IBM et la Cité du Roi Abdelaziz pour les Sciences et la Technologie (KACST) annoncent la création d'un centre de recherche dédié à la désalinisation de l'eau de mer et alimenté grâce à l'énergie solaire.

Armonk, NY & Riyadh, Arabie Saoudite - 08 avr. 2010: La nouvelle centrale de désalinisation devrait avoir une capacité de production de 30 000 m3 par jour : elle sera construite dans la ville d'Al Khafji en Arabie Saoudite et permettra d'alimenter 100 000 personnes. Cette initiative intervient à l'heure où 2,3 milliards de personnes (41% de la population mondiale) vivent dans des zones où l'eau se fait rare. Cette nouvelle initiative offre un énorme potentiel afin de répondre à la demande en eau douce, en constante hausse.

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IBM, KACST Unveil Research Initiative to Desalinate Seawater Using Solar Power

New technologies could significantly reduce water, energy costs

Armonk, NY and Riyadh, Saudi Arabia – April 8, 2010 – IBM (NYSE: IBM) and the King Abdulaziz City for Science and Technology (KACST), Saudi Arabia's national research and development organization, today announced a research collaboration aimed at creating a water desalination plant powered by solar electricity, which could significantly reduce water and energy costs.

A new, energy efficient desalination plant with an expected production capacity of 30,000 cubic meters per day will be built in the city of Al Khafji to serve 100,000 people. KACST plans to power the plant with the ultra-high concentrator photovoltaic (UHCPV) technology that is being jointly developed by IBM and KACST; this technology is capable of operating a CPV system at a concentration greater than 1,500 suns. Inside the plant, the desalination process will hinge on another IBM-KACST jointly developed technology, a nanomembrane that filters out salts as well as potentially harmful toxins in water while using less energy than other forms of water purification. According to KACST scientists, the two most commonly used methods for seawater desalination are thermal technology and reverse osmosis, both at a cost ranging from 2.5 to 5.5 Saudi Riyals per cubic meter. By combining solar power with the new nanomembrane, the goal of this project is to significantly reduce the cost of desalinating seawater at these plants.

"*Currently, Saudi Arabia is the largest producer of desalinated water in the world, and we continue to invest in new ways of making access to fresh water more affordable*," said **Dr. Turki Al Saud, vice president for research institutes, KACST**. "*Water has the first priority in the Science, Technology and Innovation Plan of the Kingdom, overseen by KACST*."

Because over 97 percent of the world's water is in the oceans, turning salt water into fresh water cost effectively and energy efficiently offers tremendous potential for addressing the growing worldwide demand for clean water. One of the most efficient means of desalination is reverse osmosis. But there are obstacles to unlocking this reserve -- principally bio-fouling, degradation by chlorine and low flux challenges. The KACST / IBM joint research focuses on improving polymeric membranes through nanoscale modification of polymer properties to make desalination much more efficient and much less costly.

"*Our collaborative research with KACST has led to innovative technologies in the areas of solar power and of water desalination*," said **Sharon Nunes, vice president, IBM Big Green Innovations**. "*Using these new technologies, we will create energy-efficient systems we believe can be implemented across Saudi Arabia and around the world*." In February 2008, IBM and KACST signed a multi-year collaborative research agreement, under which scientists from IBM and KACST work side by side at IBM Research labs in New York and California as well as at the KACST / IBM Nanotechnology Centre of Excellence in Riyadh, Saudi Arabia.

For more information about IBM and water management, please visit ibm.com/smarterplanet/water.
