

### Comments pursuant to R-23-130

June 16, 2023

#### **By Electronic Mail**

Ms. Lora Johnson, CMC Clerk of Council Room 1E09, City Hall 1300 Perdido Street New Orleans, LA 70112

# Re: RULEMAKING PROCEEDING TO ESTABLISH RULES FOR COMMUNITY SOLAR PROJECTS (CNO DOCKET NO. UD-18-03)

Dear Ms. Johnson:

Please find enclosed Together New Orleans' comments in the above-referenced docket filed pursuant to R-23-130. TNO is submitting this filing electronically and will deliver physical copies at your instruction.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Broderick A Bagert, Jr. Together New Orleans



#### Before the Council of the City of New Orleans

# In Re: RULEMAKING PROCEEDING TO ESTABLISH RULES FOR COMMUNITY SOLAR PROJECTS DOCKET NO. UD-18-03, FILED PURSUANT TO RESOLUTION NO. R-23-130

On March 27, the full Council for the City of New Orleans issued Resolution R-23-130, establishing an additional comment period for Docket UD-18-03 related to changes to the rules for the City's community solar program.

The purpose of this additional comment period, as TNO understands it, is to address a straightforward question: What changes to the community solar rules should be made for community solar in New Orleans to succeed?

It appears to be the view of some parties to this docket that the answer to that question should be, essentially, "none – the current rules are working well."

That position is hard to understand, considering the track record of community solar in New Orleans. Five full years after the existing community solar rules went into effect, not a single community solar project has been developed. That record positions New Orleans as having the single least prolific Community Solar Program in the nation.

"If a car doesn't start, there's a problem with the car," a citizen testified before the City Council at a hearing on March 27, 2023. "If a phone doesn't make calls, it's not a working phone. If community solar rules don't result in any community solar projects, those rules need to change."

TNO agrees.

TNO seeks through its participation in this docket to contribute to an unbiased understanding of:
1) why the existing community solar rules have failed to produce any community solar projects and
2) what changes to the existing rules are called to help the program begin to deliver on the objectives originally envisioned by the City Council and community at large.

Toward these ends, TNO commissioned an expert consultant, Gabel Associates, a firm with thirty years experience conducting analysis of wholesale and retail energy markets, to conduct an assessment of New Orleans' Community Solar rules. The Gabel Report, which is included in its entirety in TNO's filing below, sheds significant light on the question of why New Orleans' Community Solar rules have failed to result in any community solar projects.

According to the Gabel Report, the existing rules have a shortcoming that strikes at the most vital point of any community solar program – a project's economics.

As the Gabel Report explains:



A key element to the success of community solar projects is for the incumbent utility to provide a Bill Credit that provides a stable and appropriately valued price signal to invest in community solar projects. ... Importantly, the Bill Credit should reflect the full value of community solar to ensure that the entire range of benefits from the project are properly captured and do not result in any cross-subsidization of other ratepayers. If the Bill Credit is set unnecessarily low, participating customers will not realize savings that are sufficient to allow for project development, and the City will not experience economically justified levels of community solar growth.

This Report presents an evaluation of the Bill Credit implemented under the Resolution, showing that the current Bill Credit framework fails to capture the full value stack of benefits community solar provides. The Bill Credit was designed to provide a clear, streamlined path towards the development of community solar, aiming to improve the quality of life for citizens and businesses through clean and sustainable technology. However, the current approach significantly undervalues the broader benefits that form community solar.

Notably, the Bill Credit method in the Resolution does not fully account for the direct benefits community solar provides in avoiding generation capacity costs or the direct benefits relating to community solar's ability to avoid transmission and distribution capacity costs. Lastly, the Bill Credit fails to account for any societal benefits, which include avoidable greenhouse gas emissions and air pollutant externalities and incremental financial benefits resulting from the higher jobs and local economic growth resulting from building community solar resources in place of traditional generation resources. Reducing ground-level emissions in an urban area like New Orleans is particularly important as these areas and the health of residents are more severely impacted by poor air quality. ...

The City of New Orleans has taken a commendable step by implementing the Community Solar Bill Credit to promote the development of community solar and encourage the use of clean and sustainable technology. However, it is important to recognize that the current Bill Credit does not fully capture the vast array of benefits that solar power offers. The primary deficiencies of the Bill Credit include the following:

- 1. Bill Credit Deficiencies Relating to Direct Benefits
- a. It does not fully capture avoided generation capacity costs
- b. It does not capture any avoided transmission capacity costs
- c. It does not capture any avoided distribution capacity costs
- 2. Bill Credit Deficiencies Relating to Societal Benefits
- a. It does not capture any avoided greenhouse gas emissions costs



- b. It does not capture any avoided air pollutants costs
- c. It does not capture any incremental economic benefits resulting from improved reliability
- d. It does not capture any incremental economic benefits resulting from local construction ...

In essence, the Community Solar Bill Credit, in its current form, does not fully capture the broad value stack of solar power, and thus does not provide adequate incentives for the increased adoption necessary to achieve CNO's objectives. This under-recognition may impede the growth and development of community solar projects in New Orleans and limit their potential positive impact on local citizens and businesses.

To more accurately represent the holistic and full value of community solar, we propose key improvements to the existing Bill Credit calculation. This includes changing the reference resource from a Natural Gas Combustion Turbine to a Natural Gas Combined Cycle, incorporating avoided transmission and distribution capacity costs, accounting for avoided emissions and air pollutants costs, and recognizing the incremental economic benefits of community solar.

By doing so, the City can create a Bill Credit that fully reflects the "value stack" benefits of community solar, making it a more attractive and economically viable choice. This, in turn, will support the City of New Orleans' objective of harnessing clean, sustainable technology to improve the quality of life for local citizens and businesses. Community solar has the potential to drive a paradigm shift in our energy landscape, and it is essential that our regulatory frameworks evolve to fully acknowledge and incentivize this promising development.

These findings are consistent with two pieces of analysis conducted independently by TNO. TNO conducted a comparative analysis of community solar programs nationally, which found that successful programs had competitive bill credits and programs with undervalued bill credits, without exception, failed.

In addition, TNO conducted economic modeling of a sample community solar development. It found that, under the current rules with the bill credit level they provide, even a 5MW project, the largest-allowable, never would break even on the initial investment the project would require.

The conclusion of the Gabel Report appears to be, in short, that to fix the community solar rules, we need to fix the bill credit value. TNO agrees.

The Gabel Report, in its entirety, is included as part of TNO's filing here.

June 16, 2023

# SETTING THE SOLAR BILL CREDIT:

HOW TO UNLOCK THE FULL VALUE POTENTIAL OF COMMUNITY SOLAR IN NEW ORLEANS

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#### 1 **EXECUTIVE SUMMARY**

Gabel Associates, Inc. (Gabel) has agreed to provide Together New Orleans with an independent analysis (Report) of the Council of City of New Orleans' (CNO) Resolution No. R-22-76 (Resolution). The Resolution amended the City's Community Solar Rules relating to the development of a Community Solar Bill Credit (Bill Credit).

This report is based on Gabel's expertise and thirty years of experience in addressing electricity market issues as well as its review of how similar Bill Credits have been evaluated and implemented throughout the United States. The firm has testified extensively on such issues throughout the United States.

A key element to the success of community solar projects is for the incumbent utility to provide a Bill Credit that provides a stable and appropriately valued price signal to invest in community solar projects. The Bill Credit reflects utility bill savings realized by participating customers. To the extent the price for the energy (or subscription fee) from the community solar project is less than Bill Credit, the customers will realize savings. Importantly, the Bill Credit should reflect the full value of community solar to ensure that the entire range of benefits from the project are properly captured and do not result in any crosssubsidization of other ratepayers. If the Bill Credit is set unnecessarily low, participating customers will not realize savings that are sufficient to allow for project development, and the City will not experience economically justified levels of community solar growth.

This Report presents an evaluation of the Bill Credit implemented under the Resolution, showing that the current Bill Credit framework fails to capture the full value stack of benefits community solar provides. The Bill Credit was designed to provide a clear, streamlined path towards the development of community solar, aiming to improve the quality of life for citizens and businesses through clean and sustainable technology. However, the current approach significantly undervalues the broader benefits that form community solar.

Notably, the Bill Credit method in the Resolution does not fully account for the direct benefits community solar provides in avoiding generation capacity costs or the direct benefits relating to community solar's ability to avoid transmission and distribution capacity costs. Lastly, the Bill Credit fails to account for any societal benefits, which include avoidable greenhouse gas emissions and air pollutant externalities and incremental financial benefits resulting from the higher jobs and local economic growth resulting from building community solar resources in place of traditional generation resources. Reducing ground-level emissions in an urban area like New Orleans is particularly important as these areas and the health of residents are more severely impacted by poor air quality.

To more adequately capture the value stack of community solar, we propose the following improvements to the Bill Credit:

1. Replace the Avoided Capacity Cost Component Reference Resource: The CNO should revise the reference resource from a Natural Gas Combustion Turbine (NGCT) peaker to a Natural Gas



- Combined Cycle (NGCC). An NGCC provides a more accurate representation of the kind of resource likely to be displaced by community solar. Due to their more efficient operating process, NGCCs are more frequently developed as the "next fossil build", rather than NGCTs, which operate for limited hours with higher emission rates.
- 2. Incorporate Avoided Transmission and Distribution Capacity Costs: The Bill Credit should include avoided transmission and distribution costs. By reducing strain on the grid, community solar installations can save significant resources and expenditures that would otherwise be required for transmission and distribution infrastructure upgrades. These cost savings should be included in the Bill Credit to reflect the savings solar provides to the grid. To the extent battery storage is part of the project these values are even greater.
- 3. Account for Avoided Emissions and Air Pollutants Costs: Community solar contributes to significant reductions in greenhouse gas emissions including carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O); and air pollutants such as nitrogen oxides (NOX), sulfur oxides (SOX), and particulate matter (PM). By incorporating the value of these environmental benefits into the Bill Credit, the CNO can make the value stack of community solar projects more complete and reflective of societal benefits, thereby encouraging investment in such projects. Reflecting the reductions in emissions and particulates is especially relevant in urban environments like New Orleans, which are disproportionately impacted by poor air quality and its negative effect on the health of its residents.
- 4. Recognize Incremental Economic Benefits: The Bill Credit should account for the additional economic benefits from improved grid reliability and local economic growth. Enhanced grid reliability can lead to fewer service interruptions, thereby reducing costs and increasing productivity and economic output. Local construction of community solar projects can also stimulate economic growth and create jobs, which are beneficial to the community. Including these economic benefits in the Bill Credit can further incentivize the development of community solar projects.

We also discuss the common misconception that a full value stack Bill Credit would be a form of subsidy. A Bill Credit based on the full value stack of benefits from community solar should not be considered a subsidy as the value stack represents the actual benefits community solar can provide. Rather than providing financial aid to make an unviable activity viable, a full value stack Bill Credit serves to correct a market distortion where the true value of community solar power is unrecognized. Including these benefits in a Bill Credit promotes fair competition, enhances transparency in pricing, and supports sustainable economic development, thereby aligning with the aims of the CNO. In short, a properly set Bill Credit merely monetizes the benefits which solar provides, assigns them to the participating customers who are paying for the solar project, and does not require non-participants to subsidize community solar.

#### 2 INTRODUCTION

Gabel Associates, Inc. (Gabel) has agreed to provide Together New Orleans with independent analysis (Report) of the Council of City of New Orleans' (CNO) Resolution No. R-22-76 (Resolution). This Resolution amended the City's Community Solar Rules relating to the development of a Community Solar Bill Credit (Bill Credit).

This report is based on Gabel's expertise and thirty years of experience in addressing electricity market issues as well as its review of how similar Bill Credits have been evaluated and implemented throughout the United States.

#### 2.1 Gabel Associates, Inc.

Gabel is a well-established energy consulting firm that provides economic, regulatory, and technical analysis and advice to a wide range of energy clients. The firm has been providing analysis of wholesale and retail energy markets and projects for close to 30 years – this includes the analysis of avoided costs and detailed energy price modeling. We also provide a host of analytical and support services for power resources throughout the United States.

Gabel lives in both the world of energy market transactions (having undertaken project development for over 300 renewable and fossil-fuel generation projects and executed energy transactions for hundreds of thousands of accounts) and in the world of regulatory and policy analysis. We provide regulatory support on complex matters and expert testimony at the regional transmission organization (RTO), State, and Federal Energy Regulatory Commission (FERC) level, including before the Public Service Commission of Louisiana.

Gabel has provided extensive analysis in various jurisdictions related to the value of energy provided by renewable and non-renewable resources, including valuations of both direct energy values as well as environmental, societal, direct, indirect, and induced economic impact for a wide range of resources including solar, wind, offshore wind, as well as fossil resources.

Gabel is also deeply involved in the development of regulations and project development for community solar in New Jersey. We have participated in New Jersey's proceedings related to community solar for the past five years and have also consulted on the development of projects in New Jersey, which are being developed to serve only low and moderate income (LMI) customers.

#### 2.2 Together New Orleans

Together New Orleans is a broad-based coalition of congregations and community-based organizations in the greater New Orleans area, with the capacity to address community problems large and small. The coalition is deliberate about crossing the lines of race, religion, neighborhood, and political affiliation. Together New Orleans is a non-partisan organization that works on issues affecting families and communities in New Orleans. Together New Orleans's primary objectives include:

- build relationships across New Orleans's communities, based on trust and a willingness to listen;
- equip members and leadership with skills and practices to get results, and
- achieve change on concrete issues, as part of Together New Orleans's common call to justice.

Together New Orleans is part of the Industrial Areas Foundation (IAF), the nation's oldest and largest broad-based organizing network. There are more than 65 IAF organizations around the country, including projects in Alexandria, Baton Rouge, the Louisiana Delta, Monroe, and Shreveport-Bossier.

#### 3 VALUE OF SOLAR OVERVIEW

The "Value of Solar" (VOS) is a term used to represent the full range of economic value that solar power generation provides to the electricity grid and society as a whole. It is a framework used to determine fair compensation or Bill Credits for solar energy exported to the grid by solar power system owners. The Value of Solar can take into account various factors, including the environmental benefits, energy generation, and the grid-related services provided by solar power systems. The specific methodology and factors considered in calculating the Value of Solar can vary depending on the region, local regulations, and the utility company involved. It is often determined through collaborative efforts involving utility companies, regulatory agencies, solar industry stakeholders, and consumer advocates. The Value of Solar is used as a basis to establish fair compensation mechanisms that allow solar power system owners to receive Bill Credits or payments for the electricity they generate and export to the grid. These mechanisms aim to ensure that solar power system owners are appropriately compensated for the value they provide to the electricity system and society.

### 3.1 Value of Solar Components

The Value of Solar reflects the full "Value Stack" of economic and environmental benefits made possible by building and operating solar power plants:

- 1. Direct Benefits
  - a. Avoided generation energy costs;
  - b. Avoided generation capacity costs;
  - c. Avoided transmission capacity costs;
  - d. Avoided distribution capacity costs;
- 2. Societal Benefits
  - a. Avoided greenhouse gas emissions (CO2, CH4, N2O) social costs;
  - b. Avoided air pollutants (NOX, SOX, PM) costs;
  - c. Incremental economic benefits resulting from improved system reliability; and
  - d. Incremental economic benefits resulting from local construction.

Avoided generation energy costs are the customer bill savings realized by not having to procure energy from traditional sources, such as coal or natural gas, which are usually more expensive and less sustainable than community solar. When a community deploys a shared solar power system, the cost to generate electricity is primarily based on the initial capital expenditure and minimal fixed operational expenses. After the system is deployed, however, the 'fuel' – sunlight – is free. This is in contrast to conventional power plants, which rely on expensive fossil fuels. Therefore, community solar can "avoid" the need to generate costly power from polluting resources.

Avoided generation capacity costs are the expenses that a utility or grid operator avoids by not having to invest in, operate, and maintain additional power generation infrastructure by procuring an equivalent amount of generation capacity from community solar projects. The term "capacity" here refers to the maximum output that a power plant or a power system can produce. In the context of community solar power, this refers to the value that is created by reducing the need for additional or upgraded traditional

power plants like coal, gas, or nuclear, which are often expensive to build, run, and maintain. When community solar projects generate electricity, they feed it back into the grid. This supply of power decreases the overall demand that the utility or grid operator needs to meet. As a result, the utility does not have to rely as much on traditional power plants or invest in building new ones to meet peak demands. When the need for traditional power plants decreases, the associated costs of these plants – capital costs, operation and maintenance costs, and even decommissioning costs at the end of their life – are also avoided. This is a saving for the utility, and depending on the regulatory context, these savings may also be passed on to consumers in the form of lower energy bills.

Avoided transmission and distribution capacity costs reflect the reduced need for investments in constructing and maintaining transmission and distribution infrastructure. With community solar, power is generated closer to the point of use, typically within the same community or region. This reduces the need for extensive investments in transmission lines, substations, transformers, and distribution lines, thereby lowering the associated capacity costs that would otherwise have been incurred. The cost savings are referred to as "avoided" because they represent expenses that utilities would otherwise have to incur in order to expand and maintain the grid infrastructure necessary to accommodate increasing demand or replace aging infrastructure.

Avoided emissions and pollutants costs reflect the economic savings resulting from using clean power from community solar resources instead of emitting power from traditional thermal resources. Greenhouse gas emissions, including carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O), are major contributors to climate change, and opting for solar power reduces our impact on global warming. The EPA's social cost of carbon assigns a monetary value to the long-term damage caused by greenhouse gas emissions, considering factors like reduced agricultural productivity, health effects, property damages, and changes in energy system costs. Avoided air pollutants, such as nitrogen oxides (NOX), sulfur oxides (SOX), and particulate matter (PM), emitted by traditional energy generation, also have negative effects on human health and the environment. The savings in health and environmental costs associated with these pollutants are calculated based on factors including medical treatment expenses, lost workdays, and environmental degradation costs. These avoided costs highlight the economic and social advantages of community solar, which not only generates electricity but also contributes to mitigating climate change, improving public health, protecting the environment, and promoting environmental justice – especially in communities near traditional power plants.

Incremental economic benefits from improved system reliability refer to the increased economic value communities gain when transitioning from a centralized grid to local solar energy generation. Community solar projects bolster energy security, reducing the risk of power outages by creating redundancy in power sources and often being paired with energy storage for load shifting. These improvements are crucial as power disruptions can lead to significant economic costs, such as lost business revenue, damaged equipment, and productivity loss. Therefore, community solar not only reduces energy costs and has



<sup>&</sup>lt;sup>1</sup> National Center for Environmental Economics, Office of Policy, Climate Change Division, Office of Air and Radiation, U.S. Environmental Protection Agency. (2022, September). Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances. Accessed at: <a href="https://www.epa.gov/system/files/documents/2022-11/epa scghg report draft 0.pdf">https://www.epa.gov/system/files/documents/2022-11/epa scghg report draft 0.pdf</a>

environmental benefits but also increases system reliability, providing an additional layer of economic benefits.

Incremental economic benefits resulting from local construction refer to the financial and job growth benefits that communities gain when local resources are utilized to construct community solar projects. This process stimulates local economies by creating jobs, often in areas such as construction, electrical work, and project management, and circulates money within the community. When comparing different types of generators on a dollar-per-kilowatt of installed capacity, building small-scale behind-the-meter solar projects like community solar systems can generate more jobs and local economic growth than larger, traditional resources.<sup>2</sup> Additionally, these projects can lead to the development of local skills and capacities, further benefiting the local economy. Therefore, community solar projects not only offer energy and environmental advantages but also spur local economic growth, providing a multi-faceted benefit.

<sup>2</sup> Testimony of Adrian J. Kimbrough on behalf of the Maryland-DC-Virginia Solar Energy Industries Association, Commonwealth of Virginia, State Corporation Commission, In the matter of the 2020 RPS Proceeding for Virginia Electric and Power Company, Case No. PUR-2020-00134, January 4, 2021, pgs. 32-35.

#### 4 COMMUNITY SOLAR BILL CREDIT OVERVIEW

The Council of the City of New Orleans (CNO or Council) serves as the legislative body of the city, responsible for enacting laws and regulations to protect the public's health, safety, and welfare. This includes utility regulation, which sets the Council apart from many other cities in the United States. While state Public Service Commissions typically handle utility regulation, the Council has the authority to regulate electric and gas utilities within the city. This unique role allows the Council to ensure the provision of reliable and affordable utilities to the residents of New Orleans by advancing initiatives such as the introduction of a community solar Bill Credit through Resolution No. R-22-76.

Community solar refers to a shared solar energy project that allows multiple individuals or businesses to benefit from a single solar installation. It promotes renewable energy adoption by providing a more accessible and affordable option for individuals who may not have the resources or suitable conditions for installing solar panels on their own roofs. This expands the reach of solar energy, reducing dependence on fossil fuels and contributing to the fight against climate change. Community solar also helps to democratize the benefits of solar power by allowing renters, low-income households, and those living in multi-unit buildings to participate in and benefit from clean energy generation. Furthermore, community solar projects often create local jobs, stimulate economic growth, and enhance energy resiliency within communities. They foster collaboration and engagement among community members, encouraging a sense of shared responsibility and promoting a sustainable future. Overall, community solar plays a crucial role in accelerating the transition to clean energy by making solar power accessible, inclusive, and economically viable for a wider population, while fostering community involvement and sustainability.

CNO's implementation of a community solar Bill Credit serves multiple purposes. It aligns with the Council's commitment to clean and sustainable technology, supports the development of solar energy projects, and provides ratepayers with a means to invest in renewable energy while receiving credits on their energy bills. By establishing clear rules and a streamlined process, the council aims to facilitate the widespread adoption of community solar in the city of New Orleans.

#### 4.1 Community Solar Bill Credit Components

Under Resolution No. R-22-76, the Community Solar Bill Credit, the local utility will apply credits to the monthly utility bill of each community solar subscriber. The calculation of these credits incorporates two key variables: avoided energy costs and avoided capacity costs, both quantified in dollars per kilowatthour (\$/kWh).

The avoided energy costs component is based on the average of the preceding calendar year's Locational Marginal Prices (LMP), specific to the utility. The LMPs for each hour are weighted according to the projected hourly output of a standardized 1-kWdc fixed array solar photovoltaic system.

The avoided capacity costs component is based on the Midcontinent Independent System Operator's (MISO) Cost of New Entry (CONE) value for the planning year that matches the month in which the credit is issued. The formula for calculating the avoided capacity cost is as follows:

 Avoided Capacity Cost = (CONE \$/kW-yr \* Solar Resource Adequacy Percentage) / Annual Estimated Energy kWh.

In this formula, CONE represents the estimated cost of building a new natural gas combustion turbine (NGCT) peaker within MISO's Local Resource Zone 9 for the relevant planning year. The Solar Resource Adequacy Percentage refers to the proportion of the solar project's installed capacity that can be relied upon to contribute to system peak demand. Lastly, the Annual Estimated Energy represents the energy output, measured in kWh, from a 1 kWdc solar PV installation in New Orleans, as determined by the National Renewable Energy Laboratory's PVWatts Calculator, using a standard fixed array system with a tilt and orientation typical for New Orleans.

# 4.2 Community Solar Bill Credit Deficiencies

The City of New Orleans has taken a commendable step by implementing the Community Solar Bill Credit to promote the development of community solar and encourage the use of clean and sustainable technology. However, it is important to recognize that the current Bill Credit does not fully capture the vast array of benefits that solar power offers. The primary deficiencies of the Bill Credit include the following:

- 1. Bill Credit Deficiencies Relating to Direct Benefits
  - a. It does not fully capture avoided generation capacity costs
  - b. It does not capture any avoided transmission capacity costs
  - c. It does not capture any avoided distribution capacity costs
- 2. Bill Credit Deficiencies Relating to Societal Benefits
  - a. It does not capture any avoided greenhouse gas emissions costs
  - b. It does not capture any avoided air pollutants costs
  - c. It does not capture any incremental economic benefits resulting from improved reliability
  - d. It does not capture any incremental economic benefits resulting from local construction

First, the Bill Credit does not fully capture avoided generation capacity costs resulting from community solar because the avoided capacity cost formula understates the reference resource costs. The costs are understated for two reasons: (1) they are based on a cheaper but less representative new build Natural Gas Combustion Turbine (NGCT) peaker rather than a costlier but more representative new build Natural Gas Combined Cycle (NGCC); and (2) the Bill Credit formula cuts the costs in half by applying a proxy solar reliability adjustment factor.

The capacity costs are understated because the reference resource is based on an NGCT peaker, which is unrepresentative of the type of resource which would most likely be displaced by a new community solar installation. New NGCCs are the most likely resource to be displaced because they are more economically viable and much more widely used than NGCTs.<sup>3</sup> Although NGCTs may be cheaper to build than the most



<sup>&</sup>lt;sup>3</sup> See The Brattle Group, PJM CONE 2026/2027 Report, April 21, 2022, pg. v. Accessed at: https://www2.pjm.com/-/media/library/reports-notices/special-reports/2022/20220422-brattle-final-cone-report.ashx

likely alternative, NGCCs, new NGCTs are less common than new NGCCs. For example, NGCCs comprise approximately 80% of all new NGCTs and NGCCs built over the past ten years across the United States.<sup>4</sup> Additionally, NGCTs typically operate sporadically and in different periods compared to solar. NGCCs, on the other hand, operate more regularly and during periods that are better aligned with those in which solar operates, offering a better comparison for solar's capacity value. Shifting the reference from NGCT to NGCC would offer a more equitable and representative valuation of the benefits community solar can provide to New Orleans.

Second, the Bill Credit does not capture any avoided transmission or distribution costs, which undermines the appropriate valuation and effectiveness of the Bill Credit. Transmission and distribution infrastructure is a vital part of any power grid, and by not accounting for the savings associated with reducing strain on this infrastructure, the Bill Credit undervalues the full range of benefits community solar provides. The absence of avoided transmission and distribution capacity costs from the credit calculations distorts the Bill Credit's price signal and the attractiveness of community solar projects as a viable generation option to develop going forward, thus counteracting CNO's objectives of streamlining the path to community solar development and efficient use of clean technology in New Orleans.

Third, the Bill Credit does not capture any avoided emissions costs or air pollutants cost, a glaring oversight that could limit the potential for the New Orleans' Community Solar Rules to fully achieve its objectives. The current design of the Bill Credit only incorporates avoided energy costs and avoided capacity costs, leaving out crucial elements that quantify the broader societal benefits of clean, solar power. By excluding these costs, the policy fails to fully reflect the value of the environmental advantages of renewable solar energy. The avoided emissions costs are substantial and include known and measurable costs related to the environmental damage and health impacts from traditional fossil fuel energy sources. Additionally, the absence of air pollutants costs in the Bill Credit fails to account for the reduction in harmful pollutants like nitrogen oxides (NOx), sulfur oxides (SOx), and particulate matter (PM) emissions that are achieved through the use of solar energy. These omissions underestimate the full value of solar power and may inadvertently discourage investments in community solar projects, potentially undermining the Council of City of New Orleans' goal of supporting the efficient use of clean and sustainable technology to improve the quality of life for local citizens and businesses.

Fourth, the Bill Credit does not capture any incremental economic benefits from community solar, which could impede the City of New Orleans' aim to fully leverage clean, sustainable technology and bolster local quality of life. While the Bill Credit takes into account avoided energy and capacity costs, it leaves out the substantial economic benefits linked to enhanced grid reliability and local construction of community solar projects. This overlooks the value of having a resilient energy system, which can lead to lower costs due to fewer service interruptions, as well as the economic stimulation provided by local construction. Projects in community solar not only create jobs but also infuse capital into the local economy, catalyzing a virtuous cycle of development. Additionally, the framework underestimates the local environmental benefits of community solar power, such as the reduction of greenhouse gas emissions and air pollutants.

<sup>&</sup>lt;sup>4</sup> U.S. Department of Energy, Energy Information Administration, Form EIA-860 (2022). Accessed at https://www.eia.gov/electricity/data/eia860/



In essence, the Community Solar Bill Credit, in its current form, does not fully capture the broad value stack of solar power, and thus does not provide adequate incentives for the increased adoption necessary to achieve CNO's objectives. This under-recognition may impede the growth and development of community solar projects in New Orleans and limit their potential positive impact on local citizens and businesses.

### 4.3 Community Solar Bill Credit Recommendations

To truly reflect the holistic value that community solar brings, we suggest the following improvements to the existing Community Solar Bill Credit (CSBC):

#### 1. Direct Benefits Recommendations

- a. Replace the Avoided Capacity Cost Component Reference Resource: The CNO should revise the reference resource from a Natural Gas Combustion Turbine (NGCT) peaker to a Natural Gas Combined Cycle (NGCC). An NGCC provides a more accurate representation of the kind of resource likely to be displaced by community solar. NGCCs operate in a more regular pattern and during similar periods to solar, making them a more suitable comparison to calculate solar's capacity value.
- b. Incorporate Avoided Transmission and Distribution Capacity Costs: The Bill Credit should consider the avoided transmission and distribution costs. By reducing strain on the grid, community solar installations can save significant resources that would otherwise be required for transmission and distribution infrastructure upgrades. Including these cost savings in the Bill Credit would make community solar projects more attractive and financially viable.

#### 2. Societal Benefits Recommendations

- a. Account for Avoided Emissions and Air Pollutants Costs: Community solar contributes to significant reductions in greenhouse gas emissions and air pollutants. By incorporating the value of these environmental benefits into the Bill Credit, the CNO can make the value stack of community solar projects more complete, thereby encouraging investment in such projects. These values have been extensively studied and quantified at a national, regional and international level and these recognized values should be reflected in the Bill Credit valuation.
- b. Recognize Incremental Economic Benefits: The Bill Credit should account for the additional economic benefits from improved grid reliability and local economic growth. Enhanced grid reliability can lead to fewer service interruptions, thereby reducing costs. Local construction of community solar projects can stimulate economic growth and create jobs, which are beneficial to the community. Including these economic benefits in the Bill Credit can further value the development of community solar projects.

By implementing these recommendations, the Council of City of New Orleans can ensure that the Community Solar Bill Credit fully captures the broad value stack of solar power. This would provide a more comprehensive and attractive incentive for community solar development, thereby supporting the city's goals of clean, sustainable technology use, improved local quality of life, and robust economic growth.

# 4.4 A Bill Credit Based on the Full Value Would Not be a Subsidy

Incorporating the full value stack of benefits from community solar should not be considered a subsidy. Before elaborating on this point, it is necessary to first understand what a subsidy is.

In the context of electric utility ratemaking, a subsidy is typically defined as a financial contribution by one customer class (e.g., residential, commercial, industrial, etc.) to offset costs caused by another customer class. This can occur through rate structures where the costs are not equally distributed based on the actual usage or cost of service for each customer class.

A Bill Credit that incorporates the full value stack of benefits from community solar is not a subsidy because it would only compensate participating customers for the benefits their solar power provides to other customer classes. Unlike subsidies, which are often needed to make an otherwise unviable activity viable, a Bill Credit for solar power aims to provide a more accurate reflection of its value. Community solar generates tangible and quantifiable benefits, such as reducing the strain on transmission and distribution networks, enhancing grid reliability, and stimulating local economic growth through job creation. It also provides significant environmental benefits, including reducing greenhouse gas emissions and air pollutants.

#### **5 CONCLUSION**

The current formulation of the Community Solar Bill Credit, established under Resolution No. R-22-76 by the Council of City of New Orleans, does not adequately capture the full range of benefits derived from community solar power. In its current form, the Bill Credit only considers avoided energy and partial capacity costs, while other crucial factors such as avoided transmission and distribution capacity costs, emissions costs, air pollutants costs, and the broader economic benefits are left out of the calculation.

This narrow scope of considerations undermines the effectiveness of the Bill Credit as a tool for incentivizing the adoption of community solar power, and in turn, can hinder the City's progression towards the efficient use of clean, sustainable energy. It is critical for the local utility, regulators, and policymakers to recognize that the value of community solar extends far beyond mere avoided energy costs. Its impact on environmental health, system reliability, local economic growth, and sustainability should all be taken into account when shaping policies and setting incentives.

To more accurately represent the holistic and full value of community solar, we propose key improvements to the existing Bill Credit calculation. This includes changing the reference resource from a Natural Gas Combustion Turbine to a Natural Gas Combined Cycle, incorporating avoided transmission and distribution capacity costs, accounting for avoided emissions and air pollutants costs, and recognizing the incremental economic benefits of community solar.

By doing so, the City can create a Bill Credit that fully reflects the "value stack" benefits of community solar, making it a more attractive and economically viable choice. This, in turn, will support the City of New Orleans' objective of harnessing clean, sustainable technology to improve the quality of life for local citizens and businesses. Community solar has the potential to drive a paradigm shift in our energy landscape, and it is essential that our regulatory frameworks evolve to fully acknowledge and incentivize this promising development.



# CERTIFICATE OF SERVICE Docket No. UD-18-03

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