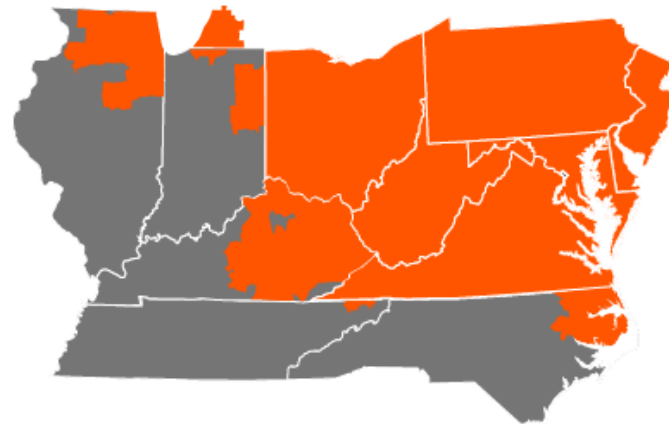# PJM's Economic Demand Response Program

CPower

Get paid for using less energy when electricity prices are high.

PJM's Economic Demand Response program allows participating businesses to reduce their energy consumption in response to high prices in the wholesale energy market.

When you participate in Economic Demand Response, not only can you save money on your electricity bill, but you can also help minimize the impact of price spikes, reduce the need for expensive peaking generating capacity, and help keep prices stable in the PJM market.

CPower can help you make it happen.

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WHAT IS
Demand Response?

There are 8760 hours in a non-leap year.

Demand for electricity in the PJM region is at its peak for about 40 of those hours. For most of those 40 peak hours, PJM is able to keep the grid in balance, avoiding brownouts or even blackouts as a result of the demand for electricity exceeding its supply.

Sometimes, however, the demand for electricity outpaces the grid's ability to supply it.

Instead of producing more electricity at great expense to consumers and the environment, PJM can offset the imbalance by reducing the amount of electricity being consumed during times when demand exceeds supply.

That's demand response, and it can be very financially rewarding to organizations like yours.

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WHAT IS
Economic Demand Response?

The Economic Demand Response program pays organizations to curtail their energy consumption in response to high wholesale electricity prices.

Wholesale electricity prices in a deregulated energy market, like PJM's, fluctuate hourly. Retail consumers, however, typically pay electricity rates that are based on average electricity costs. This means businesses like yours often don't see the hourly changes in wholesale electricity prices and, as a result, do not have the opportunity to react to them.

With CPower at your side, you'll be armed with state-of-the-art tools that will provide clear price signals and make it easy to reduce energy usage when wholesale prices are high.

CPower also makes it easy to offer your curtailed energy into PJM's Real-Time Market, allowing you to potentially earn additional revenue from the energy you did not use as a result of your curtailment. We also give you visibility into the day-ahead prices, so you can participate in the real-time market when prices are advantageous for you.

Before we get into the details of the program, let's introduce ourselves…

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Economic Demand Response

CPower's team of energy experts will work with your organization to create curtailment strategies that suit the specific needs of your business. Then we'll show you how to execute those strategies when wholesale electricity prices are high.

CPower can then help you offer your curtailed load into PJM's Real-Time Markets, enabling you to earn revenue upon complying with PJM's program requirements and curtail your energy consumption when prices are high.

You can save money and earn revenue, all for using less energy when prices are high. You'll also be doing your part to keep both the grid and electricity prices stable.

That's Economic Demand Response…the CPower Way.

Now, lets take a look at how CPower's technology makes it all possible.
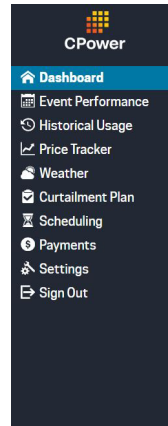
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The CPower App:

An indispensable tool for PJM's Economic Demand Response

CPower puts powerful energy management tools at your fingertips with a simple to use, economic demand response solution on your desktop or mobile device – with no out-if-pocket costs to you.
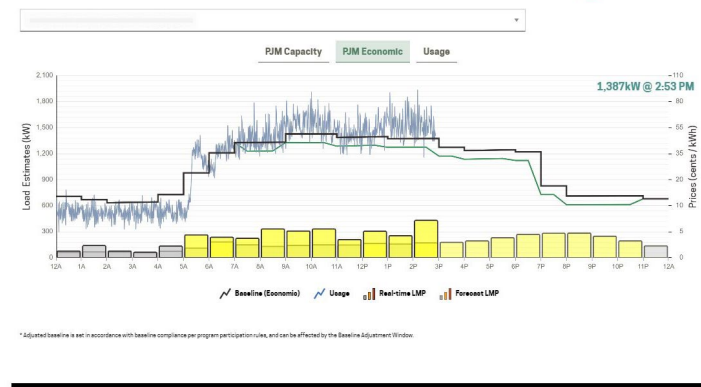
With a click of a mouse or a touch of your screen, the CPower App allows you to access all vital usage and load information quickly and intuitively.

We connect directly to your energy meter to give you real-time usage information to your desktop or mobile device.

Our user-friendly interface makes it easy to gauge your energy consumption. You can watch energy price trends in your market, empowering you to make the right decisions to manage your energy costs, and ensure that your business is in compliance with the regulations that govern your market.

Streamlined data management features provide
quick and
convenient reporting, auditing,
and financial reward calculations in simple graphical form.

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The CPower App:

Curtailment Planning at your fingertips

The CPower App has a suite of Curtailment Planning tools to help you:

- Adjust curtailment resources

- Set alerts

- Identify additional opportunities

- Automate your curtailment scenarios.

Based on the scenarios you create, CPower checks against energy market prices every day and notifies you about opportunities to earn by curtailing your usage.

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- Dashboard
- Event Performance
- Historical Usage
- Price Tracker
- Weather
- **Curtailment Plan**
- Scheduling
- Payments
- Settings
- Sign Out

Curtailment Plan

Scenarios

| Summer Curtail 275 (275) | LOW CURTAIL (100) | MID CURTAIL (500) | HIGH CURTAIL (1000) | SUMMER CURTAIL 1250 (1250) |

Name

Summer Curtail 275   Active

Description

Estimated Scenario Load Drop   275 kW

Days available   Time available   12 AM to 12 AM

MON TUE WED THU FRI SAT SUN

Duration   1 to 24 hours

Actions

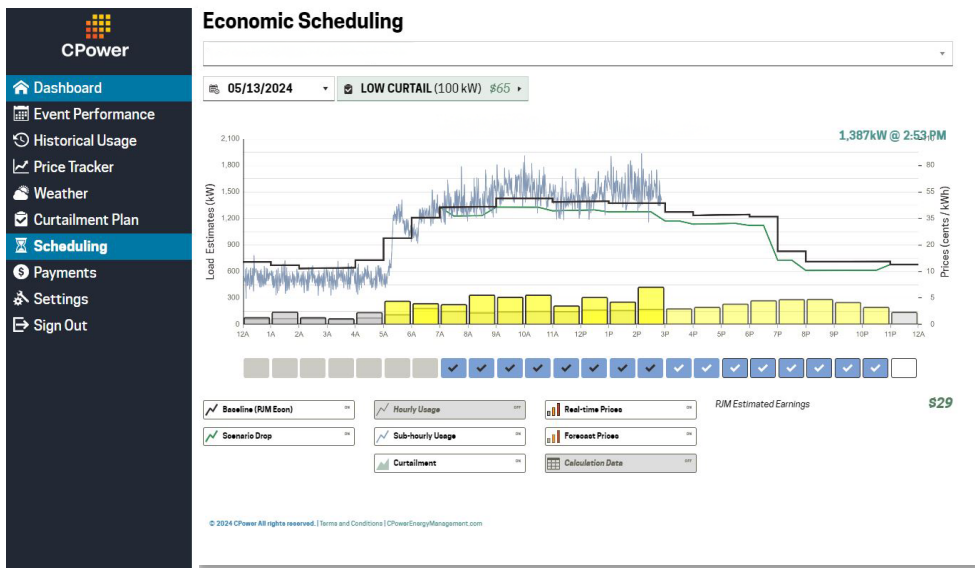| Summer Curtail | HVAC | 275 kW |
LOW CURTAIL	HVAC	100 kW
MID CURTAIL	HVAC	500 kW
HIGH CURTAIL	HVAC	1000 kW
✓ INTERMEDIATE CURTAIL	HVAC	750 kW
SUMMER CURTAIL	HVAC	1250 kW

Notify me when . . .
- Earnings are more than $ 20 per day.
- Price is 5.50 ¢ per kWh above the minimum.

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The CPower App:
Economic Scheduling at your fingertips

The CPower App's Economic Scheduling feature allows you to:

- Identify and select the hours and prices that add the most value and work with your organization's operational schedule.

- Select the curtailment plan to use that day.

- Submit your planned participation and retain flexibility to make adjustments up to three hours prior to your schedule start.

- Track your revenue estimates as the day progresses.

CPower gives you the CPower App with no out-of-pocket costs. We also give you the knowledge to leverage the app's tools so you can get the most out of your demand response participation.

Your CPower team is always standing by ready to answer any questions you may have.

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Economic Demand Response
Program Parameters and Requirements

Minimum Size	100 kW
Participation Lead time	Price notifications sent day-ahead and participants can enroll up to three hours prior to their participation hour(s)
Compensation	Hourly LMP (Locational Marginal Price) for each hour awarded
Duration	Flexible and voluntary, participant selects time and hours
Enrollment Deadline	Year round
Baseline	The default PJM baseline is the 3 Days Type with Symmetric Additive Adjustments (SAA), explained below. The 3 days types used under this baseline are; Weekdays, Saturdays and Sundays/Holidays
CBL Certification	The CBL Certification is a calculation that allows PJM to verify if a customer's load is too variable or unpredictable to be used against a specific CBL methodology.

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Economic Demand Response

Technology Requirements

Metering	1-hour interval data. If meter is Customer Owned it must meet PJM's accuracy standards.
Validation	Meter load data must be validated against sixty days of utility data.
Platform	Customer must be trained on and using the CPower App platform for hourly offers and compliance.
Site Requirements	120 V output, Internet or cell service (cell service preferable)

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Maximize your earnings when you participate in more PJM Programs

Once you've enrolled in the Economic Demand Response program, CPower can help you earn even more money from your curtailment by helping you participate in other PJM demand response or demand management programs.

Demand Response
Emergency Capacity
Synchronized Reserve

Demand Response

Demand Management
Energy Efficiency
Peak Demand Management

Demand Management

(Click on the circles above to learn more from our website.)

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