

# Killingly Energy Center (KEC)

## *Water Use Facts*

- By using air instead of water for cooling, KEC's water needs are reduced by 95% compared to typical water-cooled power generation facilities.
- In an air-cooled combined cycle process like at KEC, most of the water needs are for creating steam to directly produce power, making it a more efficient source of new energy.
- CT Water will meet the KEC demand from existing infrastructure and wells that are hydrogeologically separated from Alexander's Lake and without any additional use of or impact on the industrial park well.
- **KEC will not impact the water quality or quantity of Alexander's Lake.**
- CT Water has the capacity to sustainably provide KEC's limited water needs through connecting to adjacent CT Water infrastructure.
- The interconnection of adjacent CT Water systems will not only support KEC, but will enhance the reliability and capacity of Killingly's water supply for other existing and future CT Water customers.
- KEC's maximum water use in the fall, winter and spring will be approximately 50,000 gallons per day and during the summer will fluctuate between 50,000 and 100,000 gallons per day, far less water than a data center, typical industrial or farm use in a day, while supplying enough electricity to power 500,000 homes. In comparison:
  - Cooling a typical data center requires 360,000 gallons of water per day<sup>1</sup>.
  - Growing one acre of corn requires 350,000 gallons of water per day<sup>2</sup>.
  - Maintaining an 18-hole golf course requires 312,000 gallons of water per day<sup>34</sup>.
  - Making 6 inches of snow at a ski area requires 540,000 gallons of water per day<sup>56</sup>.
- In the very rare event when natural gas is not available and KEC must operate on diesel to maintain grid reliability (experience has been no more than several hours every 2 to 3 years), an additional 12,500 gallons of water per hour would be required.

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<sup>1</sup> <http://www.datacenterknowledge.com/archives/2012/08/14/data-center-water-use-moves-to-center-stage/>

<sup>2</sup> <http://www.hcn.org/wotr/nebraska-loves-its-cattle-a-little-too-much>

<sup>3</sup> <http://www.npr.org/templates/story/story.php?storyId=91363837>

<sup>4</sup> Audubon International estimates that the average American course uses 312,000 gallons per day.

<sup>5</sup> <http://www.nashuatelegraph.com/newsstatenewengland/910832-227/ski-areas-invest-in-snowmaking-to-survive.html>

<sup>6</sup> [http://www.killington.com/site/mountain/mountain-info/snowmaking\\_snowfall](http://www.killington.com/site/mountain/mountain-info/snowmaking_snowfall)