PRE-FILED DIRECT TESTIMONY OF
EMILY DALAGER
ON BEHALF OF SUMAC SOLAR LLC

NCUC DOCKET NO. EMP-110, SUB 0

INTRODUCTION

Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.

A. My name is Emily Dalager. I am Project Development Manager with EDF Renewables Development, Inc. (USA) ("EDF Renewables") at 10 Second Street NE, Suite 400, Minneapolis, MN 55413.

Q. PLEASE DESCRIBE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A. I am a seasoned renewable energy professional as well as a licensed real estate attorney with 8 years of greenfield energy development experience and an additional four years of working on a mergers and acquisitions team on behalf of a public renewable energy company. My work includes wind, solar, and biofuel project management, permitting, real estate matters, land use, and community outreach. As a real estate attorney, I began my career in the renewable space in 2008, joining an international wind energy developer, EDPR, working on leasing and permitting for wind energy development. My career evolved in 2011 when I joined Meridian Clean Fuel, a tax equity finance firm, where I worked on the development of a large-scale biofuel ethanol project. I then joined a mergers and acquisitions team where we bought TerraForm Power public on behalf of SunEdison. I started as a Solar Development Project Manager with EDF Renewables in 2017, managing a large portfolio of solar project in the PJM space. I hold a Bachelor of Arts degree in English and Art, a master's

degree in Counseling from Southern Illinois University, and a Juris Doctorate from William Mitchell College of Law.

Q. WHAT IS YOUR RELATIONSHIP TO THE APPLICANT?

A. As discussed in the application, Sumac Solar LLC ("Sumac Solar") is a limited liability company organized for the development and ownership of the Sumac Solar Project ("the Project") for which a Certificate of Public Convenience and Necessity is being sought in this proceeding. Sumac Solar was initially developed by Geenex Solar, LLC, a Delaware limited liability company ("Geenex"), and later fully acquired by my employer, EDF Renewables. While Geenex spearheaded land acquisition and local permitting, and continues to be involved in the development of the Project, EDF Renewables is in charge of engineering, procurement, construction, power marketing, and O&M.

Q. PLEASE SUMMARIZE YOUR CURRENT EMPLOYMENT RESPONSIBILITIES.

A. My current role as Project Development Manager with EDF Renewables covers the spectrum of solar PV development from land acquisition to preparing the project for construction. This includes local, state, and federal permitting, running multiple RFP's, environmental studies and surveys, scheduling and offtake support. Local permitting focuses on obtaining permits and fulfilling their condition to enable issuance of a grading and building permit. State permitting includes state environmental permits as well as Certificates of Public Convenience and Necessity or Reports of Proposed Construction, as applicable. Federal permits are typically limited to wetland related permits issued by the U.S. Army Corps of Engineers.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A. No.

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY?

A. The purpose of my testimony is to provide the Commission with background information concerning EDF Renewables, subsequent to its purchase of the Project in October 2020. I also provide additional information concerning EDF Renewables' plans arranging for offtake from the Project and EDF Renewables' related expertise, which relates to the need for the Project. My testimony also supports and adopts the information provided in the Supplemental Application filed this same day, the contents of which are hereby incorporated by reference.

COMPANY BACKGROUND AND PROJECT FINANCE

Q. PLEASE DESCRIBE EDF RENEWABLES' TECHNICAL EXPERIENCE AND FINANCIAL CAPABILITIES TO OWN AND OPERATE THE PROJECT.

A. EDF Renewables has the experience to build, own, and operate solar power generation facilities, including the Project. EDF Renewables is a market-leading independent power producer and service provider, and provides its services to its target sectors that include utility, municipal, cooperative, corporates, education, non-profits in the United States, Canada and Mexico. EDF Renewables develops projects that deliver grid-scale power, including wind (onshore and offshore), solar photovoltaic, and storage projects; as well as distributed solutions, including solar, solar plus storage, electric vehicle charging and energy management. EDF Renewables also provides asset optimization, with the technical, operational, and

commercial skills to maximize performance of generating projects. The company develops, builds and operates clean energy power plants in 22 countries both for our own account and for third parties. As of October, 2020, the company's North American portfolio consists of 16 GW of developed projects and 11 GW of operating assets under service contracts. EDF Renewables has another 26 GW of projects in development.

Q. PLEASE TELL ME ABOUT EDF RENEWABLES' EXPERIENCE IN DEVELOPING RENEWABLE ENERGY PROJECTS.

A. EDF Renewables' North American renewable energy portfolio consists of 16 gigawatts (GW) of developed projects and 10 GW under service contracts. EDF Renewables is a wholly-owned indirect subsidiary of EDF Renouvelables, the dedicated renewable energy affiliate of Électricité de France S.A. (France) ("EDF S.A."), a société anonyme (a form of corporation analogous to a joint stock company) registered in France and governed by French law.

In the United States, EDF Renewables has delivered an aggregate capacity of approximately 16 GW of renewable energy power to date, with an anticipated aggregate pipeline of 26 GW of additional projects in development within the United States. Limiting the development activity to solar facilities only, EDF Renewables' development of solar power in the United States totals approximately 14 GW. Of note, Gutenberg Solar, 79.9 MW ac utility scale project, is currently in service in North Carolina. Pecan Solar, a 74.9 MW ac project also located in North Carolina, is now operational and has been sold to Dominion Energy.

EDF Renewables has also developed and constructed approximately 600 MW of DG solar across the U.S. with approximately 12 MW in SERC. EDF Renewables has another 400 MW of DG solar contracted and under construction, 61.5 MW of which is in SERC.

More broadly, EDF Renewables is one of the largest renewable energy developers in North America. Its North American renewable energy portfolio consists of 16 gigawatts (GW) of developed wind, solar, and storage projects realized throughout the US, Canada and Mexico, including over 6.5 GW currently in operation.

Q. CAN YOU PROVIDE MORE INFORMATION ABOUT EDF RENEWABLES' AFFILIATED COMPANIES?

A. EDF Renewables is a member of the EDF Group, which consists of EDF S.A. and its family of subsidiaries and it is a world leader in low-carbon energy. EDF Group (i.e., EDF S.A. and its group of subsidiaries (including EDF Renewables)) bring together all the trades of production, trade and electricity networks.

Headquartered in Paris, France, EDF S.A. is largely owned by the French State, and operates through its various related entities a vast and diverse portfolio of electric power generation facilities and products. These products include electricity generation, transmission, and distribution in the United States, Canada, South America, Europe, Asia and Africa.

EDF Group operates and is developing a substantial international (Americas, Europe, Africa, Asia and the Middle East) portfolio of renewable energy facilities. As a part of its international strategy, EDF Group set goals including the tripling of its international activities by 2030. EDF S.A. is publicly traded as "Euronext: EDF" with a current market capitalization of approximately 283 billion Euros.

Q. HOW WILL THE PROJECT BE FINANCED?

A. EDF Renewables builds projects on-balance sheet, some of which have capital costs exceeding $500 million. Successful construction EDF Renewables projects will not be contingent on third party capital.

Q. DESCRIBE EDF RENEWABLES' EXPERIENCE WITH RAISING PROJECT FINANCING.

A. As noted, EDF Renewables builds projects on-balance sheet. As is typical for Sponsors both large and small, renewable projects involve tax benefits well beyond the tax "appetite" of the developer. EDF Renewables works with the largest tax equity investors in the market, and has raised over $5.5 billion to date. Tax equity is not invested until the project has neared completion (partial investment is required just before energization of a solar plant, as the Investment Tax Credit vests at the point of energization). The balance of long-term capital at energization is provided by EDF Renewables. For smaller facilities, EDF Renewables may sell down interests after the project has successfully reached Commercial Operation.

OFFTAKE PLANS

Q. DESCRIBE THE OFFTAKE PLANS FOR THE PROJECT.

A. EDF Renewables has substantial experience with offtake in the PJM market and the expectations for power purchase from the PJM market in the southeast United States are strong. EDF Renewables has previously secured and is actively negotiating for over 155 MW of offtake within the PJM market, and is using this experience to secure offtake for Sumac Solar.

Demand for renewable power in PJM is expected to remain strong for the foreseeable future. As described in a recent report prepared by market intelligence firm IHS Markit (Attachment A), corporate procurement is expected to account for about 20 percent of the United States' utility scale renewable power additions in the next decade. PJM's territory in

North Carolina and Virginia represents a particularly attractive area for corporate renewables procurement.

Q. WHAT ARE THE LONG-TERM PLANS FOR OWNERSHIP OF THE PROJECT?

A. EDF Renewables will provide expertise and capital for the financing and construction of the Project, and will continue to own the Project after it achieves commercial operation. At some point, EDF Renewables may sell portions of the facility to a utility and/or commercial and industrial entity.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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Attachment A

IHS Markit

Energy & Natural Resources Research & Analysis

Corporate US renewable procurement outlook: Optimism amid a pessimistic year

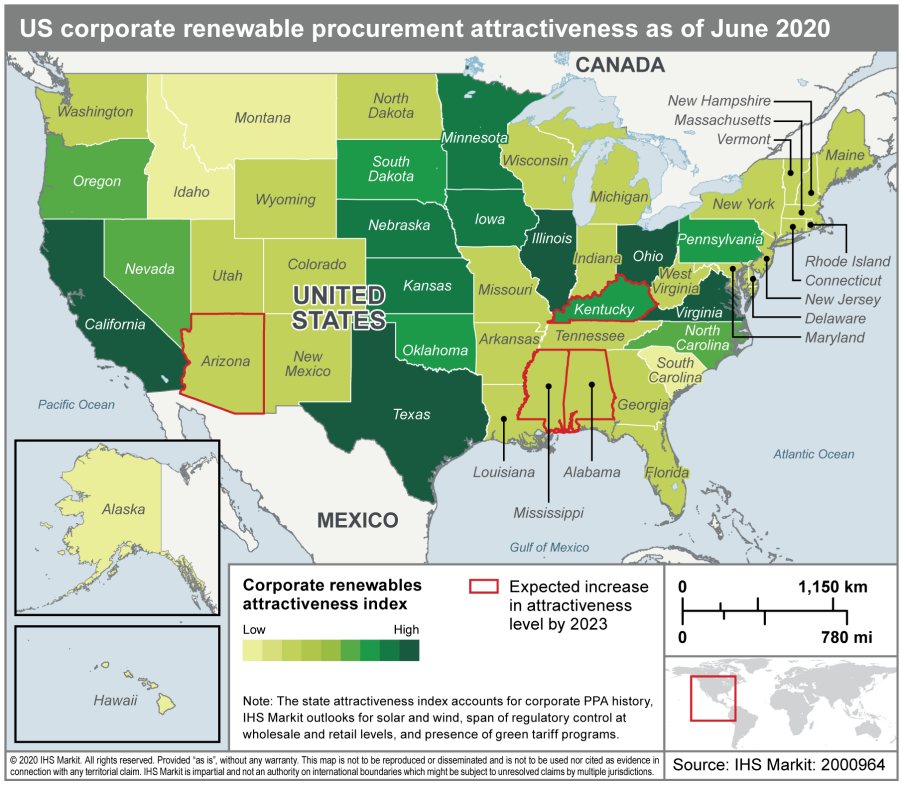
27 October 2020 | Anna Shpitsberg | Emma Xie He | Josef Benzaoui | Thomas Maslin

Procurement of solar and wind projects by corporations is on the rise globally. However, the United States continues to be the largest market for corporate driven renewable power purchase agreements (PPAs). IHS Markit's most recent estimate anticipates the corporate sector accounting for about 20% of utility scale renewable additions in the United States in the next decade (including direct PPAs, virtual PPAs, and green tariffs/sleeved PPAs).

Though the COVID-19 pandemic has delayed some construction plans, the growth in corporate contracting over prior years is expected to contribute to nearly 8 GW of wind and solar installations in 2020, an annual increase of over 45%.

Furthermore, despite COVID-19 impacting 2020 contracting, an increasing number of corporations are setting renewable targets and aiming to take advantage of tax credit availability in the short-term. There are about 220 companies operating in the US that are already procuring renewables or plan to do so and about 40% of these companies have targets that escalate through the early to mid-2020s.

Activity to date has mostly occurred in states with organized wholesale power markets and retail choice, such as ERCOT.



Though unbundled power markets continue to see high growth, the increasing adoption of green tariff programs to meet corporate demand for renewable projects closer to load, will create new hot spots as well. Green-tariff programs typically have a megawatt cap on participation, but are frequently expanded after becoming fully subscribed, such as in Utah, Michigan, North Carolina, and Virginia.

Analysis of existing procurement trends, company targets, progress toward targets, power consumption patterns, potential entrants, state policies, solar and wind economics, and timelines for transitioning from contracting to installation provide insight into IHS Markit's recently released outlook for corporate procurement, which projects 44 GW of solar and wind additions from 2021 to 2030. The outlook reaches 72GW, in a case which has active companies escalating existing procurement strategies and a greater number of new corporations entering the segment.

To date, the technology sector has dominated corporate renewable procurement, but there is significant growth potential in sectors with high consumption patterns, ambitious targets, and low to moderate renewable procurement to date, such as manufacturing and telecommunication.

In addition to expanding sector participation, we expect to see a shift in technology as well. Incremental cost improvements, the

rush to capture the ITC before its phaseout, and widespread resource availability enable solar to capture 65% of the total corporate renewable market in the next decade.

See the full press release.

Learn more about our global power and renewables research.

Anna Shpitsberg is a director of global power and renewables at IHS Markit.

Thomas Maslin is an associate director on the Gas, Power, and Energy Futures team at IHS Markit, based in Washington DC, US.

Emma Xie He is a senior research analyst on the Gas, Power, and Energy Futures team at IHS Markit.

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Posted on 27 October 2020.

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