



June 19, 2017
Project No. 2015.0171

Mr. Jim Bennett, CHG
County of San Diego
Planning and Development Services
5510 Overland Avenue
San Diego, CA 92123

MONTHLY GROUNDWATER MONITORING REPORT – MAY 2017
TULE WIND CONSTRUCTION PROJECT
EAST SAN DIEGO COUNTY, CALIFORNIA

On behalf of Avangrid Renewables, LLC (Avangrid), Geo-Logic Associates (GLA) is pleased to provide this letter presenting May 2017 daily water level data and weekly flowmeter readings from project construction-related wells (production wells 6, 6a, and 8, and piezometer PZ-1) on Rough Acres Ranch. In accordance with the requirements established in the County of San Diego Planning and Development Services in the Major Use Permit 3300 09-019, weekly groundwater production data must be recorded from wells 6, 6a and 8, and daily water level data measured in the piezometer (PZ-1) and in wells 6 and 8. This report presents a summary of the collected data obtained in May 2017.

Following initial training by GLA on water level and flowmeter protocols for the Tule Wind construction project, daily water levels and weekly flowmeter readings are being obtained by Carol Brady with LG Equipment. Additionally, wells 6, 8, 8a and PZ-1 are each equipped with a pressure transducer to measure and record water level data, which can be uploaded to corroborate the manual measurements throughout the construction program. Well 6a is a non-community public water supply well, supplying water to Rough Acres Ranch, and a pressure transducer cannot be inserted into this well; collection of water levels in this well is not required.

Weekly Flow Meter Readings. Flowmeter readings at each well are recorded on field forms, provide in Attachment 1. Based on the flow meter readings obtained during the May 2017 period, the following water volumes were pumped, and stored or applied:

May 2017 Water Production Totals

| Well | Gallons Pumped | Acre-Feet Pumped |
|------------------------------|----------------|------------------|
| Well 6 | 730,300 | 2.24 |
| Well 6a | 1,764,800 | 5.42 |
| Well 8 | 502,970 | 1.54 |
| Project Monthly Total | | 9.20 |

Note: Total volumes include water pumped to storage (lake or tanks)

Over the past six months, since the start of the project in December 2016, the total volume of water pumped is 50.14 acre-feet; approximately 12.2 acre-feet from well 8 and the balance (37.94 acre-feet) from wells 6 and 6a (Attachment A – Groundwater Production Summary).

Daily Water Level Data. During the May 2017 period, water levels were measured manually in pumping Wells 6, 8, and piezometer PZ-1 each construction day and recorded on field forms (Attachment A). However, the pressure transducer in Well 8, at a depth of about 240 feet, prevented collection of water level data during the month, when the water level dropped during regular well pumping. In lieu of measurements from Well 8, Ms. Brady measured water levels in Well 8a located 286 feet east of Well 8. Table 1 presents a summary of the manual measurements obtained during the month.

Based on the production and water level data presented, the project remains within its required groundwater parameters. Beginning in June, the project has started ramping down its draw from the wells and is closely monitoring water use to stay below the caps established in the MUP.

CLOSING

This monthly report pertains to the Avangrid Tule Wind Project. It may not be appropriate for other projects or for other sites. If you have any questions, please contact me.

Sincerely,
Geo-Logic Associates



Sarah J. Battelle, CHG 609
Principal Geologist

Attachments:

Table 1 – Manual Water Level Measurements

Attachment A - Weekly Groundwater Production Record

Table 1
Manual Water Level Measurements
Tule Wind Project Monitoring Wells

| Well Information | Well | | | |
|-------------------------|--------|-------|--------|-------|
| | 6* | PZ-1 | 8* | 8a |
| Depth below TOC: | | | | |
| 11/18/2016 | 30.68 | 31.30 | 242.90 | 30.70 |
| 12/6/2016 | 106.50 | 30.00 | 156.10 | 30.00 |
| 12/7/2016 | 105.10 | 31.90 | 212.35 | 31.90 |
| 12/8/2016 | 117.10 | 31.20 | >240 | 31.20 |
| 12/9/2016 | 123.80 | 33.90 | >240 | 33.90 |
| 12/12/2016 | 122.30 | 32.20 | >240 | 35.30 |
| 12/13/2016 | 125.80 | 32.30 | >240 | 35.70 |
| 12/14/2016 | 129.40 | 32.40 | >240 | 37.80 |
| 12/15/2016 | 128.90 | 32.30 | >240 | 38.00 |
| 12/16/2016 | 120.30 | NA | >240 | NA |
| 12/19/2016 | 48.50 | 32.30 | >240 | 36.00 |
| 12/20/2016 | NA | 32.30 | >240 | 37.30 |
| 1/4/2017 | 37.60 | 32.45 | >240 | 31.50 |
| 1/5/2017 | 71.60 | 32.50 | >240 | 36.00 |
| 1/6/2017 | 78.60 | 32.35 | >240 | 35.90 |
| 1/7/2017 | 103.80 | 32.50 | >240 | 36.50 |
| 1/9/2017 | 77.80 | 32.40 | >240 | 34.60 |
| 1/10/2017 | 74.70 | 32.40 | >240 | 33.30 |
| 1/11/2017 | 99.40 | 32.40 | >240 | 33.10 |
| 1/12/2017 | 66.20 | 32.45 | >240 | 35.10 |
| 1/16/2017 | 33.10 | 32.30 | 44.70 | 32.40 |
| 1/17/2017 | 118.70 | 32.40 | >240 | 34.50 |
| 1/18/2017 | 33.80 | 32.40 | >240 | 36.60 |
| 1/30/2017 | 38.20 | 31.70 | 25.70 | 32.70 |
| 1/31/2017 | 88.00 | 31.70 | >240 | 35.80 |
| 2/1/2017 | 35.80 | 31.60 | >240 | 35.80 |
| 2/3/2017 | 93.90 | 31.60 | >240 | 35.70 |
| 2/6/2017 | 34.20 | 31.40 | >240 | 34.20 |
| 2/7/2017 | 36.40 | 31.30 | >240 | 35.70 |
| 2/8/2017 | 36.80 | 31.30 | 42.50 | 36.50 |
| 2/9/2017 | 37.60 | 31.30 | >240 | 36.70 |
| 2/10/2017 | 32.30 | 31.30 | >240 | 37.00 |
| 2/11/2017 | 34.40 | 31.30 | >240 | 36.20 |
| 2/13/2017 | 36.20 | 31.30 | 75.80 | 36.70 |
| 2/14/2017 | 36.70 | 31.30 | >240 | 37.20 |
| 2/15/2017 | 111.50 | 31.30 | >240 | 37.20 |
| 2/16/2017 | 36.10 | 31.30 | >240 | 38.40 |
| 2/17/2017 | 37.10 | 31.30 | >240 | 38.50 |
| 2/20/2017 | 96.10 | 31.30 | >240 | 38.50 |
| 2/21/2017 | 96.10 | 31.30 | >240 | 40.10 |
| 2/22/2017 | 94.10 | 31.30 | >240 | 40.90 |
| 2/23/2017 | 96.10 | 31.30 | >240 | 40.90 |
| 2/24/2017 | 44.60 | 31.30 | >240 | 41.10 |
| 2/25/2017 | 36.10 | 31.30 | >240 | 41.70 |
| 2/27/2017 | 36.40 | 31.30 | >240 | 42.90 |
| 2/28/2017 | 37.10 | 31.30 | >240 | 43.30 |

Table 1
Manual Water Level Measurements
Tule Wind Project Monitoring Wells

| Well Information | Well | | | |
|-------------------------|-------|-------|-------|-------|
| | 6* | PZ-1 | 8* | 8a |
| Depth below TOC: | | | | |
| 3/1/2017 | 34.10 | 31.40 | >240 | 43.50 |
| 3/2/2017 | 34.60 | 31.60 | >240 | 43.70 |
| 3/3/2017 | 33.10 | 31.50 | >240 | 44.00 |
| 3/4/2017 | 39.40 | 31.45 | >240 | 44.50 |
| 3/6/2017 | 38.50 | 31.50 | >240 | 39.00 |
| 3/7/2017 | 34.60 | 31.40 | >240 | 39.40 |
| 3/8/2017 | 34.90 | 31.40 | >240 | 42.90 |
| 3/9/2017 | 35.50 | 31.50 | >240 | 43.00 |
| 3/10/2017 | 43.80 | 31.50 | >240 | 44.30 |
| 3/11/2017 | 38.70 | 31.50 | >240 | 44.50 |
| 3/13/2017 | 40.10 | 31.50 | >240 | 44.80 |
| 3/14/2017 | 39.70 | 31.50 | >240 | 44.80 |
| 3/15/2017 | 44.00 | 31.60 | >240 | 44.90 |
| 3/16/2017 | 33.70 | 31.60 | >240 | 45.00 |
| 3/17/2017 | 48.20 | 31.60 | >240 | 45.20 |
| 3/20/2017 | 44.00 | 31.70 | >240 | 45.90 |
| 3/21/2017 | 53.10 | 31.70 | >240 | 45.00 |
| 3/22/2017 | 46.60 | 31.85 | >240 | 45.20 |
| 3/23/2017 | 44.00 | 31.90 | >240 | 45.30 |
| 3/24/2017 | 36.90 | 31.90 | >240 | 45.40 |
| 3/27/2017 | 33.80 | 31.90 | >240 | 45.00 |
| 3/28/2017 | 36.20 | 32.00 | >240 | 44.50 |
| 3/29/2017 | 46.20 | 32.00 | >240 | 44.80 |
| 3/30/2017 | 44.10 | 32.35 | >240 | 45.00 |
| 3/31/2017 | 36.80 | 32.40 | >240 | 46.10 |
| 4/3/2017 | 36.80 | 32.45 | 55.90 | 46.00 |
| 4/4/2017 | 33.20 | 32.40 | >240 | 46.50 |
| 4/5/2017 | 55.60 | 32.50 | >240 | 45.90 |
| 4/6/2017 | 45.40 | 32.60 | >240 | 45.40 |
| 4/7/2017 | 50.50 | 32.70 | 95.50 | 44.65 |
| 4/10/2017 | 37.46 | 32.30 | 64.10 | 42.75 |
| 4/11/2017 | 41.50 | 32.55 | >240 | 42.00 |
| 4/12/2017 | 39.00 | 32.62 | 70.30 | 45.10 |
| 4/18/2017 | 32.90 | 32.25 | 43.10 | 40.60 |
| 4/19/2017 | 33.85 | 32.25 | >240 | 46.10 |
| 4/20/2017 | 40.90 | 32.45 | >240 | 48.10 |
| 4/21/2017 | 41.20 | 32.50 | >240 | 48.40 |
| 4/22/2017 | 41.80 | 32.60 | >240 | 48.50 |
| 4/24/2017 | 36.50 | 32.60 | >240 | 48.70 |
| 4/25/2017 | 40.70 | 32.60 | >240 | 49.20 |
| 4/26/2017 | 40.00 | 32.50 | >240 | 49.60 |
| 4/27/2017 | 36.00 | 32.60 | >240 | 49.90 |
| 4/28/2017 | 42.30 | 32.64 | >240 | 50.30 |

Table 1
Manual Water Level Measurements
Tule Wind Project Monitoring Wells

| Well Information | Well | | | |
|-------------------------|-------|-------|-------|-------|
| | 6* | PZ-1 | 8* | 8a |
| Depth below TOC: | | | | |
| 5/1/2017 | 40.20 | 32.70 | >240 | 44.50 |
| 5/2/2017 | 46.70 | 32.75 | >240 | 46.60 |
| 5/3/2017 | 48.80 | 32.75 | >240 | 48.90 |
| 5/4/2017 | 45.30 | 32.83 | >240 | 50.30 |
| 5/5/2017 | 48.90 | 32.80 | >240 | 51.00 |
| 5/8/2017 | 45.60 | 32.80 | >240 | 44.70 |
| 5/9/2017 | 44.70 | 32.86 | >240 | 43.00 |
| 5/10/2017 | 43.90 | 32.80 | 40.35 | 42.90 |
| 5/11/2017 | 40.50 | 32.80 | 56.30 | 44.45 |
| 5/12/2017 | 39.80 | 32.80 | 43.30 | 43.00 |
| 5/15/2017 | 33.70 | 32.70 | 36.20 | 40.90 |
| 5/16/2017 | 33.95 | 32.75 | >240 | 45.60 |
| 5/17/2017 | 39.60 | 32.75 | >240 | 46.90 |
| 5/18/2017 | 41.20 | 32.90 | >240 | 47.00 |
| 5/19/2017 | 37.60 | 32.80 | >240 | 47.70 |
| 5/22/2017 | 45.30 | 32.78 | 47.00 | 43.55 |
| 5/23/2017 | 46.90 | 32.90 | >240 | 46.27 |
| 5/24/2017 | 40.43 | 32.90 | >240 | 48.80 |
| 5/25/2017 | 46.70 | 32.90 | >240 | 47.00 |
| 5/31/2017 | 42.90 | 32.70 | >240 | 43.20 |

Notes:

*Production well - Water level measurements are not static levels.

NA - Water level could not be measured.

ATTACHMENT A

Weekly Groundwater Production Record

GROUNDWATER PRODUCTION SUMMARY

| | | | | | | |
|-------------------|------------------------|--|---------------------------|-------------------|------------------------|--|
| | | | | | | |
| | | | | | | |
| | Piezometer PZ-1 | | | | | |
| Date | Depth to Water | | | | | |
| 11/18/2016 | 31.30 | | Production Summary | | Total Acre Foot | |
| 12/20/2016 | 32.30 | | WELL 6/6A | 12,361,465 | 37.935893 | |
| 1/31/2017 | 31.60 | | WELL 8 | 3,977,236 | 12.205672 | |
| 2/28/2017 | 31.30 | | | | | |
| 3/31/2017 | 32.40 | | TOTAL | 16,338,701 | 50.14156478 | |
| 4/28/2017 | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Well Location: WELL 6

| Date | Meter Reading | Date | Meter Reading | Total Gallons | Depth to Water | Comments |
|--------------|----------------------|-------------|----------------------|----------------------|-----------------------|-----------------------------------------------------------------------------|
| 11/18/2016 | 664,935 | 12/20/2016 | 1,987,900 | 1,322,965 | 30.68 | This Well feeds the Lake and the 3 towers at well 6 |
| 12/20/2016 | 1,987,900 | 1/31/2017 | 2,519,800 | 531,900 | 35.8 | |
| 1/31/2017 | 2,519,800 | 2/28/2017 | 3,093,900 | 574,100 | 129.2 | The Lake currently holds 1 million gallons of water for use at a later date |
| 2/28/2017 | 3,093,900 | 3/31/2017 | 4,716,300 | 1,622,400 | 36.8 | |
| 3/31/2017 | 4,716,300 | 4/30/2017 | 5,491,500 | 775,200 | | |
| 4/30/2017 | 5,491,500 | 5/5/2017 | 5,742,800 | 251,300 | | |
| 5/5/2017 | 5,742,800 | 5/12/2017 | 5,920,200 | 177,400 | | |
| 5/12/2017 | 5,920,200 | 5/19/2017 | 6,020,400 | 100,200 | | |
| 5/19/2017 | 6,020,400 | 5/31/2017 | 6,221,800 | 201,400 | | |
| | | | | | | |
| TOTAL | | | | 5,556,865 | | |

| | | | | | | |
|----------------|----------------------|-------------------|----------------------|----------------------|-----------------------|-------------------------------|
| | | | | | | |
| Well Location: | WELL 6A | supplies the pond | | | | |
| Date | Meter Reading | Date | Meter Reading | Total Gallons | Depth to Water | Comments |
| 12/20/2016 | 31,284,500 | 3/25/2017 | 32,186,100 | 901,600 | | This meter is located at the |
| 3/25/2017 | 32,186,100 | 3/31/2017 | 32,737,200 | 551,100 | | one tower labeled Rough Acres |
| 3/31/2017 | 32,737,200 | 4/30/2017 | 33,956,700 | 1,219,500 | | |
| 4/30/2017 | 33,956,700 | 5/5/2017 | 34,632,400 | 675,700 | | |
| 5/5/2017 | 34,632,400 | 5/12/2017 | 34,695,800 | 63,400 | | |
| 5/12/2017 | 34,695,800 | 5/19/2017 | 34,940,700 | 244,900 | | |
| 5/19/2017 | 34,940,700 | 5/31/2017 | 35,366,600 | 425,900 | | |
| | | | | | | |
| TOTAL | | | | 4,082,100 | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Well Location: | WELL 6A | roduction Portion | | | | |
| Date | Meter Reading | Date | Meter Reading | Total Gallons | Depth to Water | Comments |
| 12/5/2016 | 4,335,200 | 12/20/2016 | 4,802,700 | 467,500 | | This meter is located at the |
| 12/20/2016 | 4,802,700 | 1/31/2017 | 5,163,400 | 360,700 | | one tower labeled Rough Acres |
| 1/31/2017 | 5,163,400 | 2/28/2017 | 5,734,800 | 571,400 | | |
| 2/28/2017 | 5,734,800 | 3/31/2017 | 6,418,200 | 683,400 | | |
| 3/31/2017 | 6,418,200 | 4/30/2017 | 6,702,800 | 284,600 | | |
| 4/30/2017 | 6,702,800 | 5/5/2017 | 6,796,400 | 93,600 | | |
| 5/5/2017 | 6,796,400 | 5/12/2017 | 6,857,600 | 61,200 | | |
| 5/12/2017 | 6,857,600 | 5/19/2017 | 6,932,900 | 75,300 | | |
| 5/19/2017 | 6,932,900 | 5/31/2017 | 7,057,700 | 124,800 | | |
| TOTAL | | | | 2,722,500 | | |
| | | | | | | |
| | | | | | | |
| Well Location: | WELL 8 | Cubic Feet | | | | |

| Date | Meter Reading | Date | Meter Reading | Total Gallons | Depth to Water | Comments |
|--------------|----------------------|-------------|----------------------|----------------------|-----------------------|-----------------------------------|
| 11/18/2016 | 1,054 | 12/20/2016 | 52,650 | 385,938 | 242.9 | This Well feeds the 3 towers |
| 12/20/2016 | 52,650 | 1/31/2017 | 110,360 | 431,671 | | at well 8 |
| 1/31/2017 | 110,360 | 2/28/2017 | 207,530 | 726,832 | | |
| 2/28/2017 | 207,530 | 3/31/2017 | 372,449 | 1,233,594 | | This well has a blockage at 240ft |
| 3/31/2017 | 372,449 | 4/30/2017 | 465,528 | 696,231 | | |
| 4/30/2017 | 465,528 | 5/5/2017 | 488,410 | 171,157 | | |
| 5/5/2017 | 488,410 | 5/12/2017 | 490,550 | 16,007 | | |
| 5/12/2017 | 490,550 | 5/19/2017 | 505,090 | 108,759 | | |
| 5/19/2017 | 505,090 | 5/26/2017 | 532,770 | 207,046 | | |
| | | | | | | |
| TOTAL | | | | 3,977,236 | | |

| | | | | | | | |
|----------------|----------------------|-------------------|----------------------|----------------------|-----------------------|-------------------------------|--|
| Well Location: | WELL 6A | supplies the pond | | | | | |
| Date | Meter Reading | Date | Meter Reading | Total Gallons | Depth to Water | Comments | |
| 12/20/2016 | 31,284,500 | 3/25/2017 | 32,186,100 | 901,600 | | This meter is located at the | |
| 3/25/2017 | 32,186,100 | 3/31/2017 | 32,737,200 | 551,100 | | one tower labeled Rough Acres | |
| 3/31/2017 | 32,737,200 | 4/30/2017 | 33,956,700 | 1,219,500 | | | |
| 4/30/2017 | 33,956,700 | 5/31/2017 | 35,366,600 | 1,409,900 | | | |
| | | | | - | | | |
| | | | | - | | | |
| | | | | - | | | |
| TOTAL | | | | 4,082,100 | | | |
| | | | | | | | |
| | | | | | | | |
| Well Location: | WELL 6A | roduction Portion | | | | | |
| Date | Meter Reading | Date | Meter Reading | Total Gallons | Depth to Water | Comments | |
| 12/5/2016 | 4,335,200 | 12/20/2016 | 4,802,700 | 467,500 | | This meter is located at the | |
| 12/20/2016 | 4,802,700 | 1/31/2017 | 5,163,400 | 360,700 | | one tower labeled Rough Acres | |
| 1/31/2017 | 5,163,400 | 2/28/2017 | 5,734,800 | 571,400 | | | |
| 2/28/2017 | 5,734,800 | 3/31/2017 | 6,418,200 | 683,400 | | | |
| 3/31/2017 | 6,418,200 | 4/30/2017 | 6,702,800 | 284,600 | | | |
| 4/30/2017 | 6,702,800 | 5/31/2017 | 7,057,700 | 354,900 | | | |
| | | | | - | | | |
| | | | | - | | | |
| | | | | - | | | |
| TOTAL | | | | 2,722,500 | | | |
| | | | | | | | |
| | | | | | | | |
| Well Location: | WELL 8 | Cubic Feet | | | | | |

| Date | Meter Reading | Date | Meter Reading | Total Gallons | Depth to Water | Comments |
|--------------|----------------------|-------------|----------------------|----------------------|-----------------------|-----------------------------------|
| 11/18/2016 | 1,054 | 12/20/2016 | 52,650 | 385,938 | 242.9 | This Well feeds the 3 towers |
| 12/20/2016 | 52,650 | 1/31/2017 | 110,360 | 431,671 | | at well 8 |
| 1/31/2017 | 110,360 | 2/28/2017 | 207,530 | 726,832 | | |
| 2/28/2017 | 207,530 | 3/31/2017 | 372,449 | 1,233,594 | | This well has a blockage at 240ft |
| 3/31/2017 | 372,449 | 4/30/2017 | 465,528 | 696,231 | | |
| 4/30/2017 | 465,528 | 5/31/2017 | 532,770 | 502,970 | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| TOTAL | | | | 3,977,236 | | |