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June 10, 2024 via email

Khaly Nguyen Acting Manager of Utilities Administration Port of Oakland 530 Water Street Oakland, CA 94607

Subject: 2024 Rate Study Results and Recommendations

Dear Khaly:

In December 2023, the Port of Oakland (Port) retained NewGen Strategies and Solutions, LLC (NewGen) to develop a 2024 Cost of Service (COS) and Rate Study. This report summarizes the analyses conducted with respect to the updated COS and rate design efforts by NewGen on behalf of the Port of Oakland's proposed Utility Revenue Division (Port Utility) and is referred to herein as the 2024 Rate Study or Study.

The Study determined the total cost of providing electric services, the allocation of costs to the various customer classes, and the design of rates for existing and projected customer classes, as more fully described herein. The total cost of providing services predominately includes operations and maintenance (O&M) expenses, including power supply, as well as debt service and capital outlays required to operate and maintain the system with high reliability. The Port Utility provides services to two distinct areas owned by the Port of Oakland, the Seaport operations, and the Oakland International Airport (Airport), which is served by the Port's SS-1 and SS-1A substations. The Seaport operations include two areas, including that which is served by the Port Utility (hereinafter referred to as Maritime area or division, which is served by the Davis and Cuthbertson substations), as well as a smaller area in which tenants are served by Pacific Gas & Electric (PG&E), referred to as the PG&E service area. For the purposes of this Study, the Port Utility provides services to the Maritime and the Airport areas, which each have their own direct and allocated revenues and expenses, and individual customers. The Seaport tenants who obtain power from PG&E (the PG&E service area) have been excluded from this Study.

Beginning July 1, 2024, the Port is proposing to create the Port Utility Revenue Division (the Port Utility function currently exists within the Port's operations; however, it is not recognized as a cost center or a revenue division). With this change, the Port is proposing that each revenue division be able to support its expenses through cost recovery from its tenants and customers. This includes Port usage of electricity at both the Airport and the Maritime areas, as noted herein. This Study includes an analysis of projected revenue requirements by area, as well as for the combined system (Port Utility), for Fiscal Year (FY) 2025 (July 1, 2024, through June 30, 2025). Therefore, the Test Year (TY) period is the Fiscal Year 2025 for this Study. The proposed recommended rate design changes are limited to FY 2025 (beginning July 1, 2024). Additionally, this Study recommends further analysis to be conducted for FY 2026 to ensure the Port Utility is recovering its reasonable cost of service from its rates and charges.

Summary Findings

- The Cost of Service (Net Revenue Requirement) for the TY (FY 2025) is approximately \$27.0 million for the Port Utility, which includes approximately \$15.4 million for Maritime and \$11.6 million for the Airport. The projected rate revenue for the TY at current rates is approximately \$20.2 million for the system, \$13.1 million for the Maritime, and \$7.1 million for the Airport. This represents an approximate \$2.3 million shortfall for the Maritime, or about 17%, and an approximate \$4.5 million shortfall for the Airport, or about 64%.
- 2. Long-term projections provided by the Port Utility include significant investment in capital projects at both the Maritime and Airport areas, including needed upgrades to the substations serving both (as summarized herein). The Port's financial plan assumes a mix of financing mechanisms to pay for these investments, including capital paid from retained earnings (rates) and debt issues. For the debt issues, the debt service will be paid with revenue from rates recovered from customers within each division. As indicated, the recommendations for rate changes herein are limited to FY 2025; however, an understanding of the need for rate revenues over a longer period is critical to the financial stability of the Port Utility.
- 3. The COS results suggest that some classes are under collecting relative to their projected TY COS. However, NewGen does not recommend approval of a long-term rate plan at this juncture due to uncertainties in costs as well as anticipated load. NewGen recommends approval of the FY 2025 rates as described herein and an annual review of projected costs and revenues thereafter before additional rate recommendations are provided.
- 4. As indicated, the Port Utility is proposed to be a new revenue division within the Port effective July 1, 2024. The Port Utility provides power to Port tenants as well as to internal Port usage at both the Airport and the Maritime areas. Historically, the Port has not been charged directly for the power provided by the Port Utility. This is proposed to change with the creation of the Port Utility as its own revenue division. For the Airport, the Port usage is anticipated to account for approximately 120 accounts (out of a total of approximately 300, approximately 40%). For the Maritime area, the Port usage is anticipated to account for approximately 80, approximately 18%).
- 5. The Port currently utilizes rates classes and structures that are similar to those historically offered by PG&E. The existing Time of use (TOU) rate structures do not reflect the costs incurred by the Port Utility to serve its customers, as its costs are generally not time dependent. The proposed rate plan includes changes to the rate structures and rate components to simplify the Port Utility rate offerings. This includes collapsing the distribution and energy rates into one energy rate (\$/kilowatt hour [\$/kWh]) as well as changing the structure of the TOU rates for larger customers into a single energy or demand rate (\$/kilowatt [\$/kW]).
- 6. With the recommended rate increases, the Port Utility's rate revenue for FY 2025 is projected to be approximately \$27.1 million. With these proposed rate changes, it is anticipated that the Port Utility will be able to meet its financial metrics for both its Debt Service Coverage Ratios (DSCR) and its Days Cash on Hand (DCOH), as well as its operational and other costs for FY 2025. The recommended rate changes allocate costs to provide a fair and reasonable relationship to the regulation of the Port Utility customers, and the rates do not exceed the actual costs of providing the product or service and would reimburse the Port for services and products provided.

Usage Characteristics by Class – TY

The COS analysis examines detailed customer usage characteristics by customer class. Table 1 summarizes these characteristics on a TY basis for the customer classes currently served by the Electric Utility, including projected retail sales provided in kilo-watt hours (kWh) and number of customers in each class. Energy sales and customer numbers were provided by the Port Utility for this Study and include Port and non-Port usage. For purposes of this table, the current OAB customer class served at the Maritime area has been disaggregated into the individual customer classes (Maritime Class A, B and C), as discussed in greater detail herein.

Table 1			
Area/Class/Service	Characteristics by C Annual TY kWh Sales	No. of Customers (Meters)	
Airport			
Airport Class A	5,446,589	111	
Airport Class B	11,278,150	166	
Airport Class C	19,248,101	22	
Airport Class D	6,245,031	2	
Total Airport Area	42,217,871	301	
Maritime			
Maritime Class A	967,497	42	
Maritime Class B	3,704,710	20	
Maritime Class C	5,477,474	9	
Maritime Class D	1,645,216	1	
Maritime Class E	32,651,986	6	
Maritime Shore Power (2)	39,816,178	N/A	
Total Maritime Area	84,263,062	78	
Total Port Utility (3)	126,480,932	379	

(1) Values are for FY 2025 and include estimates for Port and non-Port usage.

(2) Shore Power is measured at the substation at each individual berth.

(3) Total Port Utility excludes PG&E customers served in PG&E service areas. Maritime area total count includes disaggregation of existing OAB customer class by individual meter (see text).

Port System and Divisional Load Profile

The electric load for the Port is relatively constant over the course of a year, as electricity is consistent with the Seaport operations (at the Maritime area) and the Airport operations. There are no residential customers served by the Port Utility and the operations at both areas are generally not weather dependent (weather can often drive peak loads for electric utilities providing power for heating/cooling needs).

An analysis of total hourly Maritime electric load for FY 2023 (July 2022 through June 2023) indicates that the peak hour occurred on September 1 at 9:00 p.m. at approximately 17.1 MW. The peak loads and times for each month for the remainder of the year ranged between approximately 10.6 MW on December 30 at 1:00 a.m. and 16.7 MW on August 10 at 10:00 p.m. (the average monthly peak load for the year was approximately 13.7 MW, and there was no consistent time at which each monthly peak occurred). Figure 1 provides a summary of the peak loads for the Maritime electric load for FY 2023.



Figure 1. Load Profile (Monthly Peaks by Hour)— Maritime Area (FY 2023)

An analysis of the total hourly Airport electric load for FY 2023 indicates that the peak hour occurred on September 6 at 8:00 p.m. at approximately 5.71 MW. The peak loads and times for each month for the remainder of the year ranged between approximately 5.05 MW on June 22 at 11:00 p.m. and 5.66 MW on October 19 at 8:00 p.m. (the average monthly peak load for the year was approximately 5.3 MW, and the peak occurred between 6:00 p.m. and 8:00 p.m. for seven of the twelve months). Figure 2 provides a summary of the peak loads for the Airport electric load for FY 2023.



Figure 2. Load Profile (Monthly Peaks by Hour)— Airport Area (FY 2023)

Port System and Divisional Revenue Requirement

The TY annual revenue requirement for the Study is approximately \$27.0 million. A summary of the accounts included in the TY Revenue Requirement is provided in Table 2, which includes the jurisdictional analysis of the total revenue requirement between the Maritime service area and the Airport. This includes total O&M expenses, which includes purchased power as well as existing and projected debt service and cash needed to meet financial metrics (as further detailed in the cash flow analysis). Other income represents the Treasure Island Interconnection Fee which is paid by the City and County of San Francisco to the Port for usage of its substation equipment and is allocated to the Maritime division.

Port Utility Revenue Requirement					
Line Item TY Value Maritime TY Airport T					
Total Operations and Maintenance Expenses	\$21,685,775	\$12,678,262	\$9,007,514		
Total Debt Service	\$1,552,058	\$514,148	\$1,037,909		
Total Cash Needed for Financial Metrics	\$3,947,912	\$2,370,572	\$1,577,340		
Total Less Other Income (1)	(\$164,626)	(\$164,626)	\$0		
Total ⁽²⁾	\$27,021,120	\$15,398,357	\$11,622,763		

Table 2

(1) Includes other revenues and adjustments.

(2) Numbers may not add due to rounding.

The following provides a summary of the cost of service methodology utilized for this Study and applied to each division's (or area's) revenue requirement to determine the COS results, as presented herein.

- Functionalization and Sub-functionalization of Costs The revenue requirement is assigned to the
 particular function or sub-function of the utility. The Port is primarily a distribution utility, with limited
 generation resources. The Port is a member of Northern California Power Agency (NCPA) and buys
 energy on the wholesale market. The Port uses NCPA as a scheduler and PG&E's transmission lines to
 deliver power to its substations. The Port's functional business units include the distribution and
 customer services functions. Sub-functions may include different sources of power supply (renewable
 power, purchased power, etc.) and distribution sub-functions by voltage, metering, billing, collection,
 etc.
- Classification of Costs Once costs are functionalized, they are classified based on their underlying nature. Of particular importance is the determination of fixed versus variable costs. Fixed costs remain a financial obligation of the utility regardless of the amount of energy produced whereas variable costs fluctuate based on system energy requirements. Further, fixed and variable costs are associated with utility requirements to meet customer demand, energy, and customer service needs.
- 3. Allocation of Costs Once costs are classified, they are allocated to the various customer classes. Allocation factors used for this Study align with cost classification and are based on electricity usage by each class. Customer allocation factors are based on the number of customers. Demand allocation factors were not utilized due to the lack of consistent demand data by customer class (for Port usage) as well as the characteristics of the electric load for each jurisdiction as described herein.

Capital Projects

As indicated, the Port Utility is projecting several significant capital projects for both the Maritime and Airport areas, beginning in FY 2025 and extending for several years thereafter. Table 3 provides a summary of the proposed capital projects for each area (with specific high value capital projects identified), and the expected project costs by year for the five-year period beginning in FY 2025 and ending in FY 2029. The largest capital items related to upgrades required at the substations serving the Airport (Substation 1 and 2), as well as at the Maritime area (Davis, Cuthbertson and SS-R-14), as identified below.

Table 3					
Port Utility – Capital Improvement Plan FY 2025 – FY 2029 (Summary)					
Line Item	FY 25	FY 26	FY 27	FY 28	FY 29
Airport Division					
Battery Storage System	\$500,000	\$500,000	\$500,000	\$1,000,000	\$0
Substation 1 and 2 Upgrades	\$7,700,000	\$11,200,000	\$12,500,000	\$9,400,000	\$7,300,000
Other	\$329,000	\$162,000	\$27,000	\$4,000	\$84,000
Total Airport Division	\$8,529,000	\$11,862,000	\$13,027,000	\$10,404,000	\$7,384,000
Maritime Division					
115kV Main Substation Replacement (Davis)	\$200,000	\$500,000	\$2,000,000	\$3,000,000	\$10,000,000
115kV Main Substation Replacement (Cuthbertson)	\$200,000	\$500,000	\$2,000,000	\$3,000,000	\$10,000,000
SS-R-14 Substation Replacement (14th/Maritime)	\$5,500,000	\$12,000,000	\$12,000,000	\$6,000,000	\$0
Battery Storage System	\$500,000	\$5,000,000	\$0	\$0	\$0
Other	\$555,000	\$1,184,000	\$2,575,000	\$11,000	\$232,000
Total Maritime Division	\$6,955,000	\$19,184,000	\$18,575,000	\$12,011,000	\$20,232,000
Total ⁽¹⁾	\$15,484,000	\$31,046,000	\$31,602,000	\$22,415,000	\$27,616,000

(1) Numbers may not add due to rounding

Cost of Service Results

The results of the COS analysis provide a detailed assessment of the costs required to serve each of the customer classes. Customer class costs are compared to the projected revenues under current rates to determine if current rates are sufficient to meet costs. Once completed, the COS analysis is the basis for rate design.

The current rates include a rate class referred to as OAB, which includes storage and warehouse facilities on what used to be the Oakland Army Base (the land has since been transferred to the Port). There are approximately 47 meters at the OAB, and a total of approximately 1,646 MWh total annual sales, which consists of various customer types (Class A, B and C). For the purposes of the COS analysis, the OAB class has been included as a combined class. However, the Port Utility is proposing to disaggregate the OAB class and move the individual OAB customers from into the various rate classes served at the Maritime area based on their usage characteristics (i.e. Class A, B and C).

A comparison of the TY revenue requirement by class is shown in Table 4.

COS Results by Class for Port Utility by Division			
Class/Service	TY Airport Revenue Requirement ⁽¹⁾	TY Maritime Revenue Requirement	Total System Revenue Requirement
Class A	\$616,645	\$3,961	\$620,606
Class B	\$4,676,257	\$570,568	\$5,246,825
Class C	\$2,815,130	\$1,026,698	\$3,841,828
Class D	\$3,514,731	\$348,533	\$3,863,264
Class E	N/A	\$6,914,584	\$6,914,584
OAB-A (2)	N/A	\$402,738	\$402,738
Shore Power	N/A	\$6,131,274	\$6,131,274
Total ⁽³⁾	\$11,622,763	\$15,398,357	\$27,021,120

(1) Airport load does not include Class E, OAB-A, or Shore Power

(2) OAB class allocated costs based on combined usage; rate design proposed to disaggregate current OAB class and move customers into individual classes. See text for details.

(3) Numbers may not add due to rounding.

The Port Utility's Reserve Impact Analysis

The Port Utility intends to invest approximately \$77 million in the Maritime area and \$51 million in the Airport area over the next five-year period (FY 2025 to FY 2029). These investments will be financed through a combination of a reduction in cash reserves and an issuance of debt over that period. The debt service associated with these investments drives the need for the Port Utility to increase its rate-related revenues. The Port Utility's financial management policy requires that the Port Utility maintain a DCSR of 1.40 and a DCOH minimum cash reserve balance which exceeds 180 days. (See Board Reso. No. 17-09 Adopting a Port Debt Policy, March 9, 2017).

Table 5 provides a summary of the projected DSCR for the Port Utility (combined Maritime and Airport divisions).

Table 5 Port Utility Debt Service Coverage Ratio with		
Proposed Rate Increases	s (FY 2025)	
Line Item FY 25		
Operating Revenues	\$27,095,120	
Operating Expenses	(\$22,543,820)	
Net Revenues	\$5,538,181	
Debt Service Expense	\$1,552,058	
Debt Service Coverage Ratio 3.57		

Table 6 provides a summary of the projected cash flows for the Port Utility inclusive of these rate revenues and capital expenditures for FY 2025. This analysis suggests the Port Utility's DCOH requirement of 180 days is met for the next fiscal year (FY 2025).

Line Item FY 25		
Beginning Cash Balance	\$54,740,573	
Sources of Cash		
Operating Revenues	\$27,095,120	
Other Income	\$164,626	
Interest Income	\$822,255	
Debt Proceeds	\$8,528,873	
Total Sources of Cash	\$36,61,874	
Uses of Cash		
Operating Expenses	(\$22,543,820)	
Bond and Debt Service	(\$1,150,094)	
CP Debt Service	(\$401,963)	
Capital Expenses	(\$15,483,842)	
Other Payments	(\$428,599)	
Total Uses of Cash	(\$40,008,318)	
Net Cash Flow	(\$3,397,445)	
Cash Balance Adjustments	\$-	
Ending Cash Balance	\$51,343,128	
Days of Cash on Hand	831	

Rate Design by Class

The following are the proposed changes to the existing Port rates by class by division (Maritime Port service area and Airport). The Port intends to increase its system revenues by 34% in FY 2025 from its FY 2023 values. For the Airport, the FY 2025 rate changes are expected to be the same percent increase for each rate class (26%), which is applied to each rate component. For Maritime, the highest percentage rate increases will be to the classes that are expected to under recover their costs for FY 2025. The Port intends to implement the rate increases upon the second reading of the proposed changes to the rates by the Board of Directors. For the purposes of this analysis, it is assumed that new rates will impact customer usage beginning in July 2024.

Airport Division

The Airport Division includes customers in Customer Class A, Customer Class B, Customer Class C, and Customer Class D. There are approximately 300 meters served at the Airport.

Airport Class A and B

For Airport Class A and B rates, the proposed rate changes include a simplification of the existing rate structures as well as an increase in the rate levels for each rate component. This includes combining the Distribution Charge with the Energy Charge to create one Energy Charge rate that includes both components. Additionally, this rate change will include increasing the current Customer Charge from \$10.00 per meter per month to \$12.60 per meter per month for Class A and \$15.00 per meter per month to \$18.90 per meter per month for Class B and increasing the combined Distribution and Energy Charge from \$0.2097/kWh to \$0.2642/kWh. Table 7 includes current and proposed rates for Airport Class A and B.

Current and Proposed Airport Class A and B Rates			
Rate Component	Current Rate	Proposed Rate	
Airport Class A – Customer Charge (\$/Meter)	\$10.00	\$12.60	
Airport Class B – Customer Charge (\$/Meter)	\$15.00	\$18.90	
Energy Charge (\$/kWh)	\$0.1307	N/A	
Distribution Charge (\$/kWh)	\$0.0789	N/A	
"All-In" Energy Rate (\$/kWh)	\$0.2097	\$0.2642	

Airport Class C

Airport Class C customers are customers who currently have a demand between 100 kW and 500 kW and take service at secondary voltage.

For the Airport Class C, the proposed rate changes include a simplification of the existing rate structures as well as an increase in the rate levels for each rate component. Similar to Airport Class A and B rates, this will include combining the Distribution Charge with the Energy Charge to create one Energy Charge. Additionally, this rate change will include increasing the Customer Charge from \$125.00 to \$157.50, increasing the combined Distribution and Energy Charge from \$0.1676/kWh to \$0.2111/kWh, and increasing the Demand Charge from \$4.63/kW to \$5.83/kW. Table 8 includes current and proposed rates for Airport Class C.

Current and Proposed Airport Class C Rates				
Rate Component Current Rate Proposed Rate				
Customer Charge (\$/Meter)	\$125.00	\$157.50		
Energy Charge (\$/kWh)	\$0.1307	N/A		
Distribution Charge (\$/kWh)	\$0.0368	N/A		
"All-In" Energy Rate (\$/kWh)	\$0.1676	\$0.2111		
Demand Charge (\$/kW)	\$4.63	\$5.83		

Airport Class D

Airport Class D customers are customers who currently have a demand between 500 kW and 1,000 kW and take service at primary or secondary voltage.

For the Airport Class D, rate changes will include a simplification of the existing rate structures as well as an increase in the rate levels for each rate component. This rate change will include combining the peak, partial peak, and off-peak distinctions for energy and demand charges into a single Energy Charge and a single Demand Charge. The changes in Energy Charge and Demand Charge are provided in Table 9. The recommended Energy Charge is \$0.1619/kWh and the recommended Demand Charge is \$17.00/kW. Additionally, this rate change will include increasing the Customer Charge from \$600.00 per meter per month to \$756.00 per meter per month.

Table 9Current and Proposed Airport Class D Rates				
Rate Component Current Rate Proposed Rate				
Customer Charge (\$/Meter)	\$600.00	\$756.00		
Peak Energy (\$/kWh)	\$0.1482	N/A		
Partial Peak Energy (\$/kWh)	\$0.1254	N/A		
Off-Peak Energy (\$/kWh)	\$0.1140	N/A		
Total Energy Charge (\$/kWh)	N/A	\$0.1619		
Peak Demand (\$/kW)	\$8.46	N/A		
Partial Peak Demand (\$/kW)	\$1.94	N/A		
Maximum Demand (\$/kW)	\$5.36	N/A		
Total Demand (\$/kW)	N/A	\$17.00		

Airport Class E

Airport Class E customers are customers who have a demand greater than 1,000 kW and take service at primary or secondary voltage. Currently, there are no Class E customers at the Airport. Table 10 provides the proposed Class E rates for the Airport.

Proposed Airport Class E Rates		
Rate Component	Proposed Rate	
Customer Charge (\$/Meter)	\$800.00	
Peak Energy (\$/kWh)	N/A	
Partial Peak Energy (\$/kWh)	N/A	
Off-Peak Energy (\$/kWh)	N/A	
Total Energy Charge (\$/kWh)	\$0.1699	
Peak Demand (\$/kW)	N/A	
Partial Peak Demand (\$/kW)	N/A	
Maximum Demand (\$/kW)	N/A	
Total Demand (\$/kW)	\$18.00	

Table 9 Proposed Airport Class E Rates

Maritime Division (Served by the Davis and Cuthbertson Substations)

The Maritime Division which is served by the Port includes customers in Customer Class A, Customer Class B, Customer Class D, Customer Class E, and Shore Power. There are approximately 250 meters served by the Port in the Maritime Division. As indicated previously, the proposed rate plan for FY 2025 recommends disaggregating the current 47 OAB class meters into their respective Maritime area classes (36 meters to Maritime Class A, 9 meters to Maritime Class B and 2 meters to Maritime Class C).

Maritime Class A and B

The results of the COS study indicate that the Maritime Classes A and B are expected to under collect their associated costs by approximately 90% and 128%, respectively, for FY 2025 without a rate change. The proposed rate changes are intended to reduce the class-level under recovery of costs.

For Maritime Class A and B rates, rate changes will include a simplification of the existing Class A and B rates. This rate change will include combining the Distribution Charge with the Energy Charge to create one Energy Charge rate that includes both components. The proposed rate change includes increasing the current Customer Charge from \$10.00 per meter per month to \$11.30 per meter per month for Class A, and from \$15.00 per meter per month to \$17.40 per meter per month for Class B. Additionally, the proposed rate change includes increasing the combined Distribution and Energy Charge from \$0.1695/kWh to \$0.1916/kWh for Class A and from \$0.1727/kWh to \$0.2003/kWh for Class B (see Table 11).

Rate Component	Current Rate	Proposed Rate
Maritime Class A – Customer Charge (\$/Meter)	\$10.00	\$11.30
Maritime Class A – Energy Charge (\$/kWh)	\$0.0909	N/A
Maritime Class A – Distribution Charge (\$/kWh)	\$0.0786	N/A
Maritime Class A – "All-In" Energy Charge (\$/kWh)	\$0.1695	\$0.1916
Maritime Class B – Customer Charge (\$/Meter)	\$15.00	\$17.40
Maritime Class B – Distribution Charge (\$/kWh)	\$0.0909	N/A
Maritime Class B – Distribution Charge (\$/kWh)	\$0.0818	N/A
Maritime Class B – "All-In" Energy Charge (\$/kWh)	\$0.1727	\$0.2003

Maritime Class C

Maritime Class C customers are customers who currently have a demand between 100 kW and 500 kW and take service at secondary voltage.

For the Maritime Class C, the proposed rate changes will include a simplification of the existing Class C rates. This rate change will include combining the Distribution Charge with the Energy Charge to create one Energy Charge rate that includes both components. Additionally, this rate change will include increasing the current Customer Charge from \$125.00 per meter per month to \$151.25 per meter per month, increasing the combined Distribution and Energy Charge from \$0.1381/kWh to \$0.1671/kWh, and increasing the Demand Charge from \$5.33/kW to \$6.45/kW (see Table 12).

Table 12 Current and Proposed Maritime Class C Rates				
Rate Component Current Rate Proposed Rate				
Customer Charge (\$/Meter)	\$125.00	\$151.25		
Energy Charge (\$/kWh)	\$0.0909	N/A		
Distribution Charge (\$/kWh)	\$0.0472	N/A		
"All-in" Energy Charge (\$/kWh)	\$0.1381	\$0.1671		
Demand Charge (\$/kW)	\$5.33	\$6.45		

Maritime Class OAB

Current Maritime Class OAB customers are customers who are located at the OAB facility and are served by the Port Utility. These customers are proposed to be moved to either the Maritime Schedule A, B or C, depending on their usage characteristics.

Maritime Class D

Maritime Class D customers are customers who currently have a demand between 500 kW and 1,000 kW and take service at primary or secondary voltage.

For the Airport Class D, the proposed rate changes will include a simplification of the existing rate structures as well as an increase in the rate levels for each rate component. This rate change will include combining the peak, partial peak, and off-peak distinctions for energy and demand charges into a single Energy Charge and a single Demand Charge. The changes in the Energy Charge and the Demand Charge are provided in Table 13. The recommended Energy Charge is \$0.1003/kWh and the recommended Demand Charge is \$16.12/kW. Additionally, this rate change will include increasing the Customer Charge from \$600.00 per meter per month to \$684.00 per meter per month.

Current and Proposed Maritime Class D Rates			
Rate Component	Current Rate	Proposed Rate	
Customer Charge (\$/Meter)	\$600.00	\$684.00	
Peak Energy (\$/kWh)	\$0.10160	N/A	
Partial Peak Energy (\$/kWh)	\$0.08597	N/A	
Off-Peak Energy (\$/kWh)	\$0.07815	N/A	
Total Energy Charge (\$/kWh)	N/A	\$0.1003	
Peak Demand (\$/kW)	\$8.71	N/A	
Partial Peak Demand (\$/kW)	\$1.99	N/A	
Maximum Demand (\$/kW)	\$5.52	N/A	
Total Demand (\$/kW)	N/A	\$16.12	

Maritime Class E

Maritime Class E customers are customers who currently have a demand greater than 1,000 kW and take service at primary voltage.

For the Maritime Class E, the proposed rate changes will include a simplification of the existing rate structures as well as an increase in the rate levels for each rate component. This rate change will include combining the peak, partial peak, and off-peak distinctions for energy and demand charges into a single Energy Charge and a single Demand Charge. The changes in the Energy Charge and the Demand Charge are provided in Table 14. The recommended Energy Charge is \$0.1114/kWh and the recommended Demand Charge is \$17.03/kW. Additionally, this rate change will include increasing the Customer Charge from \$1,000 per meter per month to \$1,240 per meter per month.

Table 14 Current and Proposed Maritime Class E Rates			
Rate Component	Current Rate	Proposed Rate	
Customer Charge (\$/Meter)	\$1,000	\$1,240	
Peak Energy (\$/kWh)	\$0.10160	N/A	
Partial Peak Energy (\$/kWh)	\$0.08597	N/A	
Off-Peak Energy (\$/kWh)	\$0.07815	N/A	
Total Energy Charge (\$/kWh)	N/A	\$0.1114	
Peak Demand (\$/kW)	\$7.66	N/A	
Partial Peak Demand (\$/kW)	\$1.75	N/A	
Maximum Demand (\$/kW)	\$4.85	N/A	
Total Demand (\$/kW)	N/A	\$17.03	

Maritime - Shore Power

Shore Power customers are container ships that dock at the Port facility and utilize power provided by the Port Utility. The vessel commissioning charge and hourly usage maintenance charge are not Port Utility charges and no changes to those charges are being proposed with this Study.

For Shore Power, the proposed rate change moves from a rate based on hours to a rate based on energy usage, however, there is no projected increase in cost recovery from this class. Historically, the Port Utility charged a Shore Power Usage Fee of \$259.00 per hour for any portion of an hour in which the ship was connected to its system. It is recommended that the per hour charge be replaced with an Energy Charge of \$0.2239/kWh (see Table 15).

Table 15				
Current and Proposed Maritime Shore Power Rates				
Rate Component	Current Rate	Proposed Rate		
Usage Fee (\$/hr.)	\$259.00	N/A		
Energy Charge (\$/kWh)	N/A	\$0.2239		

Capacity Charges (Buy-In Charges)

The Port Utility is considering a restructuring of its one-time capacity¹ (or buy-in charge) for new customers in the Airport and Maritime Port Utility service areas (separate charges for each). The one-time cost-of-service charge is similar to how many utilities charge for new customers that will utilizing existing capacity on their system. The use of a capacity or buy-in charge results in downward pressure on electric rates for existing customers who have been paying for the surplus capacity that is available for the new customer. This recognizes the prior contributions of existing customers to the electric system's ability to accommodate new customers.

¹ The Port's current capacity or buy-in charge has also been referred to as a "cost of service" charge.

This approach is widely adopted in the electric and other utilities (such as water and wastewater systems) and supports a general approach of having "growth pay for growth." With this approach, the new customer load should not result in increased electric rates for existing customers, by recovering an appropriate and reasonable upfront capacity charge on new customers. The Port Utility's approach utilizes a credit applied to the capacity charge, based on the projected contribution towards the Port's cost of maintaining the electric distribution system recovered within the proposed electric rates. The use of this credit reduces the total capacity charge, such that it does not discourage new load from coming on to the system.

To determine the capacity charge, the Port Utility utilizes the replacement costs for the planned infrastructure based on its most recent Capital Improvement Plan (CIP). This results in a dollar per megavolt-ampere (MVA) value (a measurement of capacity). The unit cost (\$/MVA) is applied to the capacity (demand in MVA) associated with the new load to determine a total capacity cost. The credit is determined by assuming the same capacity of the new load, times an estimated load factor for a year (which is a measure of the relationship between demand and energy on a percentage basis) times the average distribution costs for the system on a dollars per kWh basis (\$/kWh). The result of the credit determination is an annual contribution to the existing distribution system costs. The resulting capacity charge is the capacity cost less the credit, which is the upfront payment required for the new load.

As indicated, the concept of a capacity charge is an accepted industry practice. As part of this Study, NewGen has reviewed the proposed changes to the existing capacity charge methodology utilized by the Port Utility. We are of the opinion that the proposed capacity charge methodology is prudent and represents an equitable manner in which to encourage new load, while ensuring that "growth pays for growth" and does not burden the existing customer base.

Direct Assignment Charges

The Port Utility is considering adopting a Direct Assignment Charge for customers in the Airport and the Seaport. The Direct Assignment Charge is an upfront payment for improvements or portions of improvements owned by the Port Utility that are solely a result of, and in response to, an existing or new customer's request. The Direct Assignment Charge is similar to a "Line Extension Policy" adopted by many publicly owned utilities and can be applied in conjunction with the capacity charge described herein. The requested infrastructure improvements directly benefit the customer making the request and are assigned for the customer's use at a point of interconnection. These infrastructure needs are above and beyond those that the Port may need to construct or install to meet its distribution system needs. These improvements must be owned, constructed, and installed by the Port to interconnect and serve the customer's requests at the point of interconnecting, and the customer is responsible for the entire cost of requested improvements. NewGen is of the opinion that the proposed Direct Assignment Charges are prudent and equitable.

Electric Vehicle Charger Rates

The Port Utility reviewed the need and ability to implement Electric Vehicle (EV) charger rates for various entities utilizing the Airport and Maritime areas. However, at this time, it is not recommended that the Port Utility adopt specific EV charging rates, due to uncertainty of how the chargers will be utilized and metered. The Port Utility will continue to evaluate the need for an EV charger rate as EV chargers are installed and utilized across its service territory.

Conclusions

Based on the results of the analysis completed for this Study, the following conclusions are presented:

- The Port Utility will become a self-sufficient revenue division on July 1, 2024, and will need to charge for its electric usage on a cost basis utilizing its current rate classes and updating its charges for service. The Port Utility's current rates and rate structures are insufficient to provide the revenue necessary to support these required system improvements. A system-level revenue increase of approximately 34% is required to fund the capital plan while simultaneously meeting the Port Utility's DCOH requirement in the future.
- The Port Utility's existing rates do not align with class-level COS results. The proposed changes herein for FY 2025 provide the opportunity for the Port Utility to align class revenues over time.
- The Port Utility's existing rate structures are a holdover legacy construct from PG&E's historic rate structures. The existing TOU rate structures do not reflect the costs of the Port Utility, which are generally not time dependent. The Port Utility could simplify its rate components (i.e., demand, customer charge, and energy) with this Study.

We appreciate the opportunity to be of service to you and the Port of Oakland. If you have any questions regarding this report, please contact me directly at (720) 259-1762 or sburnham@newgenstrategies.net.

Sincerely,

NewGen Strategies and Solutions, LLC

DocuSigned by: BFC962DA6432

Scott Burnham Partner