



IF THEY CAN BUILD IT THERE, WHY NOT ANYWHERE?

All they needed was Sinatra crooning a variation of New York, New York: “If they can build it there, they can build it anywhere.” The crowd — about 300 people gathered under a tent in downtown Burbank, California on June 2 — would have gone wild. That’s because those present — public officials, electric and water utility employees, and power industry professionals — were celebrating a remarkable accomplishment. More importantly, what they did just might be repeatable elsewhere.

What they did was build a new baseload power plant smack dab in the middle of one of the most prestigious, prosperous, scenic, historic and environmentally sensitive communities in the United States. They did it with the support and encouragement of a broad coalition of state, regional and local authorities. The project began at a time when consensus all but dictated that few, if any, power plants would ever be built by investor owned or government operated utilities in California. The plant will extend the ability of the six municipal utility owners to supply reliable and affordable power to their 250,000 customers for decades to come. And it will provide an effective hedge against ongoing price uncertainties in the electric market.

Burbank Water & Power (BWP) conceived the Magnolia Power Project (MPP) in early 2000 after determining it needed to repower or add generation to cope with future uncertainties. Because BWP’s need for 50-75 MW would be most economical if provided by a larger unit, partnering with an independent power producer was an option. But BWP approached its fellow members of the Southern California Public Power Authority (SCPPA) with the prospect of building and owning a 250 MW project, thus allowing each to benefit from lower initial cost and higher operating efficiency. The other five cities decided to participate, and in the spring of 2001 subscription was completed and licensing activities were underway.

The six cities — Anaheim, Burbank, Cerritos, Colton, Glendale and Pasadena — each own shares of the project ranging from 4 percent to 38 percent. Each also provides its own contracted fuel supply and schedules its own output with BWP, the Magnolia operator, for every hour of the day. Each may use its power as it wishes, meaning it can take its power as needed or sell it into the wholesale market.

Such a flexible and advantageous off-take provision is but one of many aspects of MPP that set it apart. Magnolia’s technical details are just as impressive. At its heart is an advanced gas turbine combined-cycle unit, equipped with supplemental firing in the heat recovery steam generator and steam injection in the combustion turbine to increase power from a nominal 242 MW up to 310 MW.”

The local water district’s reluctance to facilitate water permitting resulted in a decision to use a state-of-the-art water supply and discharge system that bypassed the need for the water district’s permission. As a result, Magnolia is a zero liquid discharge plant — one of only a few in the nation. Even more unique, Magnolia takes water from Burbank’s municipal water reclamation plant and cleans it to less than 0.042 ppm total

dissolved solids required for the steam cycle, making it one of the first power plants in the world to operate solely on reclaimed waste water. This total water solution will triple BWP’s reclaimed water sales, which will help facilitate system expansion and promote additional revenue.

Between the power demands of the six owner cities and the opportunities to sell power into the wholesale market, Magnolia will operate about 8,000 hours a year at a capacity factor in the range of 80 percent. Compare that to many combined-cycle facilities built in the past decade that operate at levels one-fourth that because of high natural gas prices. And due to its location at a brownfield site near the existing load center, it is not dependent on long-distance transmission.

The 310 MW unit replaces four units totaling 115 MW, yet will only use one-third of the fuel they consumed. Magnolia will produce 50 times less NO_x than the units it replaces and, because oil will no longer be used at the site, SO₂ and particulates will decrease dramatically.

At the dedication ceremony, public officials cited examples of the exemplary community cooperation that went into making Magnolia a reality. Nearby Bob Hope Airport provided much needed lay-down area. BWP General Manager Ron Davis recalled bringing major components from the port at Long Beach through congested neighborhoods. “These were trucks a block long with 66 wheels that had to be shimmed around corners,” said Davis. “We had to let down every overhanging line between Long Beach and Burbank.” He told how Burbank Mayor Jef Vander Borcht was making an introduction for a walk of fame, when along came a truck with parts of trees collected on it from every community it had passed through. It was the sort of temporary inconvenience the communities tolerated to get the project built.

Magnolia’s tag line — An URBAN Solution — describes what has happened in Burbank. “URBAN” is actually an acronym for Utilizing Resources Benefiting Area Needs. Project Manager Bill Hutchings believes the process embodied by the tagline/acronym can be applied in other U.S. locations — both in California and across the nation.

“Potential sites for load-centered urban generation include existing power plants where units have been retired, transmission substations and large industrial facilities served off the transmission system,” he said. Local customers benefit because they become more insulated from power market conditions. Transmission congestion and contingencies are reduced or even eliminated. Local generation provides better control and enhances reliability for the utility. And the infrastructure needed is generally in-place or requires minimal upgrade.

There’s a lesson here for many U.S. communities. If a group of communities can build a new power plant in beautiful downtown Burbank, it seems reasonable to believe it can be done in other, less constrained regions too. What it takes is the realization that new capacity is needed, coupled with technology, ingenuity, commitment and cooperation. Surely none of these are exclusive to Southern California. **PE**