



# Agenda Report

April 30, 2018

**TO:** Honorable Mayor and City Council

**THROUGH:** Municipal Services Committee (April 24, 2018)

**FROM:** Water and Power Department

**SUBJECT: ADOPT A RESOLUTION AMENDING REGULATION 23 TO REQUIRE THAT NEW AND MODIFIED SELF-GENERATION UNITS UTILIZE RENEWABLE GENERATION AND FUEL SOURCES**

## **RECOMMENDATION:**

It is recommended that the City Council:

1. Find that the proposed action is not a project subject to the California Environmental Quality Act ("CEQA"), as defined in Section 21065 of CEQA and Section 15378 of the State CEQA Guidelines and, as such, no environmental document pursuant to CEQA is required for the project; and,
2. Adopt a Resolution that: (i) amends Regulation 23, the Pasadena Water and Power Department ("PWP") Distributed Generation Facilities Interconnection Requirements, to require that new and modified customer-owned self-generation units utilize only renewable fuel sources and other minor revisions set forth herein.

## **ENVIRONMENTAL ADVISORY COMMISSION RECOMMENDATION:**

The Environmental Advisory Commission unanimously supported the staff recommendation at its April 10, 2018 meeting.

## **EXECUTIVE SUMMARY:**

Currently, PWP customers can install their own electric generation systems at their properties and also choose to remain connected to PWP's electrical distribution system. Typical examples of customer-owned generation systems include technologies such as solar photovoltaics, internal combustion driven emergency back-up generators, fuel cells, steam generators, and gas turbines.

Nearly all type of self-generation resources, other than solar systems, use fossil-fuels such as diesel, gasoline or natural gas. Those intended only for emergency back-up purposes rarely operate and do not emit significant air pollution or greenhouse gasses ("GHG"); however, those intended to serve a customer's own electric load operate nearly at full capacity throughout the year, which results in significant local air pollution

and GHG emissions. Additionally, PWP is not able to recover costs of maintaining back-up power infrastructure. This causes a shift of cost from customers with own-generation to those who do not have their own-generation.

In order to mitigate their adverse environmental and economic impact, PWP is recommending that customers that wish to install self-generation resources (other than emergency backup generation) and remain connected to the PWP electrical system be required to use a "Renewable electrical generation facility" as defined in the California Public Resources Code Section 25741. This requirement would be incorporated into Pasadena's Regulation 23 and apply to all customers submitting an application to interconnect a new or modified self-generation resource on or after May 1, 2018. This requirement also applies to requests to replace or increase the capacity rating of existing Generation Facilities. Self-generation resources with existing interconnection agreements and completed applications submitted prior to this date would be exempt.

This initiative meets the objective of the City's Climate Action Plan, Section E-4 (I) – Prohibit non-renewable customer generation.

#### **BACKGROUND:**

Since Regulation 23 was amended by Resolution 9156 on November 7, 2011 to enable a broader range of distributed energy resources to interconnect to PWP's grid, state and local policy objectives have shifted away from the use fossil fuels in favor of a 100% renewable energy future. Meanwhile, the cost of natural gas burning self-generation systems has declined to a level that provides customers economic incentive to install them. PWP customers have installed numerous natural gas burning generators over the last few years, resulting in decreased electric revenues, cost shifting to other electric customers, and an overall increased reliance on fossil fuels within the City.

#### ***PWP Obligated to Provide Back-up***

Customers with self-generation rely on PWP to instantly make up for their electricity need in addition to their own generation or entirely in case their generating source is not generating. As a result, PWP builds and maintains electric infrastructure, and also maintains electric generation capacity and energy reserves to be able to provide back-up instantly and seamlessly when needed by the customer. Simultaneously, the state's major transmission grid operator California Independent System Operator ("CAISO") has continually imposed new and additional back-up capacity requirements on PWP and other electric utilities to keep the electric grid stable in view of the rather large additions of solar and wind energy resources whose output fluctuate continually. Under PWP's current rate structure, a significant portion of these costs are not recovered and thus borne by other customers without self-generation.

#### ***Climate Change Initiatives and Mandates for PWP***

Recently, the City Council adopted the Climate Action Plan targeted to reduce GHG emissions. Section 3-4 (I) requires prohibition of non-renewable customer generation.

In the last few years, state legislation has continually mandated increasing levels of GHG reductions and renewable energy requirements on electric utilities including PWP. The Pasadena community has demanded that PWP show environmental leadership and set voluntary GHG reduction goals and renewable energy target that exceed the state requirements. PWP has significantly reduced its GHG emissions, increased renewable energy in its portfolio, and reduced the use of coal based energy resources. The 2015 energy Integrated Resource Plan ("IRP") set the following major goals:

- Eliminate the use of coal-based energy by 2027;
- Achieve 60% GHG emissions reduction below 1990 levels by 2030 (the State target is 40% below 1990 levels); and,
- Meet 40% of retail energy sales with renewable energy by 2020 (the current State target is 33% by 2020).

Subsequent to adoption of the 2015 IRP, Senate Bill ("SB") 350 increased the renewable energy target to 50% by 2030. Last year SB 100 proposed accelerated renewable energy mandate to 100% by 2045. Although SB 100 did not work its way through the legislative process in 2017, a similar bill is expected this year.

### ***Environmental and Cost Impacts***

PWP supports and is doing its part to address climate change challenges and create a cleaner environment within the City of Pasadena. As a result, to meet the City's higher clean energy goals initiatives, legislative, regulatory and necessary operational requirements, the overall cost of electricity has increased over period of time.

PWP's electric rates do not fully recover the cost of infrastructure, back-up capacity, as-needed power supply, and administrative costs associated with its obligation to reliably meet self-generation customers' need for balancing energy services and backup supply due to unexpected changes in self-generation that occur at any given time. This has created an economic opportunity, particularly for commercial customers, to install fossil-fueled self-generation systems on their properties. As a result:

- Cumulatively, customer-owned fossil fuel electric generators have the potential to emit significant amounts of GHG and other air pollutants in Pasadena. This is counter to the City's environmental initiatives;
- A cost burden is transferred from self-generators to rest of the customer base; and,
- PWP's reduced electric sales lead to increased rates that exacerbate the cost shift to non-generating customers.

### ***Amendments to Regulation 23***

The proposed amendments to Regulation 23 will require that future applications for self-generation resources intended to operate in parallel with PWP's grid qualify as renewable resources. The proposed amendments would not impede a customer's ability to install fossil fueled backup generation sources that do not operate in parallel with

PWP electric grid except during momentary switching. The proposed amendments to Regulation 23 include:

- Clarification that, effective May 1, 2018, PWP will only accept requests to interconnect Generating Facilities that are intended to operate in parallel with PWP's Distribution System if they qualify as Renewable Generating Facilities. This requirement would apply to replacement of existing customer-owned Generation Facilities or capacity increases thereto. It would not apply to Generating Facilities intended as backup power sources and do not operate in parallel with PWP's Distribution System except during Momentary Parallel Operation;
- Define a "Renewable Generating Facility" as a Generation Facility consisting only of Generators that meet the definition of "Renewable electrical generation facility" as defined in Section 25741 of the California Public Resources Code;  

As currently defined by state law, Renewable electrical generation facilities include those using biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion using technology that produces no discharges of air contaminants or emissions (including greenhouse gases), landfill gas, ocean wave, ocean thermal, or tidal current; and,
- Require all Renewable Generating Facility customers using a California state approved Renewable Generating Facility to provide an preliminary renewable eligibility certification from the California Energy Commission ("CEC") prior to interconnection with PWP system, final CEC certification within 180 days of the interconnection, and ongoing annual attestation signed by a duly authorized customer's representative that provides sufficient documentation and information for PWP to determine that the facility is continually in compliance with the CEC renewable certification. In addition, PWP may request documentation providing evidence of CEC renewable certification of the Generation Facility at any time.

The proposed amendments to Regulation 23 include two additional changes unrelated to the proposed renewable resource requirement:

1. A clarification that Applications for interconnection shall expire twelve months after the Application is accepted by PWP. This provision is currently included in the application form, but not stated in Regulation 23. The proposed amendment further provides that the PWP General Manager may authorize a twelve month extension if construction of the Generation Facility is at a substantially advanced stage, in the sole discretion of PWP.
2. A technical/operational change with respect to power factor is recommended to improve power quality on PWP's grid. Currently, Section E.2.f of Regulation 23 requires that Generation Facilities be operated within a power factor range of 0.9 leading and 0.9 lagging, and that "Operation outside this range is acceptable provided the reactive power of the Generating Facility is used to meet the reactive power needs of on-site loads." To reduce adverse impacts on the grid, it is proposed that this section be amended to require that "To the extent

technically feasible, Generating Facilities shall be operated in a manner that meets the reactive power needs of on-site loads in order to maintain a power factor at the Point of Common Coupling in the range of 0.9 leading and 0.9 lagging.”

Redlined pages reflecting the proposed amendments to Regulation 23 are included as Attachment A. A complete clean copy of the proposed Regulation 23 is included as Attachment B.

Except as noted herein, the proposed amendments to Regulation 23 do not include substantive changes in technical requirements, respective cost obligations or other obligations. PWP anticipates a more substantive amendment of a technical nature to Regulation 23 may be required within the next 24 months. PWP is currently reviewing the technical requirements of Regulation 23 to see if changes are needed to address evolving technologies and national standards. Likewise, a review of procedural requirements is being conducted to identify potential streamlining opportunities. As part of this effort, staff is monitoring a recently opened proceeding at the California Public Utilities Commission (“CPUC”) to consider amendments to their Rule 21 guidelines (Rule 21 is the CPUC equivalent of Pasadena’s Regulation 23).

#### ***Customers May Continue to Install Renewable Self-Generation***

Pasadena supports the use of local renewable resources and PWP will continue to enable customers to install CEC approved renewable resources, such as solar, wind, and generators using renewable biofuels to serve their on-site loads. These resources are currently eligible for net energy metering rates under PMC Section 13.04.177 (Net Energy Metering) of the Light and Power Rate Ordinance. These customers must also enter into an interconnection agreement and comply with Regulation 23.

#### **COUNCIL POLICY CONSIDERATION:**

Requiring that customer-owned self-generation resources utilize renewable fuel is consistent with the City’s Climate Action Plan, which calls for a prohibition on customer-owned fossil-fueled generation sources as a means to reduce the City’s carbon footprint. It further supports the conservation and energy elements of the General Plan, and the Urban Environmental Accords goals to increase renewable energy and reduce greenhouse gas emissions.

#### **ENVIRONMENTAL ANALYSIS:**

The requirement that customer-owned generation qualify as a renewable generation resource is an administrative action that would not cause either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment. Therefore, the proposed action is not a “project” subject to CEQA, as defined in Section 21065 of CEQA and Section 15378 of the State CEQA Guidelines. Since the action is not a project subject to CEQA, no environmental document is required.

**FISCAL IMPACT:**

There is no direct fiscal impact of the recommended action. However, non-action would continue to allow customers to install fossil-fuel powered self-generation that would increase GHG emissions within the City, reduce PWP's electric sales, and escalate the need to raise PWP's electric rates over time, making PWP less competitive with other alternatives and thereby accelerating the pace of additional self-generation installations and future rate increases.

Respectfully submitted,



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GURCHARAN BAWA  
General Manager  
Water and Power Department

Prepared by:



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Eric R. Klinkner  
Deputy General Manager  
Water and Power Department

Approved by:



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STEVE MERMELL  
City Manager

Attachments:

- Attachment A – Redlined pages of Regulation 23 (changed pages only)
- Attachment B – Amended Regulation 23, As Recommended