

Product Name	Aquarian Hot Pump Water Heaters
Document Type	Green Building Rating Compatibility Analysis
Document Code	ES-GSNZ-16-86
Client	Aquarian

The Aquarian heat pump water heater range delivers efficiency and affordability to meet home water heating requirements. The All-in-One configuration of stainless steel tank and in-built Panasonic heat pump is easily operated with a user friendly control panel which allows full control of unit operation times, access to lower off peak tariffs and is highly suitable for use with solar power (PV) systems.






Green Star Design & As Built NZ (V1)	Credit 15	Contribution Potential
	Credit 16	Contribution Potential
Green Star Interiors NZ (V1)	Credit 16	1 point
Green Star Performance NZ (V1)	Credit 15	Contribution Potential
	Credit 16	Contribution Potential
Green Star NZ (V3) Office / Industrial / Interiors + Education V3.1	ENE 1	Contribution Potential
	ENE 2	1 Contribution Potential



Homestar V4	EHC 5	5 to 6 points
Homestar V3	EHC 2	3.6 to 4.3 points



Net Zero Energy	Contribution Potential
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Manner in which the product may contribute towards points	Legend of Symbols in EnviroSpec
Products must meet specific criteria (e.g. Paint VOC emissions, carpets, etc)	
Products may help achieve points by their very nature, if they are specified and installed (e.g. bicycle racks)	
Products may help achieve an outcome but they must be used in a specific manner (e.g. lighting control and zoning systems) OR The nominated product(s) can contribute towards the outcome but many other products or factor influence that same outcome (E.g. Potable Water Calculator)	
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Rating Tool	Credit / category	Points available	Requirements	Contribution symbol	Contribution Potential	Details of compliance
Green Star Design & As Built NZ (V1)	Credit 15	20	This credit rewards energy efficiency and the specified reduction in predicted energy consumption and Greenhouse Gas emissions of the building.	○	Contribution Potential	Using the nominated product may help provide an energy efficient solution for hot water. <i>Please note: This explanation is provided as soft guidance only. Actual points and performance in the nominated credits is strongly dependent on many products, systems and design features implemented by the Architects and Engineers.</i>
	Credit 16	3	This credit rewards the reduction of peak demand load on electricity. 16A Pathway: 1 point is available where it is demonstrated the use of on-site electricity generation systems reduces the total peak electricity demand by at least 15% 16B Pathway: Up to 2 points are available where it is demonstrated that the projects predicted peak electricity demand has been reduced below a Modelled Reference Building. - 20%: 1 point - 30%: 2 points	○	Contribution Potential	The nominated product may help meet the credit by reducing peak electricity demand for hot water in the building.
Green Star Interiors NZ (V1)	Credit 16	20	This credit rewards energy efficient buildings and the reduction of Greenhouse Gas emissions associated with energy use in day to day building operations.	○	1 point (pending COP > 3.5)	Using the nominated product may help satisfy the requirements of the prescriptive pathway for this Credit, although discussion with the supplier should confirm that the COP will be above 3.5 given the project's specific design circumstances.
Green Star Performance NZ (V1)	Credit 15	23	This credit rewards the reduction of Greenhouse Gas emissions associated with energy use in day to day building operations. 15A Pathway: Up to 23 points available where GHG emission outcomes of a building are verified by NABERSNZ certification 15B Pathway: Up to 23 points available based on reductions in GHG emissions against Building Energy Baselines 15C Pathway: Up to 23 points available based on reductions in GHG emissions against the baseline established from a peer group of alike buildings 15D Pathway: Up to 23 points are available based on reductions in GHG emissions against the baseline established from historical data from the building	○	Contribution Potential	Using the nominated product may help meet the credit criteria through one of the four pathways, by providing an energy efficient solution for hot water. <i>Please note: This explanation is provided as soft guidance only. Actual points and performance in the nominated credits is strongly dependent on many products, systems and design features implemented by the Architects and Engineers.</i>
	Credit 16	1	This credit recognizes building operational practices that reduce peak demand on electricity. 16A Pathway: 1 point is available where a building demonstrates a 20% reduction in peak electricity demand against a baseline established from a peer group of comparable buildings. 16B Pathway: 1 point is available where a building demonstrates a 20% reduction in peak electricity demand against a baseline established from historical data of the building 16C Pathway: 1 point is available where a building demonstrates a 20% reduction in peak electricity demand against a preliminary baseline.	○	Contribution Potential	Using the nominated product may help meet the credit criteria through one of the three pathways, by providing an energy efficient solution for hot water. <i>Please note: This explanation is provided as soft guidance only. Actual points and performance in the nominated credits is strongly dependent on many products, systems and design features implemented by the Architects and Engineers.</i>

Tool	Credit category	Points available	Requirements	Contribution symbol	Contribution Potential	Details of compliance
Homestar V4	EHC-5	6	This credit rewards the use of energy efficient water heating solutions.	○	On average between 5-6 points (Using standard sizing estimates)	If appropriately sized, then the use of an Aquarian Heat Pump Water Heater system can assist towards gaining up to 5 – 6 points in this category. (5 in colder climate zones, 6 in warmer climate zones in NZ with an efficient shower head of < 9 L/min)
Homestar V3	EHC-2	4.5	This credit rewards the use of energy efficient water heating solutions.	○	On average between 3.6- 4.3 points (Using standard sizing estimates)	If appropriately sized, then the use of an Aquarian Heat Pump Water Heater system can assist towards gaining up to 3.6 - 4.3 points in this category. (3.6 in colder climate zones, 4.3 in warmer climate zones in NZ. With an efficient shower head at 7.5 L/min)
Net Zero Energy Building	-	-	Achieving Net Zero energy requires a building with low heating and cooling loads to facilitate average annual electrical generation to meet the energy demand. This requires high performance an energy efficient solutions for space and hot water heating.	○	Contribution potential	Aquarian provides an efficient solution to water heating requirements.

LEGACY GREEN STAR NZ TOOLS

Tool	Credit category	Points available	Requirements	Contribution symbol	Contribution Potential	Details of compliance
Green Star NZ Office 2009 + V3	ENE- 1	Conditional Requirement	This credit rewards the use for energy efficient design features and systems in the building.	○	Contribution Potential	Using the nominated product may help provide an energy efficient solution for hot water. <i>Please note: This explanation is provided as soft guidance only. Actual points and performance in the nominated credits is strongly dependent on many products, systems and design features implemented by the Architects and Engineers.</i>
	ENE - 2	20	This credit rewards the use for energy efficient design features and systems in the building.	○	Contribution Potential	Using the nominated product may help provide an energy efficient solution for hot water. <i>Please note: This explanation is provided as soft guidance only. Actual points and performance in the nominated credits is strongly dependent on many products, systems and design features implemented by the Architects and Engineers.</i>
Green Star NZ Industrial 2009 + V3 Education 2009 + V3 + V3.1	ENE - 1	10	This credit rewards the use for energy efficient design features and systems in the building.	○	Contribution Potential	Using the nominated product may help provide an energy efficient solution for hot water. <i>Please note: This explanation is provided as soft guidance only. Actual points and performance in the nominated credits is strongly dependent on many products, systems and design features implemented by the Architects and Engineers.</i>
	ENE - 2	10	This credit rewards the use for energy efficient design features and systems in the building.	○	Contribution Potential	Using the nominated product may help provide an energy efficient solution for hot water. <i>Please note: This explanation is provided as soft guidance only. Actual points and performance in the nominated credits is strongly dependent on many products, systems and design features implemented by the Architects and Engineers.</i>
Green Star NZ Interiors 2009 +V3	ENE - 1	Conditional Requirement	It is a conditional requirement that a minimum of 3 points are achieved from any one or combination of ENE- 4, ENE-5, ENE-6 and ENE-B.	-	-	This is not applicable to hot water systems.