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## **Economic Analysis of Rappahannock Electric Cooperative Power Supply Costs**

**By Cathy Kunkel, Energy Analyst**

The vast majority of Rappahannock Electric Cooperative's power comes from the Old Dominion Electric Cooperative, a generation cooperative whose members are local distribution cooperatives, of which REC is the largest. REC has signed a contract with ODEC through 2054; beyond 2054, the contract can be terminated with three years written notice by either party. According to REC's annual financial statements, the contract explicitly states that REC must purchase at least 95% of its electricity supply from ODEC.<sup>1</sup> Yet in the last two years, REC has purchased 89% of its energy from ODEC.<sup>2</sup> It has purchased about 1% of its energy from Southeastern Power Administration, a federal power marketing administration that owns hydroelectric facilities. It has purchased 10% of its energy from Morgan Stanley Capital Group.<sup>3</sup>

The following chart provides a breakdown of Rappahannock Electric Cooperative's power supply costs by provider for the past three years. The final column shows a comparison to the estimated cost of purchasing power (energy, capacity and transmission) from the PJM wholesale market.<sup>4</sup> Clearly the long-term power contract that REC has entered into with ODEC has consistently been above-market. Specifically, in the last three years, ODEC has supplied power at a cost ranging from 23% to 50% higher than our estimate of market costs. This means that over this period, REC customers have been paying 1.4 to 2.4 cents/kWh more for power purchased from ODEC than they would have from purchasing power directly from the wholesale electricity market.

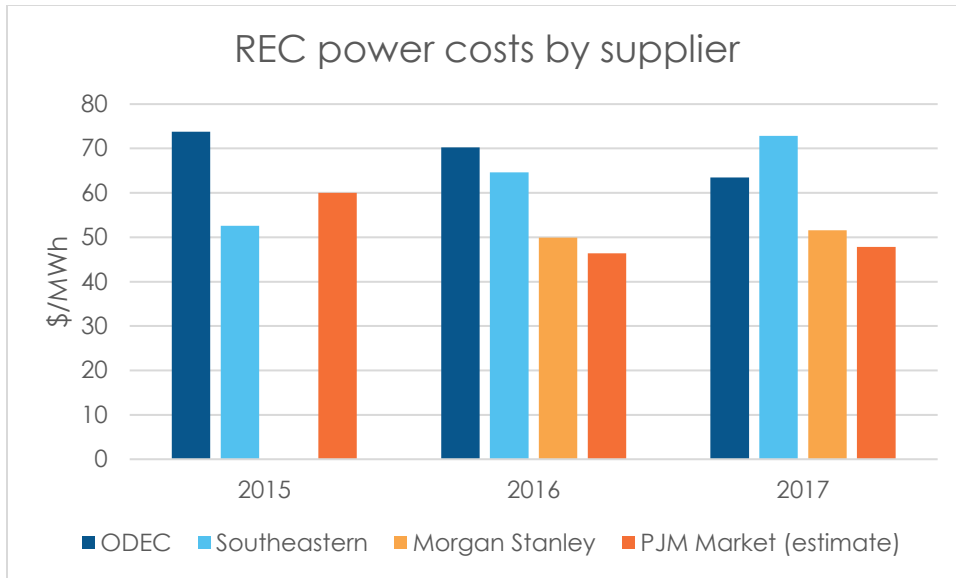
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<sup>1</sup> "As part of REC's agreement with ODEC, the Cooperative has an option to obtain up to 5% of its power requirements from a third party provider." (Rappahannock Electric Cooperative Financial Statements, December 31, 2017 and 2016.)

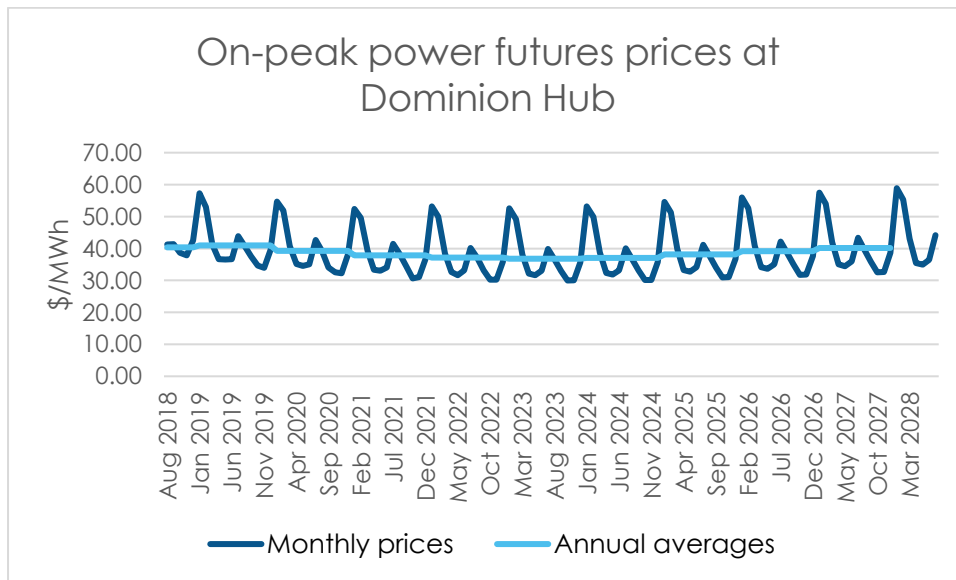
<sup>2</sup> Curiously, despite this provision, in 2017 REC purchased 11% of its energy from the Morgan Stanley Capital Group. One would have to look at the contract with ODEC to determine whether its restriction on power purchase from a third party applies only to energy, or to a mixture of energy and capacity.

<sup>3</sup> Energy purchases by provider from RUS Form 7 (2017 and 2016).

<sup>4</sup> Estimate based on average day-ahead energy market cost at the Dominion hub, PJM capacity price, and a 20% adder for ancillary services and transmission, based on the 2017 Monitoring Analytics "State of the Market" report. This is a conservative estimate that assumes that all transmission costs are borne by ODEC.



Moreover, wholesale power prices are expected to remain flat for the next decade. The following graph shows futures prices for on-peak power prices at the Dominion Hub (the closest trading hub to ODEC).<sup>5</sup> With wholesale power prices remaining low, it appears that the ODEC contract will continue to be above-market for the foreseeable future.



The high cost of power from ODEC is particularly surprising because in the last three years ODEC has purchased between 55% and 63% of its total power supply and re-sold it to member coops.<sup>6</sup> Only 37-45% of ODEC's power supply, in other words, comes from

<sup>5</sup> OTC Global Holdings futures prices, retrieved 8/6/18.

<sup>6</sup> ODEC Securities and Exchange Commission Form 10-K, p. 9.

power plants owned by ODEC. The largest of these plants are the Clover coal plant (in which ODEC has a 50% ownership stake) and the North Anna nuclear plant (11.6% ownership stake). ODEC also generates power from three gas plants (Louisa Generating, Marsh Run and the new Wildcat Point combined cycle facility that came online earlier in 2018). In 2017, ODEC reported that it purchased power (energy and capacity) at an average of \$46.56 per MWh, consistent with our estimate of market prices shown in the figure on the previous page.<sup>7</sup>

This implies either that the costs of energy and capacity at ODEC-owned plants averaged significantly above \$63 per MWh in order for ODEC to be retailing power to its member cooperatives at \$63 per MWh in 2017 or that there are some other factors driving up the cost of power from ODEC. Either way, it appears that REC customers could enjoy significant savings in power supply costs if REC were not locked into a long-term contract with ODEC. Without access to this contract, we are not able to evaluate the potential options for REC. We do not know whether REC has inquired with ODEC regarding their high power supply costs and whether there has been any attempt to re-negotiate the power supply contract.

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<sup>7</sup> Source: SNL Financial proprietary database.