Britain unveils desalination plant for London reservoirs

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Aerial view of Farmoor Reservoir, Oxfordshire

(PhysOrg.com) -- Britain has brought online a new desalination plant near London capable of providing the city with 150 million gallons (568 million litres) of water per day, should the need arise. At a cost of £270 ($445) million, and built over the past four years, the plant uses reverse osmosis to remove salt from the brackish water pumped in from the Thames Estuary, which it then pumps into local reservoirs, thus staving off the threat of drought.

Reverse osmosis water purification is a filtration process whereby brackish water is pressurized in a tank which pushes it through a thin membrane, allowing only the pure water to emerge out the other side. Because of the extra energy needed for pressurization, reverse osmosis generally costs up to twice as much as regular purification processes, which in turn causes taxpayers, especially in such a wet climate as Britain, to wonder about the wisdom of installing such a plant.

But Thames Water, the company in charge of supplying drinking water to London, believes such a plant will be necessary in the future, citing the water restrictions put in place during the last extended drought in 2005/06, which was a catalyst for the construction of the plant. Critics have been quick to point out, however, that had the water company fixed its leaking pipes, some of the worst in the world, there would not have been a need for a new plant at all.

Construction of the plant was finished in June of last year, but it wasn't until just last month that the plant began actively pumping clean water into nearby reservoirs, albeit at only one sixth capacity. Simon Evans, spokesman for Thames Water, claims they are only doing so to test the system and train workers. The idea after all, is to fill the reservoirs if they fall low due to lack of rainfall, which coincidently or not, is exactly what Britain has been experiencing this spring.

It's likely the construction of the plant will cause other metropolitan areas to take notice as city planners the world over fall victim to criticism from thirsty city dwellers who suddenly find themselves at the mercy of varying weather patterns. Traditionally reverse osmosis plants have been built for areas with few other options, such as those in the Middle East; with this new plant in London, however, that could change.

More information: www.thameswater.co.uk/