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ScottMadden Featured in RTO Insider and SNL Energy for "Duck Curve" Analysis

ATLANTA, GA – (November 3, 2016) – ScottMadden, Inc., one of North America's leading energy consulting firms, was recently featured in RTO Insider and SNL Energy for key findings published in its report, "Revisiting the Duck Curve: An Exploration of Its Existence, Impact, and Migration Potential." RTO and SNL highlighted insights from the report, which explores increasing penetrations of renewable resources and how they impact grid conditions.

The duck curve, as SNL Energy defines it, is "the midday dip in energy demand followed by a steep evening peak." Based on the original ScottMadden study, California system data displays unmistakable marks of a deepening duck curve problem.

"California utilities are now required to hurriedly dispatch thousands of megawatts from fastramping gas-fired plants to compensate for sudden increases in load," states the SNL Energy article. The lowest net load, or the "belly of the duck," is declining each year, which signifies a connection to utility-scale solar use in California. Due to the causes attributed to the deepening curve, ScottMadden analysts believe this problem might not stop with California.

The <u>RTO Insider report</u> emphasized the key lesson from the ScottMadden study: correctly identify the root causes of the curve so that industry leaders can respond appropriately.

"Perhaps most important from a system planning perspective, the report attempts to dispel the notion that DER is contributing significantly to the shape of the duck curve," Robert Mullin, RTO Insider author, explains. Chris Vlahoplus, partner and clean tech & sustainability practice leader at ScottMadden and a co-author of the report, adds, "Contrary to popular belief among many, the primary driver of the California duck curve is utility-scale solar, not rooftop. This conclusion was 'hiding in plain sight' in the years of CAISO data we analyzed for this report."

With this conclusion, ScottMadden experts maintain that grid solutions need not depend entirely on complex DER management. Instead, the operational challenges associated with utility-scale solar present the challenge of the duck curve and offer the potential for more targeted utility-scale solutions.

"Another important implication is that the duck curve may migrate to other parts of the United States," said <u>Greg Litra</u>, partner and energy, clean tech, and sustainability research lead. "Growing numbers of utility-scale solar installations could mean that 'the duck' could migrate to states like Arizona, Georgia, Nevada, North Carolina, and Texas in the not-too-distant future."

Read the original <u>ScottMadden report</u> here and <u>contact us</u> to learn more.

About ScottMadden's Clean Tech & Sustainability Practice

Leveraging our energy expertise, the ScottMadden Clean Tech & Sustainability practice helps our clients effectively navigate through the quickly changing energy landscape. We specialize in assisting our clients with sustainable energy strategies and making smart portfolio choices. We

work with our clients to understand and effectively utilize cleaner, renewable sources of energy, such as nuclear, wind, solar, biomass, and biofuels. Our experienced team of energy practitioners understands the roles of energy efficiency, demand response, and storage as part of an integrated strategy. We also assist clients with sustainability, bringing an understanding of energy-unique concerns.

About ScottMadden, Inc.

ScottMadden is the management consulting firm that does what it takes to get it done right. Our practice areas include Energy, Clean Tech & Sustainability, Corporate & Shared Services, and Grid Transformation. We deliver a broad array of consulting services ranging from strategic planning through implementation across many industries, business units, and functions. To learn more, visit www.scottmadden.com | Twitter | Facebook | LinkedIn

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