



March 3, 2011

Mr. Patrick O'Neill
HDR, Inc.
8690 Balboa Avenue, Suite 200
San Diego, CA 92123

Dear Mr. O'Neill:

Scientific Resources Associated (SRA) has reviewed the information in the Global Climate Change Analysis for the Tule Wind Project proposed to be located in southeastern San Diego County, approximately 70 miles east of Downtown San Diego, in the vicinity of the unincorporated communities of Jacumba and Boulevard. The Tule Wind Project is proposing to construct a wind power facility, which will include 128 1.5 to 3.0-MW wind turbines, along with the necessary infrastructure to connect the wind turbines to the San Diego Gas & Electric (SDG&E) grid. The purpose of the project will be to provide electricity generated from the wind turbines to the grid. It is estimated that, upon completion, the Tule Wind Project will provide 201 MW of wind power.

The Tule Wind Project will assist SDG&E in meeting its renewable energy goals under the California Renewables Portfolio Standard. Established in 2002 under Senate Bill 1078 and accelerated in 2006 under Senate Bill 107, California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources by at least 1% of their retail sales annually, until they reach 20% by 2010. To date, SDG&E has met a goal of 10.5% renewables, which is 9.5% below their current goal.

On September 15, 2009, Governor Arnold Schwarzenegger signed Executive Order (EO) S-21-09 directing the California Air Resources Board (CARB) to adopt regulations requiring 33 percent of electricity sold in the state come from renewable energy by 2020. On September 23, 2010, the California Air Resources Board approved a Renewable Electricity Standard regulation.

One of the key purposes of the RPS is to reduce statewide emissions of greenhouse gases (GHG) to meet the goals of AB 32, the California Global Warming Solutions Act of

2006. AB 32 sets forth a goal to reduce emissions of GHGs to 1990 levels by the year 2020. The ARB estimates, in its scoping plan, that full implementation of the 33% RPS will achieve a reduction of 21.3 million metric tons of CO₂-equivalent gases by the year 2020.

The Tule Wind Project will result in minor amounts of GHG emissions during construction and inspection and maintenance activities. The project will reduce GHG emissions from conventional power plants by eliminating the use of fossil fuels used in combustion sources, and by eliminating the embodied energy of water required for cooling of conventional power plants. Tule Wind, LLC, has calculated the emission reductions that will be realized through these reductions in fossil fuel and water use.

SRA has reviewed the calculations of GHG emission reductions that will be realized from the replacement of conventional power generation with power generated by the Tule Wind Project. The calculations are based on information from Tule Wind, LLC, regarding the project's proposed generation capacity and net capacity factor of 31 percent. These values are based on Tule Wind, LLC's engineering design for the facility and were not independently verified.

Based on calculations conducted by Tule Wind, LLC indicating that the project will generate 545,836 MWh of electricity, the project will reduce GHG emissions from electricity generation by 231,744 metric tons of CO₂e annually, assuming an average value for GHG emissions of 0.4246 metric tons of CO₂e per MWh in the U.S. The emission factor is adjusted from the Department of Energy's 2000 CO₂ emissions report, which estimated that the pounds of CO₂e per kWh was 1.341, on average. SRA has reviewed the Department of Energy's information on CO₂e emissions from power generation in the United States. For natural gas-fired power plants, based on nationwide data from 2009, the average CO₂e emissions per kWh are 1.22 lbs/kWh (http://www.eia.doe.gov/ask/environment_faqs.asp#electricity_fossil_fuels). Therefore, the emission factor used in the calculation of CO₂e emissions of 0.4246 metric tons of CO₂e per MWh is a conservative estimate. The operating emissions for the project will be 337 metric tons of CO₂e annually, which includes amortized construction emissions. Thus the net emission reduction associated with electricity generation would be 231,407 metric tons of CO₂e annually.

SRA has reviewed and verified the calculation of reductions in water use conducted by Tule Wind, LLC, which is based on estimated water use by the Palomar Energy Project in San Diego County. The calculation provides an estimate of the gallons of water required per MWh for a conventional natural gas-fired power plant to generate electricity. Based on these assumptions, it is estimated that the project will save 149 million gallons annually of water. SRA has independently calculated the project's reduction in GHG emissions through water use reductions assuming the CEC's value for the embodied energy of water of 12,700 kWh/gallon. The reduction in the embodied energy of water will be 1,892 MWh/year, for a total GHG reduction of 803 metric tons of CO₂e.

SRA has independently calculated the reductions in GHG emissions based on the methodologies and assumptions discussed above. The reduction in GHG emissions

realized by the Tule Wind Project is therefore estimated to be 232,210 metric tons of CO₂e annually.

SRA has also reviewed and independently verified the calculations of criteria pollutant emission reductions that will be realized from the replacement of conventional power generation with power generated by the Tule Wind Project. The calculations are based on the Palomar Energy Project's emissions, as reported in the CEC's Staff Assessment (http://www.energy.ca.gov/sitingcases/palomar/documents/2003-01-24_PALOMAR_FSA.PDF). The emissions are representative of a state of the art natural gas-fired power plant.

Based on these calculations, it is SRA's expert opinion that the project will offset a total of 231,901 metric tons of CO₂e greenhouse gases, as well as the following amounts of criteria pollutants:

Pollutant	NOx	PM10	CO	SOx	VOC
Lbs/year	24,828	22,186	29,411	7,598	7,565
Tons/year	12.4	11.1	14.7	3.8	3.8

The Tule Wind Project will therefore contribute both to SDG&E's goal of achieving a 33% RPS by 2020, and to the statewide goal of reducing GHG emissions to 1990 levels by the year 2020.

Sincerely,



Valorie L. Thompson, Ph.D.
Principal