

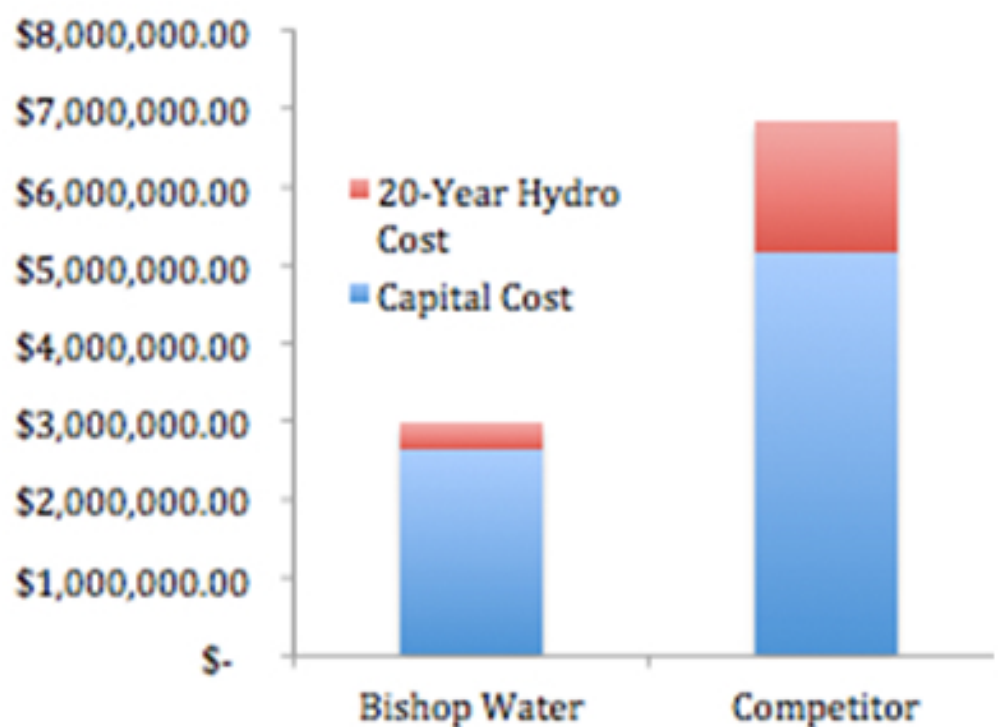
## Energy Usage for BioCord™ versus a Competitor

### Background...

A wastewater lagoon treatment plant was looking at options to upgrade the capacity of the lagoon to handle a higher flow and the growing town. After considering several options, the choice was between Bishop BioCord™ Reactors and a Competitor's attached growth system. In the end, BioCord™ was chosen as the best option for multiple reasons, including lower capital cost as well as lower operating and maintenance costs.

Energy Usage		
Component	Bishop Water	Competitor
Number of units	26	2
HP of each unit	3/4	50
Total HP	19.5	100
Total kW	14.54	74.57
Cost* for one year	\$16,558.15	\$84,920.32

\*Cost assumes \$0.13/kWh



### Differences in Design...

While Bishop BioCord™ Reactors and the Competitor's product are both attached growth systems, they are utilized very differently. While the Reactors can be placed in-situ in a lagoon, the competitor's product needs a separate containment area that needs to be built. Bishop Water uses fine bubble aeration on all their Reactors as this ensures higher oxygen transfer efficiency. While large blowers are quite common, Bishop Water uses individual air compressors. These need less maintenance than large blowers, offer redundancy in case of mechanical problems, and use much less energy. Air compressors offer higher air pressure, which can be maintained over longer distances, while air blowers lose their pressure.