

**Ice Rink Vortex Water Treatment System**

Date reviewed: 04/07/2017

Description of Technology		Energy Saving Opportunity	
Vortex water system saves natural gas and electricity if installed in the existing or new ice rinks. Vortex technology removes air bubbles from the water used in ice resurfacing machine and creates a high quality ice using unheated water. Savings are achieved from the ability to increase brine temperature by 2-3 deg. F and by eliminating the need to heat the water to 140 deg. F (current standard practice).		Sector(s):	<input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial & Industrial
		Applicability Criteria:	Ice Rinks
		Efficiency Improvement:	Gas savings, Electricity savings
		Energy (%) Savings Potential:	Approx. 800 Therms per rink. Approx. 4% of refrigeration electrical energy
		Demand (%) Reduction Potential:	None
Strengths		Weakness	
<ul style="list-style-type: none"> <li>Technology has been tested by other PAs and results are acceptable as to quality of ice and energy savings</li> <li>Southern California Edison, Efficiency Vermont and Enbridge already provide incentives for the vortex water system.</li> <li>385 Arenas already use Realice worldwide</li> </ul>		<ul style="list-style-type: none"> <li>Persistence of savings based on acceptability by customer of this process.</li> </ul>	
Third Party Analysis/ Previous MTAC Reviews		Suppliers Known to MTAC	MTAC Status
Southern California Edison conducted studies on this technology		Realice	Acknowledged to have energy savings potential and recommended to individual PA for their own EE program consideration
Market Development Issues			
Cost:	\$20,000-\$30,000		
Market Risk and Barriers:	None		
Time to Market:	Currently on market		
Simple Pay-back: (Years)	1-2 years. Less if more rinks served per installation		
			