



GAVIN NEWSOM  
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SECRETARY FOR  
ENVIRONMENTAL PROTECTION

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## State Water Resources Control Board

SEP 09 2019

Mr. Mark Krausse  
Director, State Agency Relations  
Pacific Gas and Electric Company  
1415 L Street, Suite 280  
Sacramento, CA 95814

Dear Mr. Krausse:

### **RE: INVOICE FOR THE 2017-2018 INTERIM MITIGATION PERIOD FOR DIABLO CANYON NUCLEAR POWER PLANT - ONCE-THROUGH COOLING POLICY**

This letter serves as an invoice for Diablo Canyon Nuclear Power Plant's (Diablo Canyon Plant) interim mitigation payment for the operating period of October 1, 2017, through September 30, 2018 (2017-2018 interim mitigation period). The final determination calculating the interim mitigation payment is included as Attachment A.

The State Water Resources Control Board's (State Water Board) Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Once-Through Cooling or OTC Policy) requires owners or operators of existing power plants to implement measures to mitigate interim impingement and entrainment impacts resulting from their cooling water intake structures. The interim mitigation period commenced on October 1, 2015, and continues up to and until owners or operators achieve final compliance with the OTC Policy. Section 2.C(3) of the OTC Policy provides options for demonstrating compliance with the interim mitigation requirements.

As stated in the 2015-2016 Final Determination for Diablo Canyon Nuclear Power Plant<sup>1</sup>, Pacific Gas and Electric Company (PG&E) elected to comply with interim mitigation requirements in Section 2.C(3)(b) of the OTC Policy. This option demonstrates compliance with the interim mitigation requirement by providing funding to the Ocean Protection Council or State Coastal Conservancy to fund appropriate mitigation projects.

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E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, CA 95812-0100 | [www.waterboards.ca.gov](http://www.waterboards.ca.gov)

Mr. Mark Krausse

SEP 09 2019

The State Water Board calculated the interim mitigation payment for the 2017-2018 interim mitigation period using information provided by PG&E in its January 15, 2019 information response letter<sup>2</sup>. The annual interim mitigation payment is the sum of three components: an entrainment payment using a facility-specific fee, an impingement payment, and a management and monitoring payment. The interim mitigation payment for Diablo Canyon Plant for the operating period of October 1, 2017, through September 30, 2018, is \$4,236,740.35.

PG&E has 60 days from receipt of this letter to make this payment to the Natural Resources Agency's Ocean Protection Council. When submitting this payment, include a cover letter that identifies the National Pollution Discharge Elimination System number for Diablo Canyon Plant and copy Karen Mogus, Director of the Division of Water Quality at the State Water Board. Please make the check payable to the Natural Resources Agency and send to:

California Natural Resources Agency

Attn: Jenn Eckerle

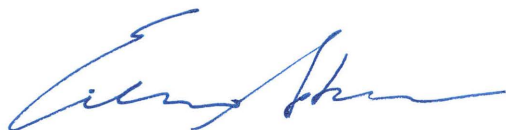
1416 9<sup>th</sup> Street, Suite 1311

Sacramento, CA 95814

Reference Account: Ocean Protection Trust Fund

If you have questions regarding this invoice letter, please contact Julie Johnson at (916) 341-5687 ([Julie.Johnson@waterboards.ca.gov](mailto:Julie.Johnson@waterboards.ca.gov)), or Katherine Walsh at (916) 445-2317 ([Katherine.Walsh@waterboards.ca.gov](mailto:Katherine.Walsh@waterboards.ca.gov)).

Sincerely,



Eileen Sobeck  
Executive Director

Enclosure:

Attachment A – Final Determination for Diablo Canyon Nuclear Power Plant

cc:

Mr. Mark Gold  
Executive Director  
Ocean Protection Council  
1416 9<sup>th</sup> Street, Suite 1311  
Sacramento, CA 95814

Ms. Jenn Eckerle  
Deputy Director  
Ocean Protection Council  
1416 9<sup>th</sup> Street, Suite 1311  
Sacramento, CA 95814

cc via email:

Ms. Jessica Melton, [JE11@pge.com](mailto:JE11@pge.com)  
Mr. Jonathan Bishop, [Johnathan.Bishop@waterboards.ca.gov](mailto:Johnathan.Bishop@waterboards.ca.gov)  
Ms. Karen Mogus, [Karen.Mogus@waterboards.ca.gov](mailto:Karen.Mogus@waterboards.ca.gov)  
Mr. Michael Lauffer, [Michael.Lauffer@waterboards.ca.gov](mailto:Michael.Lauffer@waterboards.ca.gov)  
Ms. Marleigh Wood, [Marleigh.Wood@waterboards.ca.gov](mailto:Marleigh.Wood@waterboards.ca.gov)  
Mr. Phillip Crader, [Phillip.Crader@waterboards.ca.gov](mailto:Phillip.Crader@waterboards.ca.gov)  
Ms. Rebecca Fitzgerald, [Rebecca.Fitzgerald@waterboards.ca.gov](mailto:Rebecca.Fitzgerald@waterboards.ca.gov)  
Mr. John M. Robertson, [John.Robertson@waterboards.ca.gov](mailto:John.Robertson@waterboards.ca.gov)

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<sup>1</sup> 2015-2016 Final Determination for Diablo Canyon Nuclear Power Plant:  
[https://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/docs/diablocanyon\\_1516mitigation\\_letter.pdf](https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/diablocanyon_1516mitigation_letter.pdf)

<sup>2</sup> PG&E's January 15, 2019 Information Response Letter:  
[https://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/docs/cwa\\_april/dc\\_im1718.pdf](https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/cwa_april/dc_im1718.pdf)

**Attachment A – Final Determination for Diablo Canyon Nuclear Power Plant**

**FINAL DETERMINATION TO APPROVE MITIGATION MEASURES  
FOR THE WATER QUALITY CONTROL POLICY ON THE USE OF  
COASTAL AND ESTUARINE WATERS FOR POWER PLANT COOLING:**

**DIABLO CANYON NUCLEAR POWER PLANT  
OCTOBER 1, 2017 THROUGH SEPTEMBER 30, 2018**

Interim Mitigation Requirements and Determinations

The State Water Resources Control Board's (State Water Board) Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (also known as the Once-Through Cooling or OTC Policy) requires owners or operators of existing power plants to implement measures to mitigate interim impingement and entrainment impacts resulting from their cooling water intake structures. The interim mitigation period commenced on October 1, 2015, and continues up to and until owners or operators achieve final compliance with the OTC Policy.

The State Water Board approved Diablo Canyon Nuclear Power Plant's (Diablo Canyon Plant) continued request to comply with the interim mitigation measures described in Section 2.C(3)(b) of the OTC Policy in the Final Determination<sup>1</sup> for the October 1, 2016 to September 30, 2017 interim mitigation period (2016-2017 Final Determination). Consistent with Resolution No. 2015-0057<sup>2</sup> and the recommendations in the Expert Review Panel's Final Report<sup>3</sup>, the interim mitigation payment is comprised of an entrainment payment, an impingement payment, and a management and monitoring payment.

In the sections below, the State Water Board has calculated Diablo Canyon Plant's interim mitigation payment for October 1, 2017, through September 30, 2018 (also known as the 2017-2018 determination period). This calculation is consistent with the methods and calculations applied in the 2016-2017 Final Determination.

Interim Mitigation Payment Calculation for Diablo Canyon Nuclear Power Plant

*Entrainment Payment Calculation*

In its January 15, 2019 email<sup>4</sup>, Pacific Gas and Electric Company (PG&E) stated that \$3.12 per million gallons (MG) should be the starting point for determining the facility-specific cost of entrainment for Diablo Canyon Plant. However, in the Final Determination<sup>5</sup> for the October 1, 2015, to September 30, 2016, interim mitigation period, the State Water Board approved the facility-specific average adjusted entrainment cost of \$3.88/MG for Diablo Canyon Plant. The \$3.88/MG is an average of entrainment fees that was calculated from two past entrainment studies (1996 to 1999 and 2008 to 2009) using the habitat production foregone method and adjusted to more accurately reflect current estimates for reef construction costs. Therefore, \$3.88/MG is the starting site-specific entrainment cost for Diablo Canyon Plant for entrainment payment calculations, the first of which was calculated for the October 1,

2015, through September 30, 2016, interim mitigation period. Each year going forward from the first interim mitigation period, a three percent escalator is applied as described below to account for inflation.

To calculate the portion of the interim mitigation payment to offset entrainment impacts for October 1, 2017, through September 30, 2018, the State Water Board used the facility-specific cost of entrainment for Diablo Canyon Plant approved in the 2016-2017 Final Determination. Consistent with Resolution No. 2015-0057 and the Expert Review Panel's Final Report, the State Water Board used a three percent escalator to update the facility-specific cost of entrainment from the 2016-2017 Final Determination to 2018 dollars to account for inflation. The resulting entrainment cost for October 1, 2017, through September 30, 2018, increased from \$4.00/MG to \$4.12/MG:

$$(\$4.00/\text{MG} \times 0.03) + \$4.00/\text{MG} = \$4.12/\text{MG}$$

In its January 15, 2019 email, PG&E provided the intake volume for Diablo Canyon Plant for the 2017-2018 determination period of 856,808 MG. The State Water Board verified intake volume with the data submitted in the National Pollution Discharge Elimination System permit monitoring reports for Diablo Canyon Plant.

To calculate the entrainment payment, the State Water Board multiplied the intake volume by the updated cost of entrainment:

$$\$4.12/\text{MG} \times 856,808 \text{ MG} = \$3,530,048.96$$

#### *Impingement Payment Calculation*

In its January 15, 2019 email, PG&E confirmed use of the established annual average of pounds of fish impinged stated in the *Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling - Final Substitute Environmental Document*<sup>6</sup> for calculating the impingement payment, which is 710 pounds. The State Water Board calculated the impingement payment for Diablo Canyon Plant using 710 pounds of impinged fish multiplied by the average indirect economic value of the fisheries as determined in the Expert Review Panel's Final Report of \$0.80 per pound:

$$\$0.80/\text{pound} \times 710 \text{ pounds} = \$568.00$$

#### *Management and Monitoring Payment Calculation*

The State Water Board calculated the management and monitoring payment by taking twenty percent of the sum of the entrainment and impingement payments:

$$0.20 \times (\$3,530,048.96 + \$568.00) = \$706,123.39$$

## State Water Board's Final Determination for Diablo Canyon Plant

Based on the sum of the entrainment, impingement, and management and monitoring payment calculations, the total payment to fulfill the interim mitigation obligation for PG&E's Diablo Canyon Plant for the interim mitigation period of October 1, 2017, to September 30, 2018, is \$4,236,740.35.

$$\$3,530,048.96 + \$568.00 + \$706,123.39 = \$4,236,740.35$$

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<sup>1</sup> State Water Board 2016-2017 Final Determination for Diablo Canyon Plant.

<[https://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/docs/interim\\_mitigation/fdi1617\\_diablo.pdf](https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/interim_mitigation/fdi1617_diablo.pdf)>

<sup>2</sup> State Water Board Resolution No. 2015-0057.

<[https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2015/rs2015\\_0057.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2015/rs2015_0057.pdf)>

<sup>3</sup> Final Report from the Expert Review Panel.

<[https://www.waterboards.ca.gov/water\\_issues/programs/ocean/desalination/docs/erp\\_intake052512.pdf](https://www.waterboards.ca.gov/water_issues/programs/ocean/desalination/docs/erp_intake052512.pdf)>

<sup>4</sup> Email from Mark Krausse, PG&E, to Julie Johnson, State Water Board on January 15, 2019.

<[https://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/docs/cwa\\_april/dc\\_im1718.pdf](https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/cwa_april/dc_im1718.pdf)>

<sup>5</sup> State Water Board 2015-2016 Final Determination for Diablo Canyon Plant.

<[https://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/docs/diablocanyon\\_1516mitigation\\_letter.pdf](https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/diablocanyon_1516mitigation_letter.pdf)>

<sup>6</sup> State Water Resources Control Board, *Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling – Final Substitute Environmental Document*, May 4, 2010. Table 3, Page 34.

<[https://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/docs/cwa316\\_may2010/sed\\_final.pdf](https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/cwa316_may2010/sed_final.pdf)>