

# Pacific Power & Light Company

Washington

Annual Renewable Portfolio Standard Report

# **REDACTED per WAC 480-07-160**

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## Introduction

Pacific Power & Light Company (Pacific Power), a division of PacifiCorp, submits this 2019 Annual Renewable Portfolio Standard Report (Renewable Report) to the Washington Utilities and Transportation Commission (Commission) and the Washington Department of Commerce (Commerce) in accordance with reporting requirements established as part of the Energy Independence Act (EIA). The report is consistent with RCW 19.285.070 which states, in relevant part:

- (1) On or before June 1, 2012, and annually thereafter, each qualifying utility shall report to the department on its progress in the preceding year in meeting the targets established in RCW 19.285.040, including expected electricity savings from the biennial conservation target, expenditures on conservation, actual electricity savings results, the utility's annual load for the prior two years, the amount of megawatt-hours needed to meet the annual renewable energy target, the amount of megawatt-hours of each type of eligible renewable resource acquired, the type and amount of renewable energy credits acquired, and the percent of its total annual retail revenue requirement invested in the incremental cost of eligible renewable resources and the cost of renewable energy credits.
- (2) A qualifying utility that is an investor-owned utility shall also report all information required in subsection (1) of this section to the commission, and all other qualifying utilities shall also make all information required in subsection (1) of this section available to the auditor.

This report is consistent with the collaborative workshop documents addressing annual reporting requirements, in Docket UE-110523, Order 01 in Docket UE-120813, Order 01 in Docket UE-140802, and Docket UE-131723.

## **Executive Summary**

Under RCW 19.285.040(2)(a), each qualifying utility must use eligible renewable resources, acquire equivalent renewable energy credits (RECs), or a combination of both, to meet annual targets. As demonstrated in this report, the company will meet the targets in accordance with WAC 480-109-200(1). The company met the 2018 renewable energy target with a combination of eligible renewable resources and RECs and the company is positioned to use eligible renewable resources and RECs to supply at least nine percent of its average Washington load to satisfy the 2019 renewable energy target.

A summary of the company's 2018 and 2019 renewable targets and eligible renewable resources and RECs are provided below:

PacifiCorp Renewable Target, Eligible Resource and RECs									
	2018	2019							
Average Retail Sales (MWh)	4,101,476	4,085,207							
Percentage Target	9%	9%							
Renewable Target 369,133 367,669									
Qualifying Resources & RECs (MWh)	369,133	367,669							

Table 1

The company does not intend to rely on any of the alternative compliance mechanisms provided in WAC 480-109-210 for meeting either the 2018 or 2019 renewable energy targets.

## Annual Load for Previous Two Years and Renewable Energy Target

Under RCW 19.285.040(2)(c) and WAC 480-109-200(1), a utility must calculate its annual target based on its average load for the previous two years. Accordingly, using the average of the Washington annual retail loads for the previous two years, Table 2 calculates the annual renewable targets for 2018 and 2019.

Target Year 2018									
Prior Year Retail Sales (2016)	3,981,654 MWh								
Prior Year Retail Sales (2017)	4,221,298 MWh								
Average Retail Sales	4,101,476 MWh								
Percentage Target	9%								
Renewable Target	369,133 MWh/RECs								
Target Year 2019									
Prior Year Retail Sales (2017)	4,221,298 MWh								
Prior Year Retail Sales (2018)	3,949,116 MWh								
Average Retail Sales	4,085,207 MWh								
Percentage Target	9%								
Renewable Target	367,669 MWh/RECs								

Table 2
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## **Renewable Energy Acquired to Meet Renewable Energy Target**

The company met its 2018 renewable resource target and plans to meet its 2019 renewable resource target with a combination of eligible RECs, company- and third-party-owned wind resources, and hydroelectric facilities with upgrades completed after March 1999.

The company is submitting the Commission's Renewable Portfolio Standard (RPS) Report Tool as Attachment A. The RPS Report Tool details the renewable resource target for 2018 and 2019 and the RECs and renewable resources identified to meet the 2018 and 2019 targets.

PacifiCorp will use the following company- and third-party-owned wind facilities for 2019: Table 3

<b>Resource Name</b>	Location
Goodnoe Hills	Washington
Leaning Juniper	Oregon
Marengo I	Washington
Marengo II	Washington
Dunlap I	Wyoming
Glenrock Wind I	Wyoming
Campbell Hill/Three Buttes	Wyoming
Top of the World	Wyoming

Four of these eight wind facilities are located in the Pacific Northwest. The remainder are located in Wyoming and qualify as eligible to meet Washington's RPS.<sup>1</sup> Descriptions of the projects are referenced in the Supporting Documents for Renewable Report section of this Renewable Report. Renewable resources identified to meet the 2019 target also includes energy from wind projects that are forecasted to be repowered by the end of 2019. Facilities that are expected to be repowered in 2019 are: Glenrock Wind I, Goodnoe Hills, Marengo I, Marengo II, and Leaning Juniper.

Additionally, the company identified upgrades to hydroelectric facilities located in the Pacific Northwest that were completed after March 31, 1999, listed in Table 4 below.

<b>Resource Name</b>	<b>Upgrade Date</b>
Prospect 2	1999
Lemolo 1	2003
JC Boyle	2005
Lemolo 2	2009

Table 4	Та	ble	4
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<sup>&</sup>lt;sup>1</sup> In Docket UE-151162, Order 01, the Commission found all of these resources to be eligible renewable resources under RCW 19.285.030(12)(e).

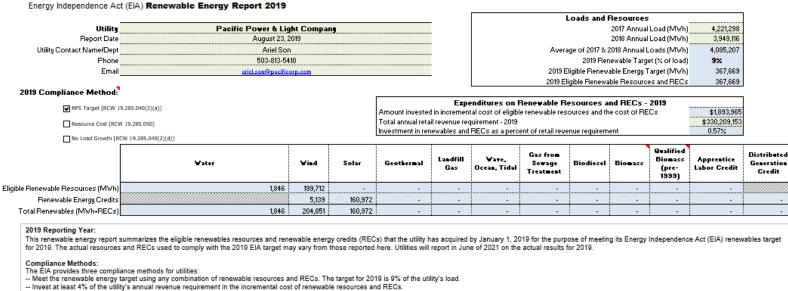
The company performed analyses to determine the incremental energy associated with upgrades to hydroelectric facilities, consistent with Method two, as identified in WAC 480-109-200(7)(c). The methodology, described in more detail in Attachment B of this report, is consistent with the methodology the company submitted to the Oregon Department of Energy to certify these facilities and calculate the percentage of the incremental energy for the Oregon RPS program. The company performed an analysis of the incremental energy for upgrades to hydroelectric facilities that includes actual generation data from 2007 through 2012. The company resubmitted the analysis to the Oregon Department of Energy in December 2013 and the Oregon Department of Energy approved the updated incremental hydropower efficiency percentages, effective January 2014. The eligibility was reviewed and made effective once again by the Oregon Department of Energy in December 2015. The company is providing the analyses in Confidential Work Papers—PacifiCorp Hourly Incremental Hydro Analyses.

In January 2017, PacifiCorp contracted to purchase the RECs from six Washington RPS-eligible solar projects over a consecutive ten-year term.

The following pages contain the company's Renewable Report which will be resubmitted to the Washington Department of Commerce upon Commission approval of this report, and include a summary of the forecasted number of megawatt-hours and RECs to meet the 2019 compliance target.

Please see Table 5 of this report for a summary of PacifiCorp's expected Washington-allocated resource costs compared to the annual revenue requirement.

#### Energy Independence Act (I-937) Commerce Renewable Report – 2019



- Invest at least 1% of its annual revenue requirement in renewable resources and RECs. This option is available only to certain utilities that are not growing.

All utilities must report the renewable resources and RECs acquired for the 2019 target year. Utilities that elect to use a compliance method based on renewable investments must provide additional information demonstrating compliance with that method. Refer to WAC 194-37-110(2) and (3) for specific requirements.

NOTE: This is a general explanation of the renewable energy requirements of the Energy Independence Act, intended to help members of the public understand the information reported by the utility. Consult Chapter 19.285 RCW and Chapter 194-37 WAC for details.

Renewable	e Resources	Co	Utility mpliance Year		wer & Light C 2019	Company			
WREGIS ID	Facility Name	Resource Type	Apprentice Labor Eligibility	Generation Amount (MWh)	Apprentice Labor Amount (MWh equiv.)		- Explanatory	y Notes (as needed)	
W536	Goodnoe Hills - Goodnoe Hills	Wind	No	16,098	-				
W200	Leaning Juniper I - Leaning Juniper I	Wind	No	16,388	-				
W185	Marengo - Marengo	Wind	No	26,067	-				
W772	Marengo II - Marengo II	Wind	No	12,516	-				
W1749	Top of the World - Top of the World	Wind	No	48,616	-				
W1687	Dunlap I - Dunlap I	Wind	No	29,430	-				
W964	Glenrock I - Glenrock I	Wind	No	24,118	-				
W1383	Campbell Hill - Campbell Hill	Wind	No	26,479	-				
W180	JC Boyle - JC Boyle	Water	No	246	-				
W157	Lemolo 1 - Lemolo 1	Water	No	1,208	-				
W140	Prospect 2 - Prospect 2	Water	No	283	-				
W158	Lemolo 2 - Lemolo 2	Water	No	109	-				
	Total			201,558					
Renewable	e Energy Credits	Co	Utility mpliance Year		wer & Light C 2019	Company			
WREGIS ID	Facility Name	REC Vintage (Year)	Resource Type	Apprentice Labor Eligibility	Distributed	<b>Quantity</b> RECs	Apprentice Labor Amount MWh equiv.	Distributed Generation Amount MWh equiv.	Explanatory Notes (as ne

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VREGIS ID	Facility Name	REC Vintage (Year)	Resource Type	Apprentice Labor Eligibility	Distributed Generation Eligibility	Quantity RECs	Apprentice Labor Amount MWh equiv.	Distributed Generation Amount MWh equiv.	Explanatory Notes (as needed)
W542	Bennett Creek Windfarm - Bennett Creek Windfarm	2018	Wind	No	No	3,216	-	-	
W543	Hot Springs Windfarm - Hot Springs Windfarm	2018	Wind	No	No	1,923	-	-	
W7039	Adams Solar	2018	Solar	No	No	588	-	-	
W7047	Bear Creek Solar	2018	Solar	No	No	677	-	-	
W7046	Bly Solar	2018	Solar	No	No	129	-	-	
W7044	Elbe Solar	2018	Solar	No	No	648	-	-	
W4938	Enterprise Solar, LLC - Enterprise Solar, LLC	2018	Solar	No	No	35,344	-	-	
W4619	Pavant Solar, LLC - Pavant Solar, LLC	2018	Solar	No	No	26,773	-	-	
W7039	Adams Solar	2019	Solar	No	No	4,434	-	-	
W7047	Bear Creek Solar	2019	Solar	No	No	4,455	-	-	
W7046	Bly Solar	2019	Solar	No	No	3,930	-	-	
W7044	Elbe Solar	2019	Solar	No	No	4,374	-	-	
W4619	Pavant Solar, LLC - Pavant Solar, LLC	2019	Solar	No	No	26,688	-	-	
W4938	Enterprise Solar, LLC - Enterprise Solar, LLC	2019	Solar	No	No	47,360	-	-	
W4938	Enterprise Solar, LLC - Enterprise Solar, LLC	2020	Solar	No	No	5,572	-	-	
	Total					166,111			

#### **Designated Information is Confidential per WAC 480-07-160** Energy Independence Act (I-937) Commerce Renewable Report – 2019

Incremental Cost of Renewable Resou	rces		Utility	Pacific Pow	er & Light Company		
		Co	mpliance Year Renewable		2019		
Facility Name	WREGIS ID	MWh	Resource Annual Cost in 2019	Renewable Resource Cost per MWH	Description of Substitute Resour	Substitute Resource Cost per MWH	Incremental Cost of Renewable Resource in 2019
Goodnoe Hills - Goodnoe Hills	W536	16,098	227,492	14.13		-	\$227,492
Leaning Juniper I - Leaning Juniper I	W200	16,388	58,734	3.58		-	\$58,734
Marengo - Marengo	W185	26,067	168,665	6.47		-	\$168,665
Marengo II - Marengo II	W772	12,516	151,524	12.11		-	\$151,524
Lemolo 1 - Lemolo 1	W157	1,208	(54,638)	(45.23)		-	-\$54,638
Lemolo 2 - Lemolo 2	W158	109	(7,188)	(65.95)		-	-\$7,188
JC Boyle - JC Boyle	W180	246	(16,343)	(66.44)		-	-\$16,343
Prospect 2 - Prospect 2	W140	283	(11,397)	(40.27)		-	-\$11,397
Top of the World - Top of the World	W1749	48,616	413,651	8.51		-	\$413,651
Dunlap I - Dunlap I	W1687	29,430	250,406	8.51		-	\$250,406
Glenrock I - Glenrock I	W964	24,118	205,209	8.51		-	\$205,209
Campbell Hill - Campbell Hill	W1383	26,479	225,298	8.51		-	\$225,298
Totals		201,558	\$1,611,412				\$1,611,412

Cost of Renewable Energy Credits			Utility	Pacific Pow	er & Light C	npany	
		Co	mpliance Year		2019		
Facility Name	WREGIS ID	REC Vintage (Year)	Number of RECs	Annual Cost of Renewable Energy Credits	Cost per REC		ulation and inputs for percentage of revenue ent invested in renewables:
Bennett Creek Windfarm - Bennett Creek Windfarm	W542	2018	3,216				
Hot Springs Windfarm - Hot Springs Windfarm	W543	2018	1,923				
Adams Solar	W7039	2019	4,434				
Bear Creek Solar	W7047	2019	4,455				
Bly Solar	W7046	2019	3,930				
Elbe Solar	W7044	2019	4,374				
Pavant Solar, LLC - Pavant Solar, LLC	W4619	2019	26,688				
Enterprise Solar, LLC - Enterprise Solar, LLC	W4938	2019	47,360				
Adams Solar	W7039	2018	588				
Bear Creek Solar	W7047	2018	677				
Bly Solar	W7046	2018	129				
Elbe Solar	W7044	2018	648				
Enterprise Solar, LLC - Enterprise Solar, LLC	W4938	2018	35,344				
Enterprise Solar, LLC - Enterprise Solar, LLC	W4938	2020	5,572				
Pavant Solar, LLC - Pavant Solar, LLC	W4619	2018	26,773				
Total			166,111	\$282,553			

The 'Cost per REC' column is redacted to protect the confidential REC price for each individual resource. The 'Annual Cost of Renewable Energy Credits' is redacted to prohibit calculation of the confidential REC price.

## **Alternative Compliance**

Under WAC 480-109-210(2)(b), the utility must state in its report if it is relying on one of the alternative compliance mechanisms provided in WAC 480-109-220 instead of meeting its renewable resource target. The company has fully met its 2018 obligations and anticipates fully meeting its 2019 obligations without the need for an alternative compliance mechanism.

### **Resource Cost Compared to Annual Retail Revenue Requirement**

Under RCW 19.285.070(1), a utility must report the percentage of its total annual retail revenue requirement invested in the incremental cost of eligible renewable resources and the cost of RECs. Similarly, under WAC 480-109-210, a utility must report the incremental cost of eligible renewable resources and RECs, and the ratio of this investment relative to the utility's total annual retail revenue requirement.

The incremental cost of an eligible renewable resource is defined in RCW 19.285.050(1)(b) as the difference between the levelized delivered cost of the eligible renewable resource, regardless of ownership, compared to the levelized delivered cost of an equivalent amount of reasonably available substitute resource that does not qualify as eligible, where the resources being compared have the same contract length or facility life.

With the adoption of General Order R-578 in Docket UE-131723, the Commission revised rules implementing RCW 19.285, the EIA, including the application of a new methodology for calculating incremental cost. The company performed the incremental cost calculations as defined in WAC 480-109-210; please refer to the company's confidential work paper labeled as PacifiCorp Resource Incremental Cost Methodology.

#### REC Costs for REC-only Purchases

The cost of RECs from the REC-only purchase is based on the contractual price set forth in the applicable bilateral agreement between the company and the counterparty.

#### Incremental Costs for Wind Resources

The estimated cost of the RECs from renewable wind resources is the calculated levelized cost of each eligible renewable resource at the time of acquisition, compared to an equivalent amount of the lowest-reasonable-cost resource available to the utility at the time of the eligible resource's acquisition. The cost of RECs from PacifiCorp's resource(s) located outside of the west control area are not included in Washington customers' rates. To determine the ratio of incremental cost to revenue requirement, resource costs *outside* the west control area are calculated using the weighted average cost of the resources *within* the west control area (Goodnoe Hills, Leaning Juniper, Marengo I and Marengo II). The incremental costs associated with resources that will be repowered in 2019 were not included in the incremental costs.

#### Incremental Costs for Renewable Energy from Incremental Hydro Upgrades

The estimated cost of eligible renewable energy from incremental hydro represents the calculated levelized cost of each hydro upgrade at the time of investment in the upgrade, compared to an equivalent amount of the lowest-reasonable-cost resource available to the utility at the time of the eligible resource's acquisition.

The company's confidential work papers provided with this report and labeled as PacifiCorp Resource Cost Analysis provide the key assumptions and analysis that the Company used to forecast the estimated resource costs associated with the renewable resources and RECs for the target years 2018 and 2019.

#### Revenue Requirement

The revenue requirement amounts used in this Renewable Report are from the most recent general rate case, Docket UE-152253. The 2018 revenue requirement is \$330,209,153 from and the 2019 revenue requirement from is \$330,209,153.<sup>2</sup>

#### Resource Costs Compared to Revenue Requirement

Table 5 shows the expected Washington-allocated resource costs (incremental cost of eligible renewable resources and the cost of RECs) compared to the annual revenue requirement for 2018 and 2019.

Calendar Year	Total Washington Allocated Resource Costs	Washington Annual Revenue Requirement	% of Washington Expected Allocated Resource Costs to Annual Revenue Requirement
2018	\$ 2,325,266	\$ 330,209,153	0.70%
2019	\$ 1,893,965	\$ 330,209,153	0.57%

Table 5

Based on this analysis, the company is able to meet its compliance obligations without exceeding the four percent of annual revenue requirement threshold that would allow for alternative compliance.

<sup>&</sup>lt;sup>2</sup> The revenue requirement number for 2018 reported in the company's 2018 report was \$346,967,880. This number has been revised to reflect the impacts of the Tax Cuts and Jobs Act.

## **Multistate Allocations**

Under WAC 480-109-210(e)(i), a utility serving retail customers in more than one state must allocate certificates consistent with the utility's most recent commission-approved interstate cost allocation methodology. This section explains how the company applied the current allocation methodology to arrive at the number of RECs allocated to Washington ratepayers.

PacifiCorp is a multijurisdictional utility providing electric retail service to more than 1.9 million customers in California, Idaho, Oregon, Utah, Washington, and Wyoming. Of those customers, the company serves approximately 133,000 customers in the state of Washington.

PacifiCorp allocates RECs to its states consistent with the inter-jurisdictional allocation methodologies approved in each state. California uses the 2010 Protocol inter-jurisdictional cost allocation methodology; Idaho, Oregon, Utah and Wyoming use the 2017 Protocol inter-jurisdictional allocation methodology. Both the 2010 and 2017 Protocol allocate all generation-related costs, revenues, rate base balances, and RECs to each state using the system generation (SG) allocation factor. The SG factor is calculated based on each state's contribution to PacifiCorp's energy and capacity requirements for its entire six-state system. Using this methodology, Washington's SG factor is approximately 8 percent (*i.e.* Washington comprises approximately 8 percent of PacifiCorp's six-state system).

In Washington, however, PacifiCorp uses the West Control Area Inter-Jurisdictional Allocation Methodology (WCA). This methodology allocates west control area generation resources, primarily located in California, Oregon, and Washington, using the control area generation west (CAGW) allocation factor. The CAGW factor is calculated based on each state's contribution to PacifiCorp's energy and capacity requirements for the west control area (California, Oregon, and Washington). Washington's CAGW factor is approximately 22 percent (*i.e.* Washington comprises approximately 22 percent of the west control area).

As a result of Washington's use of the WCA methodology, PacifiCorp's Washington rates reflect a CAGW share, approximately 22 percent, of west control area generation resources. Accordingly, Washington customers are entitled to approximately 22 percent of RECs from these facilities. Using different inter-jurisdictional allocation methodologies for different states, however, creates challenges because the sum of each state's allocated share may not equal 100 percent. To address this issue, PacifiCorp first allocates each state its share of RECs using the state's SG factor. Using this process, Washington receives approximately 8 percent of RECs from west control area resources.

The WCA contains the following eligible resources:

- Goodnoe Hills (wind)
- Leaning Juniper (wind)
- Marengo I (wind)
- Marengo II (wind)

- Prospect 2 (incremental hydro)
- Lemolo 1 (incremental hydro)
- Lemolo 2 (incremental hydro)
- JC Boyle (incremental hydro)

PacifiCorp addresses the variance between Washington's SG share of west control area resources (approximately 8 percent) and Washington's CAGW share (approximately 22 percent) by providing Washington RECs from other eligible resources. The EIA allows PacifiCorp to use RECs from PacifiCorp facilities in other states where PacifiCorp makes retail sales.<sup>3</sup> This means that the actual RECs used to fulfill Washington's CAGW share may include RECs from resources located in any of PacifiCorp's jurisdictions or include REC purchases, but the total RECs will equal Washington's CAGW share of west control area resources.

In 2019, PacifiCorp plans to use company-owned generation from the following resources to provide Washington with its full CAGW allocation:

- Top of the World (wind Wyoming)
- Dunlap I (wind Wyoming)
- Glenrock I (wind Wyoming)
- Campbell Hill/Three Buttes (wind Wyoming)

PacifiCorp does not plan to use any third-party REC purchases to supply Washington's CAGW allocation in 2019. Table 6 summarizes how PacifiCorp plans to supply Washington with its CAGW share of renewable generation in 2019.

#### Table 6: Allocation of PacifiCorp's Eligible Generation to Washington\*

Year	Total WCA Eligible Generation (Projected)	Washington CAGW Allocation Factor <sup>4</sup>	Washington CAGW Allocation <sup>5</sup>	SG Allocation of WCA Generation	Adjustments from Other Eligible (Company) Resources	Adjustments from Purchased RECs	Final Allocation
2019	905,839	22.251%	201,558	72,915	128,643	166,111	367,669

\*see Attachment C, "(2)(a)(ii)Annual-2019, estimate" tab for detail.

Any REC purchases necessary for RPS compliance in excess of Washington's CAGW share of west control area resources will be reflected in Washington customers' rates.<sup>6</sup> This treatment ensures that Washington customers receive an allocation of costs and benefits of RECs proportionate to its share of renewable resource costs reflected in rates.

PacifiCorp follows the Western Renewable Energy Generation Information System (WREGIS) and state RPS requirements to ensure that under no circumstances are any RECs double-counted.

<sup>&</sup>lt;sup>3</sup> RCW 19.285.030(12)(e)

<sup>&</sup>lt;sup>4</sup> Washington's forecast CAGW factor for 2019.

<sup>&</sup>lt;sup>5</sup> Washington's allocation of all RPS-eligible WCA resources - wind and incremental hydro.

## **Prior Year Progress**

As evidenced in this report, the company met its Washington 2018 renewable compliance target with a combination of eligible renewable resources, REC purchases and renewable energy from hydroelectric facilities with upgrades completed after March 1999. The company has set aside the WREGIS certificates for the 2018 compliance target and upon Commission approval, will retire these WREGIS certificates. The company is providing a listing of the WREGIS certificates in its work papers labeled WREGIS Certificates for Washington Compliance for 2018.

The company does not rely on any alternative compliance mechanisms to meet its renewable resource targets for 2018.

## **Current Year Progress**

The company is positioned to meet its Washington 2019 renewable compliance target with a combination of eligible renewable resources, REC purchases and renewable energy from hydroelectric facilities with upgrades completed after March 1999. The company has also identified, to date, the WREGIS certificates that it intends to use toward the 2019 compliance target. The company is providing a listing of the WREGIS certificates in its work papers labeled WREGIS Certificates for Washington Compliance for 2019.

The company does not anticipate relying on any alternative compliance mechanisms to meet its renewable resource targets for 2019.

# **Supporting Documents for Renewable Report**

Further information about PacifiCorp's renewable portfolio standard resources may be found at: https://www.pacificorp.com/energy/wind-solar.html

## List of Attachments

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