

## **Water Fittings that generate electricity**

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### *Introduction*

This document has been developed to identify the issues related to the compliance and acceptance of water fittings that incorporate devices that generate electricity from the motive power of water and to define criteria products can be assessed against. The guidance and conditions set out below have been developed to be used when assessing products submitted for WRAS approval only.

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### *Relevant Legislation*

*The Water fittings regulations do not permit misuse or undue consumption:*

*“2) No water fitting shall be installed, connected, arranged or used in such a manner that it causes or is likely to cause—*

*(i) waste, **misuse**, undue consumption or contamination of water supplied by a water undertaker”*

*The Water Industry Act does not permit the use water for a purpose other than one for which it is supplied to those premises:*

*73 (2) Any person who **uses any water supplied to any premises by a water undertaker for a purpose other than one for which it is supplied to those premises** shall, unless the other purpose is the extinguishment of a fire, be guilty of an offence and liable, on summary conviction, to a fine not exceeding level 3 on the standard scale.*

*Water is supplied for domestic purposes; this is defined in the Water Industry Act:*

*218 (1) “...**drinking, washing, cooking, central heating and sanitary purposes** for which water supplied to those premises may be used”*

*The use of motive devices to generate electricity is not specifically included within this definition, so unless a water company specifically consents to such use, then the water is not being used for the purposes for which it is supplied. Therefore, products may be lawful, but only if consent is provided.*

For motive devices that are incorporated into water fittings used to supply water for domestic use, whether this would lead to undue consumption should also be considered. Does the presence of a motive fitting lead to more water being used than would have been?

For fittings with inline motive devices, section 174 (3) of the Water Industry Act is also relevant. This requires consent for apparatus to be added to a service pipe, including the part of the pipe owned by the customer or there is an offence of interference with works.

*(3) Any person who, without the consent of the water undertaker—*

*(a) attaches any pipe or apparatus—*

*(i) to any resource main, water main or other pipe vested in a water undertaker; or*

*(ii) **to any service pipe which does not belong to such an undertaker but which is a pipe by means of which water is supplied by such an undertaker to any premises;***

## Ambiguity

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WRAS considers that there is an ambiguity in the Water Supply (Water Fittings) regulations relating to the definition of misuse and undue consumption. In particular it is not clear:

- (a) In what circumstances, if any, water fittings or arrangements could be permitted to incorporate the generation of electricity (the **Ambiguity**).

*It is believed the intent of the Water Industry Act and the Water Supply (Water Fittings) Regulations is to prevent water being consumed purely for the generation of electricity and that water should not be misused or unduly consumed. Some products use the generation of electricity could be used to integrate features that could enhance safety and/or water efficiency and would not constitute misuse or undue consumption.*

*It is becoming more common for devices to incorporate features that use electricity, and some applicants wish to incorporate features that use the motive power of water to power an electronic function.*

## Proposed approach to be introduced by WRAS

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It is proposed that WRAS Approvals accept the power generation aspect of a device under the following conditions:

1. It is incorporated into a water fitting used for domestic purposes and,
2. The electricity is not exported from the water fitting being assessed and,
3. The device must not promote or encourage higher water consumption or a function that may have a negative impact on water usage behaviour. For example the electricity generated is used to provide information to aid behaviour changes to encourage a reduction in water consumption or to provide safety information.

Examples of acceptable functions

1. A display linked to water consumption (flow meter, timer etc)
2. Powering light indicators to highlight temperature.
3. Operates the flow control device of that product, such as a solenoid valve which operates a tap assembly

Inline motive devices which could be used in service pipes could only be approved, subject to other approval requirements, with an installation requirement note that requires water company consent for the approval to be valid. These products may be considered as not using water for the purposes for which it was supplied.

*The Approach has not been endorsed by the water companies or the courts, and they could adopt a different approach to the Ambiguity. For this reason, WRAS cannot guarantee that enforcement action will not be taken by water companies under the water fittings regulations, or that the courts will hold that your product is compliant in this regard. No reliance should be placed on the Approach for the purposes of designing or producing any product, and you should rely on your own legal advice. WRAS, accordingly, accepts no liability for loss of goodwill, business, revenue or profits, anticipated savings or wasted expenditure (whether reasonably foreseeable or not) or indirect or consequential loss arising from or in connection with the Ambiguity or the Approach.*

## Appendix A: Record of Amendments

Water Fittings that generate electricity - Version Control		
Version	Issue Date	Summary of change(s)
WRAS.WCD-1005 Ver 1.0	21/12/2022	First issue