

## OREGON IRRIGATION DEMAND RESPONSE

**This document includes the following sections:**

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- Program Description
- Participation Requirements and Procedures
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### DEFINITIONS

**Available Dispatch Hours:** Daily timeframe within which Pacific Power may dispatch its demand response control system.

**Criteria:** Additional requirements for participation beyond being an Eligible Customer. Criteria are set forth in Table 1 below.

**Dispatch Days:** The days upon which Pacific Power may or may not dispatch its demand response control system.

**Dispatch Duration:** The duration of time that demand response events may be dispatched for.

**Dispatch Event:** The period during which Participating Customers' electrical loads are shut off or controlled to minimize electrical consumption

**Dispatch Parameters:** The criteria within which Pacific Power may dispatch its load control system.

**Dispatch Notification:** The maximum time between a Participating Customer receiving a notice from the Program Administrator or Pacific Power and the beginning of the Dispatch Event. "Hour ahead" shall mean 60 minutes. "Day ahead" shall mean 24 hours.

**Dispatch Period:** The calendar year timeframe within which Pacific Power may dispatch its demand response control system.

**Eligible Customer:** Any party who has applied for, been accepted, and receives electric service at the real property, or is the electricity user at the real property.

**Incentive:** Payments of money or bill credits made by Program Administrator or Company to a Participating Customer for participation in a demand response offer. Incentives are specific to Dispatch Notification the Participating Customer elects for the season.

**Maximum Dispatch Hours:** The maximum amount of time Pacific Power may dispatch its demand response control system annually.

**Maximum Dispatch Events:** The maximum number of events Pacific Power may utilize in dispatching its demand response control system annually.

**Opt-Out:** The process whereby a Participating Customer notifies the Program Administrator and/or the Company they don't want to be included in an upcoming event. Opt-Out notification must be received prior to the beginning of the event.

**Participating Customers:** Eligible Customers who meet the Criteria and agree to participate in the Irrigation Demand Response Program.

**Program Administrator:** A third-party entity selected by Pacific Power to engage with Eligible Customers about the irrigation demand response program, contract with Participating Customers on behalf of Pacific Power and provide the systems to control Participating Customers irrigation loads during certain times.

**Targeted Area:** One or more geographic area within Pacific Power's Oregon service territory that may have additional demand response requirements and/or value. Targeted Areas may be used by the Program Administrator do one or more of the following: focus marketing, differentiate participation requirements and/or Incentives.

## **PROGRAM DESCRIPTION**

The Irrigation Demand Response Program is a program offered by Pacific Power that provides Incentives to Participating Customers in exchange for granting Pacific Power the right to curtail Participating Customers' irrigation loads at certain times within the Dispatch Parameters and during the Dispatch Period. Pacific Power contracts with the Program Administrator to deliver the Irrigation Demand Response Program; the Program Administrator will oversee the enrollment of Participating Customers, deliver Dispatch Notifications, and call Dispatch Events on behalf of Pacific Power. The ability to curtail these loads provides Pacific Power with a summer capacity or energy product.

### **1) Participation**

Eligible Customer and relevant load Criteria are included in the table in this document. Eligible Customers who meet the Criteria and agree to participate are Participating Customers. Participating Customers will be required to sign a standard contract with the Program Administrator to initiate participation. The agreement is perpetual (unless terminated by either party) and does not need to be re-signed at the start of each year.

### **2) Incentives**

Incentives are available on a \$/kilowatt (kW) per year basis and vary by Dispatch Notification. Using data from the installed switches, loads available for curtailment (kW) during the hours and days of each week of the Dispatch Period are averaged to arrive at an average available load which will be multiplied by the Incentive rate depending on the notification option selected. Loads opted out are removed from the connected load calculations and reduce the Incentive payment to the Participating Customer. Incentives are paid after the end of the season by check or if requested a bill credit. Participating Customers receive Incentives based on the availability of load reduction, regardless of whether Pacific Power calls upon a load reduction during a Dispatch Event.

### **3) Dispatch Notification and Events**

Participating Customers may select from three different Dispatch Notification options—22.5 minute-ahead, hour-ahead or day-ahead notices—which define the time between when the customer is notified of an event and when the event starts. Participating Customers notify the Program Administrator with their preferred notification channel(s) for Dispatch Events and may select more than one, i.e., text and a phone call. Dispatch Events called with 22.5 minute-ahead notice are focused on providing the utility with regulating reserves. Dispatch Events called with

an hour-ahead notice are focused primarily on providing additional capacity for the utility. Dispatch Events called with a day-ahead notice are focused primarily on providing additional energy or an energy price mitigation tool for the utility. The value of the curtailed load to the utility system depends on the time between the notification and the start of the event. Available Incentives reflect the variability in the utility value.

#### **4) Equipment Operation**

Control occurs through a Company-provided switch (communicating via cellular signals) on the pump motor controller. Individual switches communicate with the software platform provided and installed by the Program Administrator which also provides secure access to Pacific Power to initiate Dispatch Events. Unless activated during an event, the switches do not affect normal control of the irrigation equipment, but they do convey information about the connected load back to the system and Pacific Power.

#### **5) Opt Outs**

To provide Participating Customers with some operational certainty around the impacts of the demand response program on their operations, there are limits on hours in a day, the total number of events within a season, and total hours in a season when the loads may be curtailed. Recognizing that unforeseen operational issue may arise, Participating Customers on an hour ahead or day ahead notification may a) opt out a site for future events or b) opt out a site once the Dispatch Notification has been sent by the Program Administrator. Opt-Out requests must be received before an event starts. In order maximize the load available for control and minimize program costs, loads that are available for control are strongly preferred. Loads that are opted out or unavailable on a regular basis may be removed from the program at the sole discretion of the Program Administrator.

#### **6) Quality Assurance, Change Process and Reporting**

Quality assurance review and techniques may be utilized during the delivery of the program. Periodic program impact and process evaluations will be conducted by a third party working for Pacific Power. Pacific Power will regularly review program performance, quality assurance and evaluation findings, and cost effectiveness results in combination with current Company resource planning results to evaluate potential program changes. Program changes may include changes to information in this document and will follow the process outlined in current version of Oregon Schedule 106.

Annual reports on program performance are provided to the Public Utility Commission of Oregon annually.

## PARTICIPATION REQUIREMENTS AND PROCEDURES

**Table 1 – Dispatch Parameters and Incentives**

<b>Dispatch Parameters and Incentives</b>	<b>Description</b>
Eligible Customer	<ul style="list-style-type: none"> <li>• Irrigation customers on Delivery Service Schedules 41 or 48</li> </ul>
Criteria	<ul style="list-style-type: none"> <li>• Pumps <math>\geq</math> 25 HP running at least 200 hours in the Dispatch Period</li> <li>• Pumps larger than 500 HP running at least 200 hours in the Dispatch Period with service voltages higher than 480V may be controlled manually at the sole discretion of the Program Administrator</li> </ul>
Dispatch Period	Week including June 1 through week including September 15.
Targeted Areas	All areas within Company's Oregon territory
Dispatch Days	All days during Annual Program Period
Available Dispatch Hours	12:00 p.m. to 10:00 p.m. Pacific Time on all Dispatch Days
Maximum Dispatch Hours	52 hours per year
Maximum Dispatch Events	20 events per year.
Dispatch Duration	Up to 4 hours
Dispatch Notification	Day ahead, hour ahead and 22.5 minute ahead
Incentive	<ul style="list-style-type: none"> <li>• Day ahead Dispatch Notification is paid at \$18/kW per year</li> <li>• Hour ahead Dispatch Notification is paid at \$30/kW per year</li> <li>• 22.5 minute ahead Dispatch Notification is paid at \$45/kW per year</li> </ul> <p>The available Incentive per site is calculated at the end of the irrigation season and paid to each participant by either a check or (if requested) a bill credit in the Fall. Incentives will be determined by multiplying the average load (kW) a customer can reliably shut-off during Available Dispatch Hours on the Dispatch Days in the Dispatch Period by the Incentive rate, adjusted for Opt-Outs.</p>
Opt-Out	Participating Customers on an hour ahead or day ahead notification may Opt-Out of dispatches. Opting out will lower Incentive payments

	proportionally. Repeated opt outs may result in removal of the site from the program.
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### **ADDITIONAL CONDITIONS**

**System Emergency Dispatch:** In the event of a system emergency, Pacific Power may, at its discretion, expand the Dispatch Parameters beyond the parameters listed. Emergency events may be used to satisfy requirements of the North American Electric Reliability Corporation standard BAL-002-WECC-2 for Contingency Reserve Obligation and may be deployed when the utility is experiencing a qualifying event as defined by the Western Power Pool.