

MEMORANDUM

Black & Veatch Project Number : 162854

March 3, 2015

To: ERCOT
Attn: Mr. Peter Warnken
From: Andrew Chastain-Howley

Re: New non-wind generating capacity - water resource availability language

RECOMMENDED PROTOCOL REVISION LANGUAGE

New, non-Wind Generating Capacity-The amount of new, non-wind IRR generating capacity for the Peak Load Season s and the year i that: (a) has a Texas Commission on Environmental Quality (TCEQ)-approved air permit, (b) has a federal Greenhouse Gas permit, if required, (c) has obtained [water rights, contracts or groundwater supplies](#) sufficient [for the generation of electricity at](#) the Resource, and (d) has a signed Standard Generation Interconnect Agreement (SGIA), or a public, financially-binding agreement between the Resource owner and TSP under which generation interconnection facilities would be constructed; or for a Municipally Owned Utility (MOU) or Electric Cooperative (EC), a public commitment letter to construct a new Resource. Exclude new, non-wind generating capacity that has met the requirements of (a), (b), (c) and (d) above in which ERCOT has received written Notification from the developer that the new capacity will not proceed with construction.

Introduction

Water used for the generation of electricity can be obtained from three main water supply sources:

1. Surface water
2. Sea water
3. Groundwater

Additionally water can also be contracted from other entities through municipal contracts or from reused or recycled water as examples. However, these are all originally sourced from one of the three supply sources outlined above. Each of these main supply sources has a slightly different contract or permitting dynamic so determining that a generator has sufficient water to operate would benefit from additional language to that existing.

Water Rights and Groundwater Rule of Capture

To understand the complexities an understanding of the water rights and groundwater rules are necessary.

State Water is described within the Texas Water Code as:

“(a) The water of the ordinary flow, underflow, and tides of every flowing river, natural stream, and lake, and of every bay or arm of the Gulf of Mexico, and the storm water, floodwater, and rainwater of every river, natural stream, canyon, ravine, depression, and watershed in the state is the property of the state.(b) Water imported from any source outside the boundaries of the state for use in the state and which is transported through the beds and banks of any navigable stream within the state or by utilizing any facilities owned or operated by the state is the property of the state.” [Source: Texas Water Code., Sec.11.021, Subchapter B., Rights in State Water]

This includes both surface water and seawater within the Texas state boundaries. It means that all surface water is the property of the State and any generator of electricity will require a water right or a contract from a water rights holder to run any water-intensive generation or cooling processes.

Groundwater is described within the Texas Water Code as:

“(a) The legislature recognizes that a landowner owns the groundwater below the surface of the landowner’s land as real property.(b) The groundwater ownership and rights described by this section:(1) entitle the landowner, including a landowner’s lessees, heirs, or assigns, to drill for and produce the groundwater below the surface of real property, subject to Subsection (d), without causing waste or malicious drainage of other property or negligently causing subsidence, but does not entitle a landowner, including a landowner’s lessees, heirs, or assigns, to the right to capture a specific amount of groundwater below the surface of that landowner’s land” [Source: Texas Water Code., Sec.36.002, Subchapter A., Ownership of Groundwater]

Therefore, in Texas groundwater belongs to the landowner. Groundwater is governed by the rule of capture, which grants landowners the right to capture the water beneath their property. The landowners have a right to pump and capture whatever water is available, regardless of the effects of that pumping on neighboring wells. In some parts of the state there are groundwater management districts that require certain “permitted” items such as making sure the well is constructed correctly, a certain spacing between wells and limiting pumping amounts. However, there are still many areas in Texas where a generator of electricity would just have to buy the land (and construct the necessary groundwater extraction infrastructure) and would not require a contract or water right to run any water-intensive generation or cooling processes.

Opinion

In order to make sure that a generator of electricity has enough water for its generation and cooling processes the possibility of this water being sourced from surface water or groundwater needs to be considered.

So, with respect to surface water, the generator will either require a water right or a contract with an entity that has access to a water right.

With respect to groundwater a generator may not actually need a water right or contract with another entity to supply water. Therefore the additional text, “or groundwater supplies sufficient for the generation of electricity”, covers those generators that may choose to supply water in this fashion. A groundwater availability study demonstrates supply sufficiency if groundwater is the primary source.