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2 ~~EPA~~ ^{EPMI} Bidding Strategies for Generators

~~EPA~~ ^{EPMI} acts as a schedule coordinator for several generators who are located both inside and outside California.

~~EPA's~~ ^{EPMI} bidding strategies are generally determined by the desires of the ^{individual} generation owners, ^{these owners} ~~to who~~ take into account ~~that~~ variable production costs, operational constraints, costs to transport energy to tie points (usually transmission, losses, & tie meter multipliers), and desired profit margin when determining minimum prices to bid into the CAPX or CAISO markets. Also taken into consideration are sales opportunities in non-CA bilateral markets (non-CA generators) which may ~~also~~ ~~have~~ result in higher net profits from time to time. ~~In addition to identifying costs, acceptable margins, and the most desirable markets,~~ ^{Additionally,} some generators have operational flexibility which allows them to bid some ~~of~~ all of their available output into the CAISO ancillary services

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MARKETS. Non CA generators may be limited in their ability to participate in ancillary services markets because of transmission scheduling requirements ~~under Open Access Tariffs~~ of transmission providers to points of interconnection with the CAISO under Open Access Tariffs. Many of these generators utilize natural gas and ~~create~~ emissions ^{credits} - both of which are subject to daily price changes. During the period of interest (June 1 - Aug 15, 2000) natural gas prices at the SoCal Border increased from $\text{\$/mmBtu}$ on June 1 to $\text{\$/mmBtu}$ on August 15 - significantly increasing variable costs. Generators also take into account the possibility that certain hours may not be awarded under the CAPX and CAISO bidding procedures. Non-continuous blocks of hours can expose generators to significant financial uncertainty in that they are generally a "price taker" in the bilateral or ^{CAISO} supplemental markets. For the unawarded Px hours, Generators take such ^{uncertainties} ~~prices~~ into account when determining their desired profit margins on any hour.

The point congestion adds to the uncertainty for
 non-CA generators and can increase overall
 transmission costs ~~per unit of delivery~~ $\frac{\$}{\text{MWh}}$ per unit of delivery
 power to CAISO interties. CAISO payment timelines
 are greater than a generator's payment timelines for
 variable costs - creating additional carrying costs associated
 with CAISO sales. Generators attempt to schedule
 planned maintenance in hours when market prices
 are expected to be lower ~~avoiding~~ in an attempt
 to avoid ~~any~~ lost opportunities in hours that prices
 are expected ~~to~~ be higher. Overall, EPMI
 bids a small quantities of generation into the
 market, ~~not~~ ~~generator is a single plant~~ for single
 plant generation owners who ~~benefit~~ only benefit when
 their plant is operating and selling energy at
 acceptable margins above their variable costs.