charges for the utilities' wires and infrastructure costs. If a customer uses grid wires only some of the time, the cost should be prorated hourly, giving the customer credit for hours off the grid. This requires utilities to meet the opportunity costs created by new technologies, and it removes the utilities' ability to use regulatory cost-averaging rules to block new cost-saving sources of power. This model has the important effect of making the transmission and the distribution grid contestable, and would relieve transmission congestion.

Any of these steps moves California closer to a fairer, more dynamic energy market -- but is only a beginning. Ending the subsidy of peak power users depends on a regulatory structure that allows for entrepreneurial innovation coupled with complete retail consumer choice. California -- known for its liberal and environmental affinities -- is an unexpectedly ideal state for the suggested, market-driven solutions to its energy crisis. Committed environmentalists will recognize that consumer choice promotes conservation, and that a better utilization of current energy infrastructure will result in less energy consumption and power plant construction. Those whose sympathies run counter to business can seize the activist opportunity to reduce the regulatory incentives the power industry naturally follows: It increases profits only by adding to its rate base through new power plant construction. Actors and celebrities who have taken to driving sub-compact hybrid vehicles as an environmental statement can...
similarly popularize load management and other conservation systems, making the development of new
technologies more attractive. Those who value equality will understand the benefits of a system that
allows consumers to control their energy costs while eliminating subsidies to peak energy users.

While more can and should be done, Mr. Schwarzenegger has the opportunity to leverage a historical
confluence of events -- a dramatic political win, enduring resentment over the energy crisis, and a
solution attractive to a range of stakeholders -- to craft a dynamic energy system that puts customers first
while setting the scene for investment, innovation and development.

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