

Drain Water Heat Recovery

Date reviewed: 10/24/2014

Description of Technology		Energy Saving Opportunity	
Drain-water heat recovery (DWHR) systems capture waste energy from warm drain water (i.e. shower, dish washer, or clothe washer) to preheat incoming cold water. This reduces the amount of energy needed for water heating.	Sector(s):	<input checked="" type="checkbox"/> Residential	<input checked="" type="checkbox"/> Commercial
	Applicability Criteria:	Buildings with high usage of hot water	
	Efficiency Improvement:	Preheat incoming water	
	Energy (%) Savings Potential:	Highly variable	
	Demand (%) Reduction Potential:	Highly variable	
Strengths		Weakness	
<ul style="list-style-type: none"> Long service life (10 to 20 years) Easy to install, very low maintenance, and no moving parts There are variety of pipe sizes depending on the needs High potential for water heating savings 		<ul style="list-style-type: none"> Potential for plumbing code issues may need to check with local plumbing enforcement. Even though horizontal applications are possible, only vertical applications of DWHR system are supported by MTAC because there isn't a substantial amount of data to verify the energy saving capability of horizontal applications. Engineering data from initial evaluation shows, when used in a single family home, the amount of energy saved is much higher when the DWHR pipe longer than 48 inches. 	
Third Party Analysis/ Previous MTAC Reviews		Suppliers Known to MTAC	MTAC Status
MTAC member is currently conducting a pilot to substantiate their initial finding regarding the minimum pipe length to be energy efficient.		Swing Green RenewAbility EcoInnovation Technologies	Acknowledged to have energy savings potential and referred to individual PA for their own EE program consideration
Market Development Issues			
Cost:	\$650/unit(from manufacture)		
Market Risk and Barriers:	Education needed for installer and user		
Time to Market:	Currently on market		
Simple Pay-back: (Years)	~4-6 years for residential based on manufacturer data		
			