**DESIGN IDEA 1 - Photovoltaic (PV) panels in Solar water purification**

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| Design idea 1 | Evidences |
| Access and Equity | |
| AE 1 | // |
| AE 2 | // |
| AE 3 | // |
| Health and Safety | |
| HS 1 | // |
| HS 2 | // |
| HS 2 | // |
| Environmetal heallths | |
| EH 1 | // |
| EH 2 | // |
| Appropriateness | |
| AP 1 | // |
| AP 2 | // |
| Affordability | |
| AF 1 | Low operating costs due to no requirement of fossil fuels or electricity from the grid  Minimal maintenance required, resulting in low ongoing costs  Potential for local manufacturing, creating jobs and stimulating the economy  Modular design, allowing for smaller systems to start and scale up as needed  Funding opportunities available for renewable energy and water projects in Indigenous communities. |
| AF 2 | Improved access to clean water, which can reduce the incidence of waterborne illnesses and improve overall health outcomes  Lower installation costs, making it a more affordable option for Indigenous communities, especially in remote areas  Lower environmental impact, reducing exposure to harmful chemicals and pollutants  Minimal maintenance required, reducing ongoing costs  Empowerment of communities, improving their overall sense of well-being and self-determination. |
| AF 3 | // |
| Sustainable livelihoods | |
| SL 1 | // |
| SL 2 | // |
| SL 3 | // |

**DESIGN IDEA 3 – Passive solar still**

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| Design idea 3 | Evidences |
| Access and Equity | |
| AE 1 | // |
| AE 2 | // |
| AE 3 | // |
| Health and Safety | |
| HS 1 | // |
| HS 2 | // |
| HS 2 | // |
| Environmetal heallths | |
| EH 1 | // |
| EH 2 | // |
| Appropriateness | |
| AP 1 | Passive Solar Stills are an appropriate and robust design for remote Indigenous communities because they have a simple design that can be constructed using locally available materials, are suitable for remote locations without access to electricity, require minimal maintenance, are reliable and can operate in almost any climate, use solar energy to purify water, and can be culturally adapted to suit the preferences of Indigenous communities. |
| AP 2 | Passive Solar Stills have appropriate infrastructure and efficient impact in solving community need for fresh water purification. This is supported by successful prototypes designed and implemented in communities worldwide, the fact that they rely solely on solar energy, making them a sustainable and low-cost solution, and their positive impact on community health and well-being. Additionally, they are low-maintenance and easy to use, making them a practical solution for communities with limited technical expertise. |
| Affordability | |
| AF 1 | // |
| AF 2 | // |
| AF 3 | // |
| Sustainable livelihoods | |
| SL 1 | // |
| SL 2 | // |
| SL 3 | // |

**DESIGN IDEA 4 – Gravity-fed system using renewable energy**

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| Design idea 5 | Evidences |
| Access and Equity | |
| AE 1 | // |
| AE 2 | // |
| AE 3 | // |
| Health and Safety | |
| HS 1 | // |
| HS 2 | // |
| HS 2 | // |
| Environmetal heallths | |
| EH 1 | // |
| EH 2 | // |
| Appropriateness | |
| AP 1 | // |
| AP 2 | // |
| Affordability | |
| AF 1 | // |
| AF 2 | Affordability: Gravity-fed systems are typically low-cost, and their installation and maintenance requirements are minimal. This means that they are affordable for many Indigenous communities, especially when constructed using locally sourced materials.  Low maintenance costs: A gravity-fed system requires minimal maintenance as it relies on natural forces and does not have any complex mechanical parts that need repair or replacement. This makes it a low-cost solution in terms of maintenance.  Energy costs: Renewable energy sources, such as solar power, are becoming increasingly affordable and are a feasible option for powering a gravity-fed system. By using renewable energy sources, Indigenous communities can save on the cost of traditional energy sources, such as diesel or gasoline.  Health benefits: Access to clean water can have a significant positive impact on community health and well-being. By providing a reliable and sustainable source of clean water, a gravity-fed system can improve the health of Indigenous communities and reduce the need for costly medical treatments.  Cultural adaptability: A gravity-fed system can be designed and constructed to suit the cultural practices and preferences of Indigenous communities. This ensures that the system is culturally appropriate and more likely to be used and maintained over time. |
| AF 3 | Local resources: A gravity-fed system can be constructed using locally available materials, which means that Indigenous communities can apply their resources and skills to the construction process.  Construction skills: Indigenous communities often have a deep understanding of their local environment and traditional building techniques. This knowledge can be applied to the construction of a gravity-fed system, enabling them to use their skills and knowledge to build a system that is culturally appropriate and effective.  Community involvement: A gravity-fed system can be constructed with the involvement of community members, providing an opportunity for skills development and knowledge sharing. This can empower community members and enable them to take ownership of the system, leading to its long-term sustainability.  Low-cost construction: A gravity-fed system is typically low-cost to construct, which means that Indigenous communities can apply their resources and skills to the construction process without incurring significant costs.  Entrepreneurship opportunities: The construction and maintenance of a gravity-fed system can also provide opportunities for entrepreneurship and income generation within the community. |
| Sustainable livelihoods | |
| SL 1 | // |
| SL 2 | // |
| SL 3 | // |

**DESIGN IDEA 5 – RO using wind energy**

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| Design idea 5 | Evidences |
| Access and Equity | |
| AE 1 | // |
| AE 2 | Easy to operate: Gravity-fed systems are generally easy to operate, as they rely on gravity to transport water from the storage tank to the household. This means that there are no complex pumps or other equipment to manage, which makes it easy for households to use the system.  Minimal maintenance: Gravity-fed systems are also relatively low-maintenance compared to other water supply systems. There are no moving parts or complex equipment that need regular maintenance or repairs, which makes it easier for households to maintain the system.  Sustainable and renewable: A gravity-fed system using renewable energy is a sustainable and renewable option for households to access fresh, pure water. This can help reduce household reliance on other sources of water that may be less sustainable or less reliable.  Cost-effective: Compared to other water supply systems, a gravity-fed system using renewable energy can be cost-effective to build and maintain. Once the system is installed, it can provide a consistent source of water for households without requiring significant ongoing expenses.  Community-wide benefits: A gravity-fed system can provide benefits not just to individual households, but to the community as a whole. By centralizing the water supply, it can help ensure that all households have access to safe and reliable water, which can have positive impacts on public health, education, and economic development. |
| AE 3 | Accessibility: A gravity-fed system can be designed with accessibility in mind, such as by including ramps, wide paths, or other accommodations for individuals with mobility impairments. This can make it easier for individuals of all ages and abilities to access the system.  Multiple access points: A gravity-fed system can also be designed to include multiple access points, such as taps or water outlets, that can be placed at varying heights or locations to accommodate individuals with different needs. For example, some outlets could be located at ground level for individuals who use wheelchairs, while others could be placed at a higher height for individuals who are standing or taller.  User-friendly design: Gravity-fed systems can be designed with user-friendly features that make it easier for individuals of all ages and abilities to use. For example, taps or outlets could be designed with levers or buttons that are easier to operate than traditional faucets.  Inclusivity: By providing a centralized, reliable water supply, a gravity-fed system can help ensure that all members of the community, including those with special needs, have access to clean and safe water. This can promote a more inclusive community and improve the quality of life for individuals with special needs.  Community engagement: By engaging with the community during the design and implementation process, the gravity-fed system can be tailored to meet the specific needs of different age groups with special needs. This could involve gathering feedback from individuals and groups with special needs, as well as working with local organizations or advocacy groups to ensure that the system is accessible and inclusive. |
| Health and Safety | |
| HS 1 | // |
| HS 2 | Risk assessments: Before implementing a gravity-fed system, a comprehensive risk assessment should be conducted to identify potential hazards and risks associated with the system. This can help inform the design of the system and ensure that appropriate safety measures are put in place.  Safety features: Gravity-fed systems can be designed with a range of safety features, such as pressure relief valves, overflows, and shut-off valves. These features can help prevent accidents and mitigate risks associated with the system.  Protective barriers: In some cases, protective barriers such as fences or covers may be necessary to prevent unauthorized access or tampering with the system. This can help ensure that the system remains safe and secure for all users.  Training and education: Proper training and education can help ensure that individuals who use the gravity-fed system understand how to use it safely and effectively. This could include training on how to operate the system, as well as education on safe water practices and hygiene.  Regulatory compliance: Depending on the jurisdiction where the system is located, there may be regulatory requirements related to the design, installation, and operation of gravity-fed systems. Compliance with these requirements can help ensure that the system is safe and meets relevant safety standards. |
| HS 2 | Compliance with relevant regulations: There are several regulations and guidelines in Australia related to the design, installation, and operation of water supply systems. These include the National Construction Code (NCC), the Australian Drinking Water Guidelines (ADWG), and various state and territory regulations. Evidence that the gravity-fed system has been designed and installed in compliance with these regulations can demonstrate that it meets relevant health and safety standards.  Water quality testing: The ADWG specifies requirements for water quality testing, including frequency of testing and acceptable levels of contaminants. Evidence that the gravity-fed system is regularly tested to ensure compliance with these guidelines can demonstrate that it provides safe and healthy water.  Risk assessments: As noted above, risk assessments can help identify potential hazards and risks associated with the gravity-fed system. Evidence that a comprehensive risk assessment has been conducted and that appropriate safety measures have been put in place can demonstrate that the system is designed with health and safety in mind.  Training and education: Proper training and education can help ensure that individuals who use the gravity-fed system understand how to use it safely and effectively. Evidence that training programs have been developed and implemented can demonstrate that the system is designed to promote health and safety.  Ongoing maintenance: Regular maintenance and monitoring can help ensure that the gravity-fed system continues to operate safely and effectively over time. Evidence that maintenance procedures have been developed and are regularly carried out can demonstrate that the system is designed for long-term health and safety. |
| Environmetal heallths | |
| EH 1 | // |
| EH 2 | // |
| Appropriateness | |
| AP 1 | // |
| AP 2 | // |
| Affordability | |
| AF 1 | // |
| AF 2 | Offer training and education: Offering training and education on the installation and maintenance of the system can help to empower the community to take ownership of the system. This will reduce the need for external contractors and experts, thus reducing the overall cost of installation and maintenance.  Collaborate with local organizations: Collaborating with local organizations can help to reduce the cost of installation and maintenance. For instance, working with local NGOs or community-based organizations can help to mobilize resources and volunteers who can help with installation and maintenance. |
| AF 3 | // |
| Sustainable livelihoods | |
| SL 1 | // |
| SL 2 | // |
| SL 3 | // |