

TENNESSEE VALLEY AUTHORITY 2019 RENEWABLES REQUEST FOR PROPOSALS

April 9, 2019

www.poweradvisoryllc.com

To: Clients and Colleagues

From: John Dalton, President and Jun-Xiong Sean Hughes, Consultant, Power Advisory LLC

On April 1, 2019 the Tennessee Valley Authority (TVA) issued [a Request for Proposals](#) seeking at least 200 MW of renewable energy.¹ The RFP is open to either stand-alone renewable energy resources or renewable energy resources with battery storage. The Commercial Operation Date (COD) deadline is no later than October 31, 2022, and all proposals must be submitted to TVA by May 15, 2019.

This announcement comes on the heels of TVA's draft IRP and previous 2017 Renewable RFP, both of which indicate increased momentum by TVA to increase the amount of renewable energy in their resource mix. In February, TVA released their [draft 2019 Integrated Resource Plan \(IRP\)](#), which outlined potential capacity resource mixes over the next 20-years.² In contrast to an absence of any new capacity for coal, hydro, and wind, there was an increase in the amount of solar across all scenarios, with solar projected to expand by 3,700 to 8,800 MW by 2038.³ In its [2017 Renewables RFP](#), TVA executed several solar PPAs in partnership with Google and Facebook, with the power purchased by TVA via PPAs, and the technology companies repurchasing the power to satisfy the electricity requirements of various data centers.⁴

While the prices associated with the 2017 PPAs are not publicly available, Figure 1 provides points of comparison with a regional solar cost benchmark alongside some known PPA prices for recent projects in the Southeast US. The regional solar Levelized Cost of Energy benchmark is based off the rate of decline from the Lazard V.10 and V.11 Southeast US LCOE.⁵ While the regional benchmark is based on a theoretical project of 30 MW size, recent projects (including those reflected in Figure 1) in the Southeast are larger and would benefit from economies of scale and offer lower prices. The River Bend solar project, which came online in 2016, is 75 MW in size and has a levelized price of \$51 per MWh (in 2013 dollars).⁶ The average PPA price across three solar projects resulting from Georgia Power's 2017 Renewable Energy Development

¹ TVA, "2019 Renewable RFP". [Link](#).

² TVA. 2019 Integrated Resource Plan. [Link](#).

³ TVA. 2019 Integrated Resource Plan. Section 7

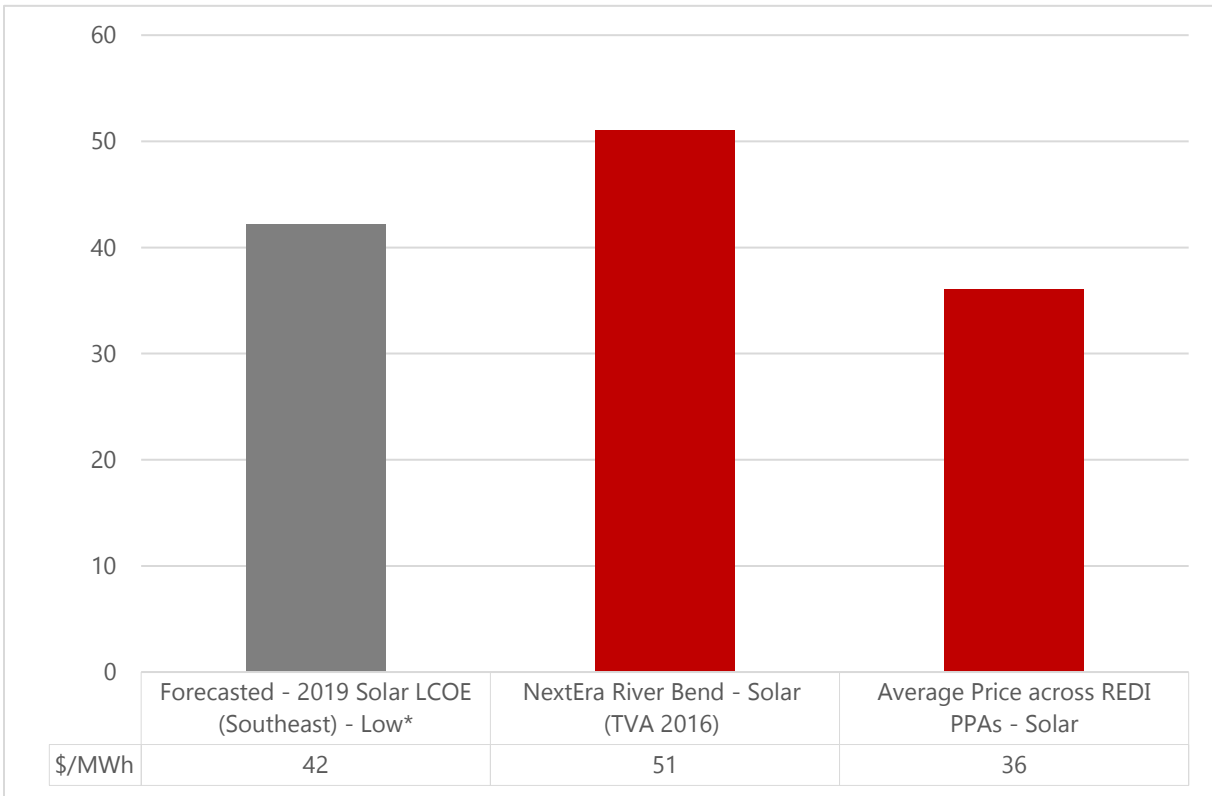
⁴ Google, [Press Release](#). Knox News, [TVA announces solar farms](#).

⁵ Lazard LCOE, [V.10](#); [V.11](#). Assumes a crystalline utility-scale, 30 MW, solar project with a fixed-tilt design, and a 30-35% capacity factor for V.10 (2016) and 17-19% for V.11 (2017).

⁶ Lawrence Berkley National Laboratory, [Report](#).

Initiative (REDI) RFP was reported as \$36 per MWh.⁷ These three projects were 200, 160, and 150 MW solar farms, owned by subsidiaries of First Solar, Invenegy Solar Development North America, and NextEra Energy Resources respectively (the First Solar project has since been sold to Origis Energy)⁸. Given these recent procurements, limited resource potential in TVA’s service territory, and the absence of wind in TVA’s draft IRP scenarios, opportunities for wind in response to this 2019 RFP seem unlikely.⁹

Figure 1: Cost Benchmarks and Recent Southeastern Renewable Energy PPA Prices



*Forecast based on the percentage decline between the V.10 and V.11 Southeast Lazard forecast. Assumes a project size of 30 MW.

Power Advisory would welcome the opportunity to assist clients in assessing potential opportunities presented by TVA’s RFP, as well as other opportunities across the United States.

⁷ pv magazine, [article](#). Georgia Power, [Press Release](#).

⁸ Origis Energy, [Press Release](#).

⁹ NREL, Section 7.6.10, [Link](#).