**Advanced oxidation secondary pool-water disinfection**

<table>
<thead>
<tr>
<th>Description of Technology</th>
<th>Energy Saving Opportunity</th>
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<tbody>
<tr>
<td>Advanced oxidation methods are employed to provide secondary water disinfection by using UV light in a process to split O₂ and allow for the formation of disinfecting hydroxyl molecules. By using magnets to assist in the formation of hydroxyl molecules, this technology reduces the UV lighting power consumption necessary to provide the proper amount of secondary disinfection to the pool water.</td>
<td>Sector(s): Residential □ Commercial &amp; Industrial</td>
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<td>Applicability Criteria: Commercial pools, spas, water parks that require secondary UV disinfection.</td>
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<td>Efficiency Improvement: Electricity Savings</td>
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<td>Energy (% Savings Potential: Up to approximately 90% in UV lighting power only</td>
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<td>Demand (% Reduction Potential: None</td>
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**Strengths**

- Simple implementation.
- Reduces chlorine consumption.
- Potential to impact HVAC system energy consumption with air quality changes from chemical savings.

**Weakness**

- Secondary filtration is not required in all commercial pool spaces.
- UV light power consumption in secondary filtration is small relative to primary filtration and pumping systems.

**Third Party Analysis/Previous MTAC Reviews**

NSF 50 - Standard for commercial pool spaces

**Suppliers Known to MTAC**

- Clear Comfort

**MTAC Status**

Acknowledged to have energy savings potential and referred to individual PA for their own EE program consideration

**Market Development Issues**

- **Cost:** $10,000-$30,000
- **Market Risk and Barriers:** None
- **Time to Market:** Currently on market
- **Simple Pay-back: (Years)** Varies