

June 3, 2019

By Hand Delivery
Lora W. Johnson
Clerk of Council
Room 1E09, City Hall
1300 Perdido St.
New Orleans, LA 70122

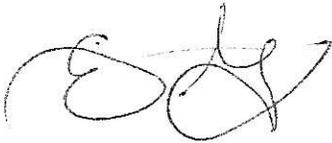
RE: A RULEMAKING PROCEEDING TO ESTABLISH RENEWABLE PORTFOLIO STANDARDS (Docket No. UD-19-01)

Dear Ms. Johnson,

Enclosed please find an original and three copies of PosiGen Solar's Comments in the above-referenced docket. Please file the attached intervention and this letter in the record of this proceeding and return one time-stamped copy to our courier, in accordance with standard procedures.

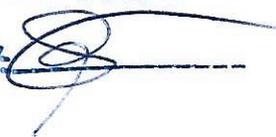
Thank you for your assistance with this matter.

Sincerely,



Elizabeth Galante
PosiGen Solar
819 Central Avenue, Suite 201
Jefferson, LA 70121

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National Green New Deal	Green New Orleans Deal
Achieve net-zero greenhouse gas emissions through a fair and just transition for all communities and workers.	Achieve 100% Renewable Energy by 2040 incentivizing low-income programs, prioritizing Opportunity Zone neighborhoods for grid modernization, subsidizing solar, energy efficiency, and storage programs.
Create millions of good, high-wage jobs and ensure prosperity and economic security for all people of the United States.	Establish a local hiring policy, incentivize locally sited generation projects, and prioritize locally owned businesses for incentive programs.
Invest in the infrastructure and industry of the United States to sustainably meet the challenges of the 21st century.	Establish a mandate to retire old infrastructure in favor of modern, efficient infrastructure.
Overhaul the transportation systems in the United States to remove pollution and greenhouse gas emissions from the transportation sector.	Encourage beneficial electrification in local transportation systems
Climate and community resiliency.	Mandate that all new infrastructure investments meet resiliency goals.
Promote justice and equity by stopping current, preventing future, and repairing historic oppression of indigenous peoples, communities of color, migrant communities, deindustrialized communities, depopulated rural communities, the poor, low-income workers, women, the elderly, the un-housed, people with disabilities, and youth (referred to in this resolution as “frontline and vulnerable communities”).	<p>Ensure affordable access to electricity by prioritizing homes that require for assistance more than two years in a row to receive energy efficiency and solar programs.</p> <p>Establish a goal to not invest in technology that requires the sacrifice of a neighborhood’s air, soil, water, or real estate values.</p> <p>Incentivize rental housing energy efficiency and solar programs.</p>

Implementation of the goals listed under the Green New Orleans Deal will be challenging and we understand that the devil is in the details. The following sections dig into the technical aspects of how these goals and more can be achieved through the ReRPS. In many instances, we look to Washington, D.C.’s RPS program as a successful model for what we may achieve here. D.C. is a great model for us

because it is the only other city in the United States that regulates an Investor-owned utility as we do. In a sense, D.C. is like a sister city.

II. A BOLD RESILIENT AND RENEWABLE PORTFOLIO STANDARD

Thirty-eight states and the District of Columbia have created Renewable Portfolio Standards and these policies have helped drive our country's \$64.2 Billion investments last year in new renewable energy projects.ⁱ The requirements of the 38 different RPS' vary as widely as the states but all of them have increasing annual targets for renewable energy to diversify their energy mix, promote economic development, and reduce emissions.

We propose targets that appear aggressive on the surface, but in fact, these targets are achievable, affordable, and in-line with other RPS standards. As mentioned in the Resolution creating this docket, D.C.'s targets are aggressive, establishing a 20% goal by 2020.ⁱⁱ

THE TARGETS

We support a mandate requiring Entergy New Orleans (ENO) to meet the following percentage goals with Renewable Energy Resources for each target year and maintain that minimum compliance portfolio level for each year thereafter:

- 15% of retail electricity sales by 2022;
- 25% of retail electricity sales by 2025;
- 40% of retail electricity sales by 2029;
- 55% of retail electricity sales by 2033; and
- 100% of retail electricity sales by 2040.

By percent of retail sales we specifically support using a MWh compliance goal. While capacity goals are easier to measure and understand, only two states use capacity as an RPS goal (Texas and Iowa).ⁱⁱⁱ Further, capacity goals cannot be supplemented with RECs, whereas retail sales goals may be. Capacity goals that fall short cannot simply purchase credits.

That stated we would entertain the idea of having a supplemental capacity goal. In the case that a very hot summer drives unusually high retail sales and forces the use of less desirable peaker plants, we support allowing a back-up capacity goal to supplement the retail sales goal. It does not strike us as fair to punish the utility for extreme weather events. However, this should not be construed as a way to wiggle out of the retail sales goal, which we take very seriously.

TIERED COMPLIANCE

We support adopting D.C.s tiered compliance system because the model translates well to our regulatory environment and geography. The Tier System offers a clear directive to the utility on which resources are

more desirable and worthy of investment. D.C.s system includes two tiers, but we propose a third tier to further distinguish between the renewable options.

TIER I

Tier I resources represent the best of class for New Orleans resiliency goals. These resources decrease our carbon footprint plus allow the grid to recover faster from disruptive events, decentralize generation, extend the life of our infrastructure, and address issues of equity and institutional racism. These resources are sited within Orleans Parish and create jobs for local citizens.

Tier I Eligible technologies

Locally sited generation should be given the highest priority. Electric generation that is closer to the customers using that energy decreases line loss and helps alleviate transmission needs. New Orleans is a transmission island and we make ourselves more resilient if we make electricity closer to us.^{iv} If we solely rely on power plants across the lake, for example, then we are completely dependent on the transmission lines connecting us. Katrina took down most of those transmission lines. Let's avoid that known vulnerability in the future by investing locally now.

Locally sited generation should include technology we have today and allow for future technology deployment. Current technologies include but are not limited to solar pv (net-metered), solar powered microgrids, solar connected combined heat and power, solar hot water heaters, community solar with virtual net metering; and other renewable energy sources. Emerging technologies may include solar and battery technology and other storage solutions.

D.C.'s programs require that solar thermal installations use Solar Rating and Certification Corporation (SRCC) certified components in order to qualify as an eligible resource. RECs are awarded to Solar Thermal based on their kWh savings at the ratio 3,412 BTUs = 1kWh. Solar capacity ratings should not be discounted.

New Orleans' energy efficiency and demand response programs should be included in the ReRPS because it is essentially a locally-sited generation-saved MWh, or a 'negawatt'. These resources boost the local economy in several ways. First, these programs create jobs that can never be outsourced. The work must be done on site. Second, lower electric bills add more dollars into the local economy, especially for Low-to-Middle Income (LMI) families that have an annualized income that is 50-80% of the HUD area median.^{v, vi}

According to a report by the American Council for an Energy-Efficient Economy (ACEEE) and the Energy Efficiency for All (EEFA) Coalition, LMI households spend on average 7.2% of their income on energy, which is three times higher than other households (2.3%). The burden is higher in New Orleans at 9.8%, whereas Washington D.C. has among the lowest energy burden – 2.1%.^{vii}

The report also reported that African-American and Latino households spend disproportionate amounts of their income on energy and that more energy efficiency measures would help close the gap by at least one-third.^{viii}

We support allowing ENO to get compliance credit for the great work on the 2% Energy Efficiency goal. However, the accounting should be verified by a third-party to ensure and certify that no double counting is occurring across the two policies (Energy Smart and ReRPS).

Resources that address the legacy of inequality in our housing stock and neighborhoods should also be in Tier I. These could include low-income energy efficiency / solar programs, Section 8 housing energy efficiency / solar programs, microgrids in Opportunity Zones, community solar programs in Opportunity Zones, and prioritizing generation and programs in traditionally marginalized communities in New Orleans East, the Seventh Ward, Hollygrove, and other non-gentrifying areas. These programs in no way should alter the fabric of these neighborhoods.

The Council should encourage MISO to set up an Energy Efficiency Certificate trading regime similar to the M-RETS to help fund EE programs moving forward.^{ix} Much like Renewable Energy Certificates, Energy Efficiency Certificates (EECs) represent 1 megawatt hour of power conserved or reduced, sometimes referred to as a 'negawatt'. The EEC market has great potential for monetizing energy efficiency savings and offering a new funding source to offset the cost of the programs.x

Emerging technology, such as solar paired with battery systems should be eligible once these technologies become widely available. Battery back-up systems have the potential to greatly enhance resiliency benefits for aged and health impaired residents. In cases of grid failure, machine-dependent residents should not be at risk and suffer life-threatening situations. ENO's study showing that there are more than seven outages per day alerts us to vulnerabilities that are critical and solvable. We point to solutions like solar plus battery storage because it addresses critical short term needs as well as longer-term resiliency goals.

Fifty percent of the ReRPS target should come from Tier I resources to be defined in the Council's compliance schedule.

Tier II

Tier II resources may include renewable energy resources located within Louisiana. These may include new generation projects or PPAs with existing generation.

Tier II Eligible technologies

Wind, solar, hydropower, geothermal, landfill gas, waste-water treatment gas, ocean (mechanical and thermal), fuel cells fueled by other Tier II resources, combined heat and power fueled by Tier II resources, wastewater used as a heat source as a sink for heating or cooling systems, and emerging technologies may qualify. Under no circumstances should municipal solid waste incineration, biomass, or nuclear power qualify to meet requirements under the ReRPS.

Twenty-five percent of resources may come from Tier II resources to be defined in the Council's compliance schedule.

TIER III

Tier III renewable resources may include renewable energy resources located outside of Louisiana. These may be RECs, M-RETS, or power purchase agreement (PPAs). PPAs should be for a minimum term of at least twenty years to provide energy, capacity, ancillary services and other grid support functions approved by the council.

Tier III Eligible technologies

ENO may meet the ReRPS by obtaining renewable energy credits (RECs) that equal the percentage requirement for electricity sold or by paying specified compliance fees.

SOLAR CARVE-OUT

Twenty-two states and D.C. have an RPS with a solar carve-out and the reason is clear. Solar PV has multiple societal benefits beyond its contribution to climate change mitigation through pollution-free energy. Its power production does not cost water, is silent, lasts decades, and requires little maintenance. Further, solar is installed close to where its power is used saving line loss and alleviating peak demand.

D.C.'s decision to heavily subsidize their solar market was a design choice intended to invest utility spending on its RPS into the local. The thinking is "high subsidy = high local benefit." Two years ago, D.C. passed a "Solar For All" bill, which uses compliance fees for local D.G. carve-outs to fund the program. The goal of the measure is to lower the utility bills of all low-income households in DC by half by 2032.

According to Google Project Sunroof, New Orleans has some of the best solar potential in the world – 94% of roofs are deemed solar-viable.^{xi} This is great news for us, especially considering that almost every roof in the city was replaced or repaired in the years following Hurricane Katrina. The average roof age, both residential and commercial, in New Orleans is younger than anywhere else in the country.

Solar is a worthy investment because it offers other benefits as well. A University of San Diego study found that rooftop solar resulted in a 5% savings on home cooling costs. Normally, when sunlight hits a roof, the heat is pushed into the home. If the roof has solar panels the sunlight is absorbed by the panel instead of the roof, thereby preventing heat from entering the house. Researchers found that solar panels can lower a roof's temperature by 5 degrees Fahrenheit.

Our roofs receive 75% of the maximum annual sun in the county. Our local irradiance suggests that solar projects should have a higher capacity factor than is currently calculated in ENO's latest IRP. To help improve planning and boost confidence in solar pv production, PosiGen is prepared to provide production data from its systems. All of our systems come with an EnPhase monitor to ensure peak performance. The production metering in EnPhase systems is tested for accuracy and is suitable for utility feed-in tariffs or for participation in a REC or SREC market.

We support retaining New Orleans' net-metering policy and suggest that net-metered customers who lease their system forfeit the created RECs to ENO. ENO may bundle these locally generated RECs as a new revenue stream. However, we do not want to automatically take the right of RECs from any other

solar user. Perhaps the owner of the solar system should be given the opportunity to either certify their system or sign over the RECs to ENO. Any funding generated from aggregating RECs should be used to reach ReRPS goals.

Currently, all systems are sited to maximize solar production for the residential or business customer. However, it is possible to maximize solar production at ENO’s peak by orienting the solar pv system westerly. These systems would be dispatchable at peak to benefit the grid, and therefore, may be more appropriate for a Value of Solar tariff. If the solar produced at peak were priced at \$.50/kWh (capped at \$5M / year) businesses and homeowners would clamor to participate in the program.

New Orleans could surpass its previous position as #6 in the nation for solar per capita. The demand is high, but up-front costs still make the systems out of reach for most people. The right incentives could put us at #1 in the country.

COMPLIANCE SCHEDULE

D.C. created a specific minimum percentage of retail electricity sales to come from eligible renewables according to the below schedule. We recommend creating a similar schedule for New Orleans.

Year	Tier I	Tier II	Solar
2007	1.5%	2.5%	0.005%
2008	2.0%	2.5%	0.011%
2009	2.5%	2.5%	0.019%
2010	3.0%	2.5%	0.028%
2011	4.0%	2.5%	0.40%
2012	5.0%	2.5%	0.50%
2013	6.5%	2.5%	0.50%
2014	8.0%	2.5%	0.60%
2015	9.5%	2.5%	0.70%
2016	11.5%	2.0%	0.825%
2017	13.5%	1.5%	0.98%
2018	15.5%	1.0%	1.15%
2019	17.5%	0.5%	1.35%
2020	20.0%	0.0%	1.58%
2021	20.0%	0.0%	1.85%
2022	20.0%	0.0%	2.175%
2023	20.0%	0.0%	2.50%
2024	23.0%	0.0%	2.60%
2025	26.0%	0.0%	2.85%
2026	29.0%	0.0%	3.15%
2027	32.0%	0.0%	3.45%
2028	35.0%	0.0%	3.75%
2029	38.0%	0.0%	4.10%
2030	42.0%	0.0%	4.50%
2031	46.0%	0.0%	4.75%
2032	50.0%	0.0%	5.0%

INCENTIVES AND MULTIPLIERS

We support the Council offering additional financial incentives or rebates to support the development and utilization of Tier 1 resources for government buildings, hospitals, universities, publicly-funded K-12 schools, grocery stores, rainwater pumping stations, public housing developments, qualifying low-income households, non-profit organizations, or any other critical infrastructure that promotes community resiliency and public safety during prolonged outages of the electrical utility's transmission or distribution systems.

We support setting multipliers to encourage higher value renewable investments. Following are examples of potential multipliers that could be set for each Tier.

Tier 1 Multiplier. If Tier 1 minimum portfolio requirements are met for a given portfolio year, a multiplier of 2 shall apply to all RECs generated by the renewable energy resource. ENO shall be allowed to count the multiplier bonus toward the overall minimum compliance portfolio requirement that would otherwise be met by a combination of Tier 1, Tier 2, and Tier 3 resources.

Tier 2 Multiplier. If Tier 2 minimum portfolio requirements are met for a given portfolio year, a multiplier of 1.5 shall apply to all RECs generated by the Tier 2 renewable energy resource or approved customer program. ENO shall be allowed to count the multiplier bonus toward the overall minimum compliance portfolio requirement that would otherwise be met by a combination of Tier 1, Tier 2, and Tier 3 resources.

Tier 3 Multiplier. Resources located within MISO South (zones 8, 9, and 10) that are subject to the siting authority of the Mississippi Public Service Commission, the Arkansas Public Service Commission, or the Public Utility Commission of Texas, or other regulatory body, should receive a multiplier of 1.25 to apply toward the overall minimum compliance portfolio requirement for the purpose of reducing congestion and improving local resource adequacy for the MISO South region.

We understand that the MTEP-19 Market Congestion Planning Study will attempt to address the North-South transmission constraint, which currently limits capacity for flows between MISO Nother/Central and South regions. ENO's access to inexpensive wind capacity may be limited because of this constraint. We encourage ENO and the Council to stress the importance of access to these resources to MISO.^{xii}

REPORTING REQUIREMENTS

Within 180 days of adoption of regulation, ENO must file a plan with the City Council to comply with the requirements of UD-19-01.

The Council should set a fixed date each year, on which ENO must file an annual report on the ReRPS detailing its progress toward the next portfolio compliance requirement, including a projection of its ability to meet the requirement, any corrective actions needed to meet the requirement, and more. We have included an Annual Report from the D.C. PSC as an example of an admirable format. We

recommend creating a similar report requirement for ENO (Appendix A: DCPSC Report on the Renewable Portfolio Standard for Compliance Year 2018).

LOCAL AND DIVERSITY HIRING REQUIREMENT

We support including a ‘local and diversity’ hiring requirement to resources added as a result of the ReRPS. This could mean a minimum percentage of employees or contract staff that work to construct or maintain a utility-owned Tier 1 resource must reside in Orleans parish. Utility solar and energy efficiency programs with similar requirements have created jaw-dropping numbers of jobs and boosted their local economy.^{xiii, xiv, xv}

Companies that are MBE, work with LMI communities and families, or are public-benefit non-profits should be given hiring priority. We want to ensure that New Orleanians receive the maximum societal and economic benefit from their ReRPS investments by cementing a commitment to improve economic access to this newly created market.

UTILITY PERFORMANCE INCENTIVES AND ALTERNATIVE COMPLIANCE PAYMENTS

We agree that ENO may seek rate recovery for utility-owned resources. However, REC purchases should be treated as a fuel cost, a straight pass through to customers.

If ENO fails to meet the minimum compliance portfolio requirement, it should pay an alternate compliance payment (ACP) into a public purpose fund for investment in Tier I resources. A potential ACP schedule should be created to set charges for each year ENO fails to comply. Charges should ramp up to keep pace with inflation and impart the seriousness of compliance. Below is a sample schedule for ACP through target year 2029. Clearly, the schedule should be set for the entire ReRPS compliance timeframe.

Year	Failure to Meet Tier I Goals	Failure to Meet Tier I and Tier II Goals	Any deficiency in the portfolio after Tier I and II goals have been met
2022	\$250 / REC	\$175 / REC	\$50 / REC
2023	\$250 / REC	\$175 / REC	\$50 / REC
2024	\$250 / REC	\$175 / REC	\$50 / REC
2025	\$250 / REC	\$175 / REC	\$50 / REC
2026	\$300 / REC	\$200 / REC	\$100 / REC
2027	\$300 / REC	\$200 / REC	\$100 / REC
2028	\$300 / REC	\$200 / REC	\$100 / REC
2029	\$350 / REC	\$250 / REC	\$150 / REC

CONTROLLING COST

COST CAPS

We support controlling costs of the program such that ratepayers are not unduly burdened, particularly low-income families. We would support a maximum bill charge that could be set up by dollar amount and/or a percentage of the monthly bill. For example,

1. \$2 per month for residential customers not to exceed 5% of the total bill.
2. \$20 per month for small commercial customers not to exceed 2% of the total bill.
3. \$200 per month for large commercial and industrial customers not to exceed 1% of the total bill.

The Council might consider waiving the recovery from low-income households struggling with bill payment. This could be determined through the LIHEAP program and/or other mechanisms.

In addition, we strongly encourage a cap on administrative costs for administering the ReRPS. We support an administrative cap of 5-8%.

PUBLIC PURPOSE CHARGE

Another way to manage costs for low-income families is through a Public Purpose Charge. The DCPSC has numerous programs supporting low-income families including the Sustainable Energy Trust Fund.^{xvi, xvii} It is based on kilowatt-hour retail sales (\$.001612 in FY 2017) and funds low-income household participation in D.C.'s programs. New Orleans should create a similar fund and allow organizations that work with low-income households to broker the funds for qualifying participants.

LOST REVENUE

No lost revenue recovery should be allowed as a result of the ReRPS. Electrification of transportation systems will likely offset any decrease in demand as a result of the policy.

RERPS ADVISORY GROUP

We support the creation of a citizen advisory group to help guide the process and ensure proper representation from impacted stakeholders, such as low income advocates or businesses that serve this population, representatives from each Council district, marginalized communities representatives, and more. Only persons who live in New Orleans should be allowed to participate. Advisory Group meetings should be open to the public. The group should receive funding from the ReRPS program.

CONNECTING RERPS POLICY TO OTHER DOCKETS AND CITY PLANNING

INTEGRATED RESOURCE PLANNING (IRP) UD-08-02

ENO should be barred from adding any new fossil-fuel fired generation units after 2022. Units of this type will not be modeled in the IRP planning. Moving forward, only resources allowed through the ReRPS will be modeled.

ENERGY SMART

The energy efficiency program should help inform the ReRPS Tier I demand response programs and vice versa.

MAYOR'S OFFICE OF RESILIENCE AND SUSTAINABILITY

Through the ReRPS, ENO, the Council, and the Advisory Council should coordinate with the Mayor's office of Resilience and Sustainability's funding program through the National Disaster Resilience Competition (NDRC). The Gentilly Resilience District and other planning is cutting edge, resiliency planning and should work in concert with the Council and ENO's efforts.

HOUSING NOLA

HousingNOLA is a process and a plan for New Orleans to achieve affordability in housing at all levels.

ANSWERING SPECIFIC QUESTIONS RELATED TO RESOLUTION NO. R-19-109.

1. What would an appropriate RPS target for New Orleans be, and should it be a requirement or a goal?

a. What percentage of ENO's load should be met through renewable resources, and what data or other information exists indicating that the target is achievable in New Orleans?

b. In what year should ENO be required to meet this target, and should ENO have specific, incremental targets to meet?

REPLY: As stated previously, we support a mandate requiring Entergy New Orleans (ENO) to meet the following percentage goals with Renewable Energy Resources for each target year and maintain that minimum compliance portfolio level for each year thereafter:

15% of retail electricity sales by 2022;

25% of retail electricity sales by 2025;

40% of retail electricity sales by 2029;

55% of retail electricity sales by 2033; and

100% of retail electricity sales by 2040.

We look to other jurisdictions, like D.C., that have operated an RPS program for more than a decade to inform achievability here in New Orleans.

2. How should a New Orleans RPS target be satisfied?

a. Should ENO be allowed to purchase RECs to satisfy the requirement, and if so what, if any, limitations

should be applied to the use of RECs? If RECs are allowed, how should they be certified or verified?

b. What resources should be included in the definition of resources that may be used to meet the target (whether through the addition of resources to ENO's system or through the purchase of RECs) -- Solar Water Heat, Solar Space Heat, Geothermal Electric, Solar Thermal Electric, Solar Thermal Process Heat, Solar Photovoltaics, Wind (Large and Small), Biomass, Hydroelectric, Geothermal Heat Pumps, Combined Heat & Power, Landfill Gas, Hydroelectric (Large and Small), Geothermal, Anaerobic Digestion, Fuel Cells using Renewable Fuels, other?

c. Should there be a requirement that some portion of the RPS must be met through specific types of renewables (or RECs), such as solar or distributed generation?

d. Should the Council consider adopting a method of encouraging local renewable resources, such as by providing ENO with greater credit toward meeting the RPS requirement for local resources than for remote resources?

REPLY: Please see the section titled "Tiered Compliance" in answer to Question 2 and subparts.

3. How should the RPS standard be enforced, should the Council consider a penalty or Alternative Compliance Payment structure?

REPLY: Please see the section titled "Utility Performance Incentives and Alternative Compliance Payments."

4. What protections should be put in place to protect ratepayers from unreasonable increases in rates due to the RPS?

a. What would be an unacceptable level of rate impact resulting from compliance with an RPS?

b. If a limit on rate impact is established, how should it be structured -- as a flat cap, as an Alternative Compliance Payment structure, or through some other structure?

REPLY: Please see the section titled "Controlling Cost."

APPENDIX A

Public Service Commission
of the
District of Columbia

Bi-Annual Report on Fuel Mix

July 3, 2017

Executive Summary

The Retail Electric Competition and Consumer Protection Act of 1999 requires the Public Service Commission of the District of Columbia (“Commission”) to report to the Council of the District of Columbia (“District Council”) every two years, beginning July 1, 2003, on fuel mix information for the electricity sold in the District of Columbia (“District”), the amount of electricity sold in the District that comes from renewable sources, and on the feasibility of requiring each licensed electricity supplier doing business in the District to provide a minimum percentage of electricity sold from renewable sources.¹ To collect the information necessary for this report, the Commission has adopted fuel mix disclosure regulations that require suppliers serving load in the District to report their most current fuel mix statistics supplied by the Regional Transmission Organization (“RTO”) that provides service to the District, i.e. PJM Interconnection, L.L.C. (“PJM”). Twenty-eight (28) of the thirty-seven (37) electricity suppliers (including Pepco) serving customers in the District reported their fuel mix statistics to the Commission by the June 1, 2017 due date—with a total of thirty-three (33) reports filed by June 19, 2017. These reports are related to the PJM System Fuel Mix for 2016, which follows:

<u>Fuel Source</u>	<u>Share</u>
Coal	34.3%
Nuclear	34.7%
Natural gas	26.3%
Oil	0.2%
Total Renewables	<u>4.5%</u>
Total	100.0%

In 2016, the share of natural gas used to provide electricity increased to 26.3 percent from 23.0 percent in 2015, while the share of coal decreased to 34.3 percent from 36.6 percent in 2015. The share of renewable resources also continues to rise, although its share of generation still remains relatively small—around 4.5 percent in 2016 compared to 4.3 percent in 2015—with wind energy representing the largest share with 2.2 percent, followed by hydroelectric power at 1.0 percent.

The impact of renewable resources is not easily accounted for in the fuel mix reporting. The renewable resources component in the fuel mix for any particular year may be different from the same component in the RPS report for that same year because of the manner in which the RPS requirement is implemented. In particular, pursuant to the Commission’s RPS rules, RECs are valid for three years from the date of generation. To the extent that an electricity supplier meets its RPS compliance requirement using RECs from a year different from the fuel mix reporting period, the renewable component should not be reflected in the report due to the difference in the date of generation.² In addition, District

¹ D.C. Code § 34-1517(c) (2).

² For example, if the fuel mix reporting period is for calendar year 2016 and the electricity supplier acquired some RECs associated with generation in 2015 to comply with the renewable portfolio standard, then the supplier’s fuel mix report should not count the renewable resources associated with generation in 2015. The

consumers may enter into purchase power agreements for renewable resources that may not be directly reflected in the fuel mix reported by suppliers.

The District Council also enacted the Omnibus Utility Amendment Act of 2004 that, among other things, requires the Commission to determine the feasibility of an electricity supplier to disclose every six months emissions on a pound per megawatt-hour basis and the fuel mix of the electricity sold by that supplier in the District.³ In September 2008, the Commission adopted final rules that require the electricity suppliers to file reports showing their emissions in pounds per megawatt-hour for carbon dioxide, nitrogen oxide and sulfur dioxide. The 2016 emissions disclosure available from PJM-EIS show a decrease in the amount of emissions from carbon dioxide, nitrogen oxide, and sulfur dioxide, compared to 2015. Based on the PJM System Fuel Mix, the 2015 and 2016 emissions are as follows:

Emissions (lbs. per MWH)

	<u>2015</u>	<u>2016</u>
Carbon dioxide	1014.29	992.04
Nitrogen oxide	0.78	0.75
Sulfur dioxide	1.61	1.32

The fuel mix and emissions information can help the District’s customers make more informed choices when selecting their electricity supplier and help the District community monitor the environmental impacts of the fuel choices that are being made. This is becoming more important as residential consumers continue to choose alternative electricity suppliers. Currently, about 15 percent of the District’s residential customers receive electricity supplied by an alternative supplier. The Commission will continue to monitor the fuel mix and emission reports to ensure that the information is being properly disclosed and to improve upon the reporting.

only RECs that should be included in the fuel mix report would be those renewable resources associated with generation in 2016.

³ D.C. Code § 34-1504(c) (2)(A).

I. Introduction

The Retail Electric Competition and Consumer Protection Act of 1999 requires the Commission to report to the District Council every two years, beginning July 1, 2003, on fuel mix information for the electricity sold in the District. In the next section, Section II, we describe the reporting requirements for fuel mix and emissions that the Commission has implemented in the District. In Section III, we provide information on the PJM Interconnection's ("PJM")—the Regional Transmission Organization ("RTO") that coordinates the delivery of wholesale electricity to the District—fuel mix and renewable resources.⁴ Finally, Section IV summarizes the Commission's ongoing activities. Selected orders relating to the Commission's rules on fuel mix and emissions reporting are included in Attachment 1.

II. Reporting Requirements for Fuel Mix and Emissions

A. Fuel Mix

Section 34-1517(c)(2) of the D.C. Code states that before July 1, 2003, and every two (2) years after that date, "the Commission shall provide a report to the Council on the overall fuel mix of the electricity sold in the District of Columbia, the amount of electricity sold in the District of Columbia which comes from renewable energy sources, and on the feasibility of requiring each licensed electricity supplier doing business in the District of Columbia to provide a minimum percentage of electricity sold from renewable energy sources."⁵ In addition, Section 34-1517(b) of the D.C. Code states that every six (6) months, "each licensed electricity supplier doing business in the District of Columbia shall report to the Commission on the fuel mix of the electricity sold by the electricity supplier, including categories of electricity from coal, natural gas, nuclear, oil, hydroelectric, solar, biomass, wind, and other resources, and on the percentage of electricity sold by the electricity supplier which comes from renewable energy sources."

In Order No. 12765, issued June 13, 2003, the Commission adopted interim fuel mix disclosure regulations and approved the Retail Competition Working Group's recommendation that suppliers serving load in the District should report the most current PJM-supplied or self-determined fuel mix statistics by June 1 and December 1 of each year. In addition, the Commission directed suppliers to report to their District customers the fuel mix information in the June and December billing cycles of each year. Subsequently, in Order No. 13391, issued September 21, 2004, the Commission directed active suppliers to file a June fuel mix report that includes information for the previous calendar year and a December fuel mix report that covers the period January through June of the current year.

B. Emissions Disclosures

On January 31, 2005, the District Council enacted the Omnibus Utility Amendment Act of 2004, which became effective on April 12, 2005.⁶ The Omnibus Act, among other things,

⁴ This information is provided through PJM Environmental Information Services, Inc. ("PJM-EIS"), which was formed to provide environmental and emissions attributes reporting and tracking services to its subscribers. PJM-EIS owns and administers the Generation Attribute Tracking System ("GATS").

⁵ The Commission provides an annual report to the District Council on the electricity suppliers' compliance with the District's Renewable Energy Portfolio Standard.

⁶ See D.C. Law 15-342, Omnibus Utility Amendment Act of 2004.

amended several sections of the Electric Restructuring Act and required the Commission to determine the feasibility of an electricity supplier to disclose every six months emissions on a pound per megawatt-hour basis and the fuel mix of the electricity sold by that supplier in the District. In Order No. 13589, issued May 19, 2005, the Commission determined that the emissions information required by law is available from PJM. In addition, the Commission concluded that since suppliers are already providing the fuel mix information, it would be administratively efficient to require electricity suppliers to disclose the emissions information at the same time that they provide their fuel mix report. Based on information readily available from PJM, the Commission directed that electricity suppliers report on carbon dioxide, nitrogen oxide, and sulfur dioxide emissions by June 1 and December 1 of each year. Active electricity suppliers were also directed to provide this emissions information to their customers.

The Commission finalized the interim disclosure requirements in a rulemaking process. A Notice of Proposed Rulemaking (“NOPR”) appeared in the *D.C. Register* on July 11, 2008, proposing rules governing the submission of fuel mix and emission disclosure reports by the Potomac Electric Power Company (“Pepco”) and electricity suppliers and replacing the interim regulations recommended by the Retail Competition Working Group and later adopted by the Commission in Order No. 12765 (issued June 13, 2003), as well as other Commission directives. No comments were filed in response to the NOPR. A Notice of Final Rulemaking appeared in the *D.C. Register* on September 12, 2008, adopting the rules that appeared in the NOPR. The rulemaking notices are also included in Attachment 1. As a result of the final rules, electricity suppliers will provide more supplier-specific information about their fuel mix and will supply data about carbon dioxide, nitrogen oxide and sulfur dioxide emissions in pounds per megawatt hour. In the past, electricity suppliers generally submitted the PJM system mix information, which offers no differentiation among suppliers.

III. Fuel Mix, Renewable Resources and Emissions Disclosures

Figure 1 below provides the fuel mix available in the PJM region for 2012 through 2016.⁷ Figure 1 also provides a perspective on the share of renewable resources in the PJM region associated with the generation of electricity. Based on Figure 1, the overall renewable resources in the PJM region in 2016 represents more than four percent of the available fuel resources.⁸

Figure 2 below provides additional details about the renewable resources in the PJM System Mix from 2012 – 2016. As of 2016, wind energy accounts for the largest share among renewable resources, about 2.2 percent. Among other renewable resources, hydroelectric power represents the second largest resource in 2016 and comprises roughly one percent. Hydroelectric power is counted as a Tier II resource under the District’s renewable energy portfolio standard.⁹ Methane gas and wood-related fuels account for approximately 0.3 and 0.2 percent, respectively, in 2016.¹⁰ Overall, Tier I related resources—such as methane gas, solar and wind—still

⁷ The PJM system mix represents the distribution of generating resources used to produce electricity in the PJM region and is used as a proxy to represent the fuel mix for the District of Columbia. A certificate is created for each megawatt hour of electricity generated. Suppliers may claim certificates from specific generators. Unclaimed certificates represent the residual mix of generation.

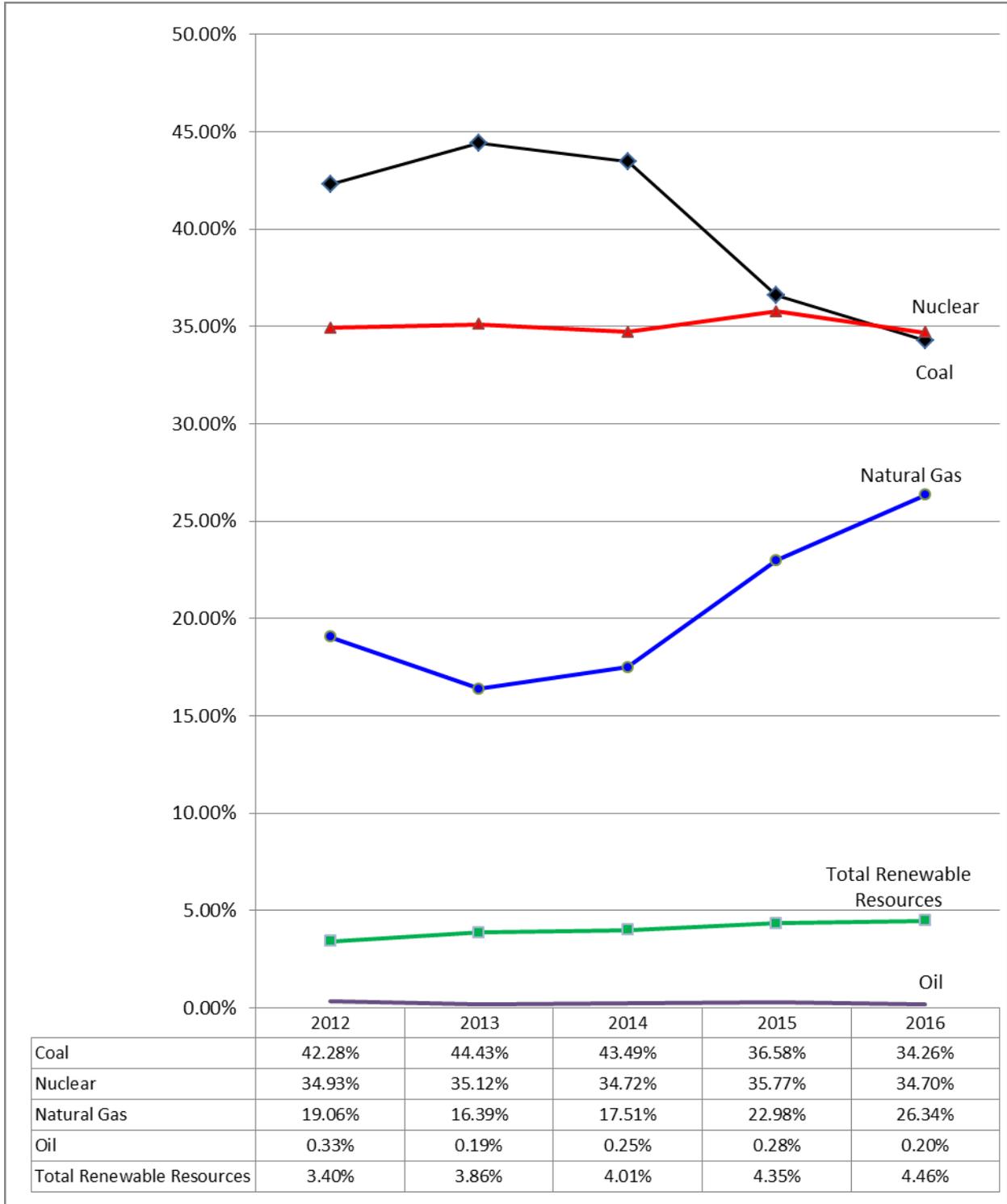
⁸ The District’s Renewable Energy Portfolio Standard requirement for 2017 calls for 13.5 percent from Tier I resources, with 0.98 percent from solar energy resources, and 1.5 percent from Tier II resources.

⁹ Municipal solid waste is no longer eligible to meet the District’s RPS requirement as of 2013.

¹⁰ Coal mine methane gas is not generally eligible under most RPS policies.

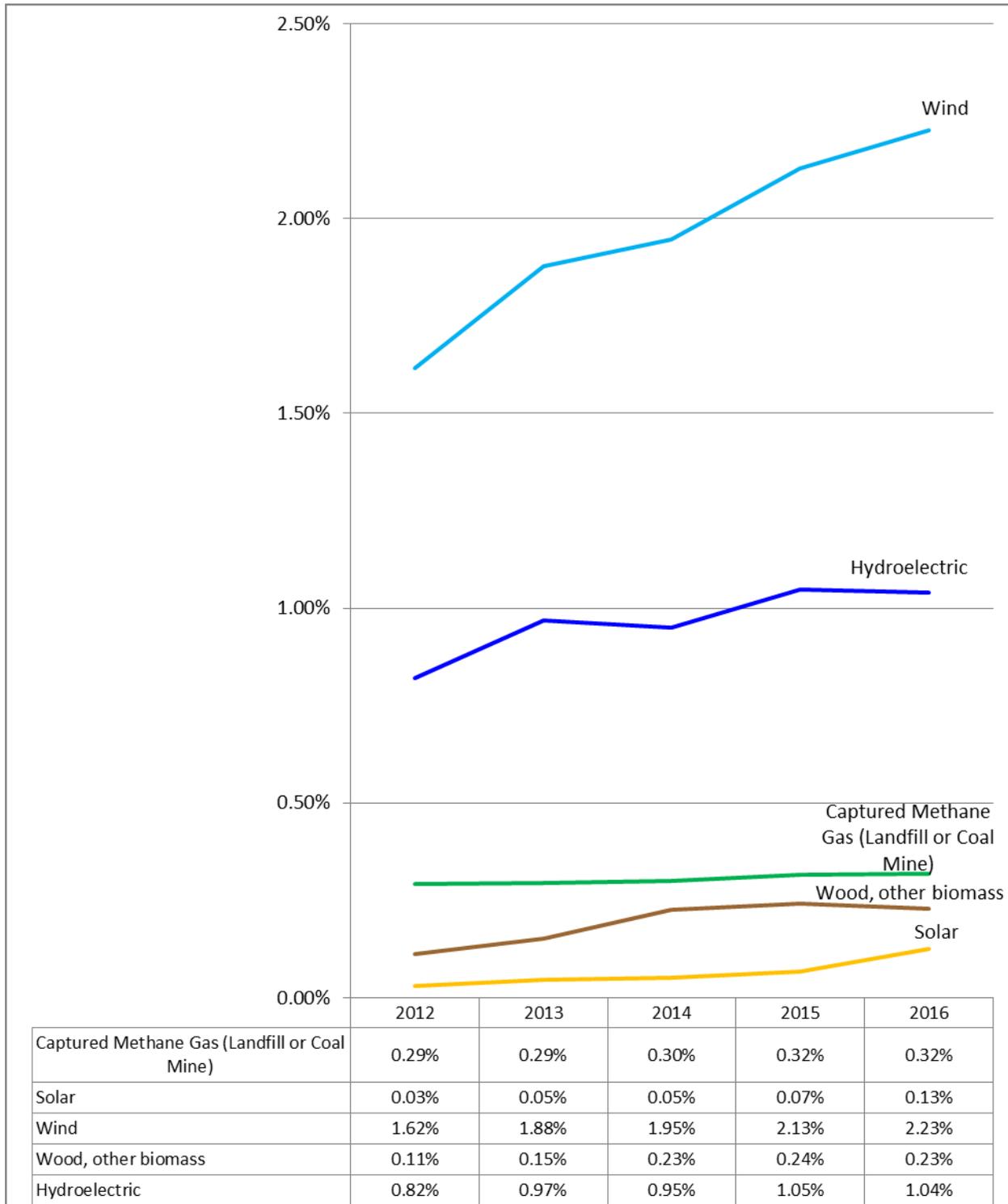
represent a very small share of the current fuel mix in the PJM system—about 2.7 percent in 2016.

**Figure 1: PJM System Fuel Mix
2012 - 2016**



Source: PJM-EIS GATS

**Figure 2: Renewable Resources in PJM System Mix
2012 - 2016**



Source: PJM-EIS GATS

* These percentages do not include solid waste, which is no longer considered a renewable resource for RPS purposes.

PJM has also begun to incorporate the impact of distributed solar photovoltaic (“PV”) generation into its long-term load forecast. PJM uses the behind-the-meter (“BTM”) solar PV data from its Generation Attributes Tracking system—adjusting for various factors—to remove the solar generation impact from its load forecast. This distributed solar impact is separate from the solar generation that is being transmitted in the wholesale market.

The District Council enacted the *Renewable Energy Portfolio Standard Act* (“REPS Act”), on January 19, 2005, which established a renewable energy portfolio standard (“RPS”) that sets the minimum percentage of a District electric provider’s supply source that must be derived from certain types of renewable energy resources beginning January 1, 2007.¹¹ The RPS minimum requirements, among other things, were amended by the Clean and Affordable Energy Act (“CAE Act”) of 2008.¹² Subsequently, the District Council adopted new legislation, the *Distributed Generation Amendment Act of 2011* (“DGAA”), which substantially increased the RPS requirement for solar energy—up to 2.5 percent by 2023, compared to the previous requirement of 0.4 percent by 2020.¹³ In addition, the DGAA generally prohibited certifying solar energy systems located outside the District of Columbia for RPS purposes. However, through the enactment of the *Fiscal Year 2015 Budget Support Act of 2014*, solar energy resources from other states are now able to meet the Tier I portion of the RPS requirement, but not the District solar carve-out requirement.

The enactment of the *Renewable Portfolio Standard Expansion Amendment Act of 2016* raised the RPS requirement to 50.0 percent from Tier I resources by 2032, with not less than 5.0 percent from solar energy. In addition, among other things, the 2016 Act amended the solar compliance fee and kept it at 50 cents per kilowatt-hour (“kWh”) shortfall through 2023, before decreasing to 5 cents per kWh by 2033. Previously, the solar compliance fee was set to begin decreasing in 2017.¹⁴ The 2016 Act also enables 15 MW solar energy systems in the District or in a location served by a distribution feeder serving the District, and no cap on the size of solar installations owned by District agencies, to be eligible for certification. The latter change has the potential to accelerate the number of DC-based solar renewable energy credits (“RECs”) that may be available to suppliers for compliance purposes in the upcoming years.

The impact of renewable resources is not easily accounted for in the fuel mix reporting. The renewable resources component in the fuel mix for any particular year may be different from the same component in the RPS report for that same year because of the manner in which the RPS requirement is implemented. In particular, pursuant to the Commission’s RPS rules, RECs are valid for three years from the date of generation. To the extent that an electricity supplier

¹¹ Renewable energy resources are separated into two categories, Tier I and Tier II, with Tier I resources including solar energy, wind, qualifying biomass, methane, geothermal, ocean, and fuel cells, and Tier II resources including hydroelectric power other than pumped storage generation, other qualifying biomass, and waste-to-energy. Minimum percentage requirements are specified for Tier I and Tier II resources, but Tier I resources can be used to comply with the Tier II standard. In addition, a minimum requirement is carved out specifically for solar energy.

¹² The RPS requirement increased to 20 percent by 2020, up from 11 percent by 2022.

¹³ On August 1, 2011, the Distributed Generation Emergency Amendment Act of 2011 became law (*See* D.C. Act 19-126). The permanent version of this legislation, the Distributed Generation Amendment Act of 2011, became law on October 20, 2011 (*See* D.C. Law 19-0036).

¹⁴ Under the DGAA, the solar energy compliance payment was set to decrease from 50 cents per kWh in 2016 to 35 cents in 2017; then 30 cents in 2018; then 20 cents in 2019 through 2020; then 15 cents in 2021 through 2022; until reaching 5 cents in 2023 and thereafter.

meets its RPS compliance requirement using RECs from a year different from the fuel mix reporting period, the renewable component should not be reflected in the report due to the difference in the date of generation.¹⁵ In addition, District consumers may enter into purchase power agreements for renewable resources that may not be directly reflected in the fuel mix reported by suppliers.

The District has made significant progress in certifying renewable energy facilities for the RPS program. As of June 1, 2017, 5,482 renewable energy systems—including solar photovoltaic (“PV”) and solar thermal—have been certified and are now eligible to participate in the District’s RPS program. Solar energy systems account for the vast majority of these approved renewable systems—5,304 as of June 1. Within the District, as of June 1, there are currently 2,908 certified solar PV systems and 110 certified solar thermal systems. There continues to be out-of-District solar energy systems certified for RPS purposes, with 2,286 systems still “grandfathered” into the RPS program under the DGAA or in a location served by a feeder serving the District.¹⁶ The total capacity associated with these solar energy systems is about 58.5 megawatts (“MW”), of which about 37.6 MW is located in the District. This is well below the 83.2 MW of estimated solar capacity necessary to meet the current statutory RPS requirements of 0.98 percent in 2017.

Table 1 below shows the emissions disclosures from 2012 through 2016 based on the PJM System Fuel Mix:

**Table 1: PJM System Mix Emissions
2012 - 2016
(lbs. per MWH)**

	2012	2013	2014	2015	2016
Carbon Dioxide	1,091.68	1,111.80	1,107.77	1,014.29	992.04
Nitrogen Oxide	0.95	0.95	0.9	0.78	0.75
Sulfur Dioxide	2.4	2.21	2.23	1.61	1.32

Source: PJM-EIS GATS

The reported emissions have improved over time, mainly due to the switch from coal to natural gas as noted above. The District’s Clean Energy Plan calls for reducing greenhouse gas emissions by 50 percent below 2006 levels by 2032, and 80 percent below 2006 levels by 2050. The District’s Sustainable DC Plan also identified two additional targets: (1) increase the use of renewable energy to 50 percent; and (2) reduce energy use by 50 percent by 2022.¹⁷

¹⁵ For example, if the fuel mix reporting period is for calendar year 2016 and the electricity supplier acquired some RECs associated with generation in 2015 to comply with the renewable portfolio standard, then the supplier’s fuel mix report should not count the renewable resources associated with generation in 2015. The only RECs that should be included in the fuel mix report would be those renewable resources associated with generation in 2016.

¹⁶ This does not include solar energy resources that are eligible to meet the Tier I requirement only and not the solar carve-out.

¹⁷ District Department of Energy and Environment, *Clean Energy DC: A Climate and Energy Plan for the District of Columbia* (October 2016, Summary Report).

IV. Commission's Ongoing Activities

The Commission continues to monitor the fuel mix and emissions reports that are submitted by retail electricity suppliers and Pepco every six months. The Commission will address, as appropriate, any issues arising from the recent fuel mix and emission filings for June 2017. The Commission staff also continues to monitor the regional GATS collaborative process, as appropriate, through PJM-EIS meetings. As needed in the future, the Commission will revise the regulations or issue orders to ensure that electricity suppliers disclose the fuel mix and emissions information consistent with District law and the Commission's rules. The Commission will continue to consider ways to improve upon the reporting of the fuel mix and emissions information.

APPENDIX B. KEY CONCEPTS AND DEFINITIONS

2-Channel Billing: the policy that allows Utilities to compensate solar customers for energy exported to the grid and charge solar customers for energy imported from the grid at the end of the billing cycle.

Community Solar Program (also referred to as a solar garden or shared renewable energy plant): a solar power plant whose electricity is shared by more than one household. May be community-owned projects, third party-owned, or utility-owned.

Distributed Generation (on-site generation or decentralized energy): electrical generation and storage performed by a variety of small, grid-connected or distribution system connected devices referred to as distributed energy resources (DER).

Distributed Generation customer: Any customer who chooses to take electric service under the from a DER.

Distributed Generation facility: A facility that is able to produce electrical energy that:

Uses solar, wind, hydroelectric, geothermal, or biomass resources to generate electricity including, but not limited to, fuel cells and micro turbines that generate electricity if the fuel source is entirely derived from renewable resources; and,

Has a generating capacity of not more than eighty (80) megawatts; and,

Is located in Louisiana; and,

Can operate in parallel with an electric utility's existing transmission and distribution facilities; and,

Can add battery back-up storage; and,

Is designated by the Commission as eligible for 2-channel billing service pursuant to § 2.06 below.

Energy Resilience: the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents.^{xviii}

Exported or Delivered Energy: the kWh supplied to the grid by the Distributed Generation facility.

Green Tariff: Utility-based, optional programs that allow customers to buy renewable electricity from specific project(s) through a special utility tariff rate.^{xix}

Net Energy Metering: A policy that allows utility customers to receive 1 kWh credit for each customer generated kWh exported to the grid.

MISO-Connected Renewable Energy Resource: Wind, solar, or other intermittent resource connected through the MISO territory.

Non-wires alternatives (NWAs): An electricity grid investment or project that uses non-traditional T&D solutions, such as distributed generation, energy storage, energy efficiency demand response, and grid software and controls, to defer or replace the need for specific equipment upgrades, such as T&D lines or transformers, by reducing load at a substation or circuit level.^{xx}

Renewable Energy Certificate (REC): A certificate that is proof that one megawatt-hour (MWh) of electricity was generated from a renewable energy resource. Once the electricity provider has fed the

electricity into the grid, the Renewable Energy Certificate (REC) they received can then be sold on the open market as a commodity. Because of the additional cost for producing "green" energy, the RECs provide an additional income stream to the energy provider, thus making it a bit more attractive to produce.xxi

Renewable Energy Resource: Wind generation, solar generation, hydro-generation, geo-thermal generation, or sewerage biogas. Specifically does not include: biomass generation (wood pellets, trash incineration, solid waste) or nuclear generation.

Resilient Energy Resource: Any resource that allows the grid to recover quickly after an event or relieves pressure off the grid before, during or after an event. May include combined heat and power (if it uses waste heat for power generation or a renewable energy resource), microgrids (if powered by renewable energy resource), distributed generation, or other.

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ENTERGY NEW ORLEANS, INC

IN RE: A RULEMAKING PROCEEDING TO ESTABLISH RENEWABLE PORTFOLIO STANDARDS

UTILITY DOCKET NO. UD-19-01

I hereby certify that I have this 3RD day of JUNE, 2019, served the required number of copies of the foregoing pleading upon all other known parties of this proceeding, by email.

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