

OREGON IRRIGATION LOAD CONTROL KEY PARAMETERS

This document includes the following sections:

- Definitions
- Program Description
- Participation Requirements and Procedures
- Dispatch Parameters and Incentives
- Additional Conditions

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 Parameters: The criteria by which Pacific Power may dispatch its load control system.

Dispatch Notification: The minimum time between a Participating Customer receiving a notice from the Program Administrator or Pacific Power and the beginning of the Program Event.

Dispatch Season: 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.

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

Maximum Program Events: The maximum number of events Pacific Power may utilize in dispatching its demand response control system in the specified period of time.

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.

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

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 to 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 Season. 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 Program 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

Base mandatory Incentives are paid on a \$/kilowatt (kW) per year basis and may vary based on specific dispatch parameters, performance requirements, or other criteria, as indicated in Table 1. Using data from the installed switches, loads available for curtailment (kW) during the hours and days of each week of the Dispatch Season are averaged to arrive at an average available load which will be multiplied by the applicable Incentive rates. The program offers a base mandatory Incentive rate for all participants. In addition, the program offers a bonus mandatory Incentive rate adder to the base mandatory Incentive rate for loads that are not opted out from a mandatory Program Event at any point during the season. Loads opted out from mandatory Program Events are also removed from the connected load calculations and reduce the mandatory Incentive payment to the Participating Customer.

Incentives for participation in voluntary Program Events are calculated separately from the mandatory Incentive. The voluntary Incentive is paid on a \$/kWh basis, for capacity curtailed during a voluntary Program Event.

Incentives are paid after the end of the season by bill credit. Participating Customers receive mandatory Incentives based on the availability of load reduction, regardless of whether Pacific Power calls upon a load reduction during the mandatory Dispatch Season. Voluntary Incentives are paid based on the amount of curtailed load during voluntary Program Events.

3) Dispatch Notification and Program Events

PacifiCorp will categorize Program Events as either mandatory Program Events, or voluntary Program Events. Mandatory Program Events will occur within the mandatory program season, eligible days and hours, and within the program maximum number of hours and events per week shown in Table 1. Participation in these events is mandatory – opting out will make participants ineligible for the bonus incentive and reduce the mandatory incentive. Voluntary Program Events are those called outside the standard Dispatch Season, Days or Hours, or may exceed the Maximum Dispatch Hours or Maximum Program Events. Voluntary Program Events will only be called within the voluntary season, as noted in Table 1. Participation in voluntary Program Events does not count against customers mandatory incentive payments. On the other hand, Participating Customers will earn additional Incentives for participation in voluntary Program Events.

Participating Customers will receive notice of a Mandatory Program Event no less than 4 hours before the event starts. There is no minimum notice time for voluntary Program Events.

Participating Customers notify the Program Administrator with their preferred notification channel(s) for Program Events and may select more than one, i.e., text and a phone call.

Program Events will provide additional capacity or serve as an energy price mitigation tool for the utility, during periods of extreme peak loads or high energy prices. The value of the curtailed load to the utility system depends on the flexibility of the load to be dispatched quickly and often and the reliability of the load. 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 Program 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 number of events within a week, and total hours in a Dispatch Season when the loads may be curtailed for a mandatory Program Event. These limits are indicated in Table 1. Recognizing that unforeseen operational issue may arise, Participating Customers 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. In order to maximize the load available for control and minimize program costs, loads that are available for control are strongly preferred. Loads that are never opted out of mandatory Program Events are eligible for the bonus incentive rate. Loads opted out or unavailable for mandatory Program Events on a regular basis may be removed from the program at the sole discretion of the Program Administrator. Opting out of voluntary Program Events does not affect the participant's enrollment status or eligibility to receive the bonus mandatory incentive.

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 the 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

Dispatch Parameters and Incentives	Description
Eligible Customer	<ul style="list-style-type: none"> Irrigation customers on Delivery Service Schedules 41 or 48, except those on a time-of-use rate schedule
Criteria	<ul style="list-style-type: none"> Pumps \geq 25 HP Pumps larger than 500 HP with service voltages higher than 480V may be controlled manually at the sole discretion of the Program Administrator Meters serving pumps may participate in only demand response or time of use pilot(s). They may not participate in both. <p>Pumps that do not meet program expectations may be unenrolled from the program.</p> <p>The Company or its Program Administrator shall have the right to qualify Participating Customers, at their sole discretion based on criteria the Company or Program Administrator consider necessary to ensure the effective operation of the program and utility system.</p>
Dispatch Season	<p>Mandatory: Week including June 1 through week including August 15.</p> <p>Voluntary: Week including June 1 through week including September 30.</p>
Targeted Areas	All areas within Company’s Oregon territory
Dispatch Days	<p>Mandatory: All weekdays during standard Dispatch Season, excluding holidays¹</p> <p>Voluntary: All days during voluntary Dispatch Season</p>
Available Dispatch Hours	<p>Mandatory: 2:00 p.m. to 9:00 p.m. Pacific Time on all mandatory Dispatch Days</p> <p>Voluntary: All hours during voluntary Dispatch Season</p>
Maximum Dispatch Hours	<p>Mandatory: 52 hours per year</p> <p>Voluntary: no limit</p>

¹ Holidays are defined by NERC:
https://www.nerc.com/comm/OC/RS%20Agendas%20Highlights%20and%20Minutes%20DL/Additional1_Off-peak_Days.pdf

Maximum Program Events	Mandatory: 3 events/week Voluntary: no limit
Dispatch Duration	Mandatory Up to 4 hours Voluntary: no limit
Dispatch Notification	Mandatory: 4 hours Voluntary: No minimum, though dispatchers will try to adhere to 4 hours
Incentive	<ul style="list-style-type: none"> • Base mandatory incentive paid at \$30/kW per year • Bonus mandatory incentive is paid at \$15/kW per year, in addition to the base incentive. Bonus incentive is paid to loads that never opted out from a mandatory Program Event during the season. Voluntary incentive paid at \$0.38/kWh for load curtailed during a voluntary Program Event <p>The available mandatory incentive per site is calculated at the end of the program Season and paid to each participant by a bill credit in the Fall. Mandatory Incentives will be determined by multiplying the average load (kW) a customer can reliably shut-off during mandatory Dispatch Hours on the mandatory Dispatch Days in the mandatory Dispatch Period by the applicable incentive rate(s), adjusted for Opt-Outs.</p> <p>The available voluntary Incentive per site is calculated based on the amount of curtailed load achieved during voluntary Program Events.</p>
Opt-Out	Participating Customers may Opt-Out of mandatory or voluntary Program Events. Opting out of mandatory Program Events will lower base mandatory Incentive payments proportionally, and make the load ineligible for the bonus incentive. Repeated opt outs of mandatory Program Events may result in removal of the site from the program. Opting out of voluntary events has no negative impact on the participant's enrollment status or incentive.

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.