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**Richard Kristensen**

Children and Youth Administration (BUF, Børne og Unge Forvaltningen)



A pilot project at a Copenhagen primary school shows that 30% of the total water consumption of the school can be saved just by replacing water taps. That corresponds to an annual saving of euro 13.333 Now, 40 Copenhagen schools are to have their taps replaced. The municipality expects a saving of euro 186.500 per year.

# Copenhagen schools act against exploding water usage

Taps that just run without being turned off or which use unnecessary amounts of water for hand-washing will soon be consigned to history in over half the state schools in Copenhagen. Copenhagen municipality has for many years focused on renovating the run-down buildings of the municipality and many have been refurbished under the heading of “total renovation”, but that process has looked more at the outside shell of the buildings than at energy-saving interior improvements. A separate project to save water run by the Children and Youth Administration (BUF, Børne og Unge Forvaltningen) is now addressing this. A convincing pilot project persuaded the Administration that all the taps in the schools in the municipality should be replaced by new taps saving water and energy – with lots of comfort for pupils, teachers and not least a surprising bonus for the operating balance sheet for the individual school.

## VALBY SCHOOL LEADS THE WAY

Valby School has, as one of the first schools,

had its taps exchanged across the entire system, and the result was visible even in the first month.

- With the readings from our supply company, we and the school could already see on the first day that less water was being used. Thus, water usage in August 2017 was only 159 m3, while 237 m3 was used in the same month in 2016, explains Richard Kristensen, who, with his colleague Flemming Mortensen, is responsible for the project in Copenhagen Municipality’s Energy Team in BUF and are also the people behind the water conservation project.

- When we planted the first seeds for the water project a little over a year ago, the idea of thinking about water was entirely new, but I was quickly able to see the potential. The first results at our test school showed that we saved 30% on the total water usage. This was almost too good to be true. So we sceptically waited another month. Every single month since then has confirmed the saving, says Richard Kristensen.



KØBENHAVNS KOMMUNE

## FACTS ABOUT VALBY SCHOOL:

Old factory hall converted to a school in 2004  
Entirely renovated in 2016-2017

### THE PROJECT:

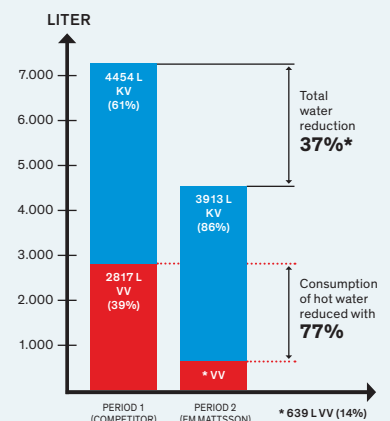
In spring 2017, replacement was made for: 100 water taps

### YEARLY SAVING:

Annual water usage – before: approx. 2.900 m3\*  
Annual water usage – after approx. 2.025 m3 (calculated)

### PRODUCTS IN USE:

FM Mattsson Tronic, Mora Cera





## PILOT PROJECT LEADS THE WAY FOR ALL 70 SCHOOLS

- The water conservation project started as a pilot project at Tingbjerg School, where we carried out a precise test with our own measuring equipment, which could document water usage both before and after the replacement of the taps. The test showed that we could save over 30% of water usage, and that we could carry out the project with a repayment time of just 2.5 years, explains Claus Dennis, FM Mattsson Mora Group Denmark, who implemented the project together with BUF's energy team. He adds:

- When we compare the current water usage with that of corresponding months last year, the difference is marked. It is food for thought that one can make such large savings just with new taps. The behaviour of the pupils has after all not changed, so the only difference is in the energy-saving and intelligent water taps.

The documented saving led to the energy team being awarded funds to replace taps in all 70 schools in Copenhagen municipality. The municipality has in fact earmarked euro 800.000 for the project, and the replacement is being carried out as quickly as the chosen plumbers can keep up. With an expected saving of euro 13.333 per school, there will soon be a lot of money "returning" to the operating budgets of the individual schools.

The digital monitoring of consumption has changed the possibilities for the energy team:

- We think we can save a lot of money by anticipating things. Previously, we dealt with symptoms and reacted to damage and sudden needs. With the digital measurements, we can react much better in advance and foresee the events to be prevented and avoided, says Richard Kristensen

## MORE ADVANTAGES THAN SIMPLY SAVING ENERGY

In addition to the daily saving in water, the school has found that the new taps have freed up staff and cleaning resources. Bente Maigaard, who is the technical administrative head of Valby Skole, says:

- Previously, there were often floods and a resulting acute need for cleaning and clearing up when a washbasin overflowed because the pupils had forgotten to turn off the water and the drain was blocked by toilet paper. With the new automatic taps, we have not had a single incident for the last ½ year. The experience in the schools that have now replaced their water taps is identical with respect to vandalism. Children test the boundaries, and that needs robust equipment - including taps. At Tingbjerg School, where the new taps have been installed the longest, they have not had a tap wrecked since the replacement took place more than a year ago. Something that has opened the eyes of the school's technical staff.

## EVERYONE CAN SAVE – THE NEXT STEP IS THE INSTITUTIONS

It is not only in the schools that there is potential for reduction in water usage and creation of better conditions for both children and adults. The 730 child care institutions in Copenhagen municipality are the next area of engagement for the BUF Energy Team, who have selected the first 100 institutions. The project has already been approved and is ready to be implemented from the start of 2018.



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