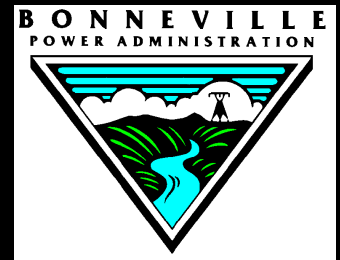


Peak Load Management

Demand Exchange Pilot Program

Bonneville Power Administration
Power Business Line



Introducing a New Approach to Peak Load Management



As part of the Bonneville Power Administration's effort to develop and foster peak load management technology, we are offering customers an opportunity to participate in a peak load management pilot program.

We've teamed with Apogee Interactive to build an Internet-based auction site where participants are alerted to hourly, one day, and two day-ahead price signals associated with peak load events, and are able to post their willingness to participate at a price.

Introducing a New Approach to Peak Load Management continued...



This pilot program will provide benefits to customers for their ability to turn off large power using equipment and/or run your emergency generator during periods of capacity maximization.

We call this service "*The Demand Exchangesm*". An innovative way to include a customer's ability to reduce load or operate a generator in the wholesale market for electricity.

Why Peak Load Management?



- The pressures of load growth have begun to maximize the system during extreme conditions.
- New fish obligations have limited the ability to optimize the value of the Columbia River system.

Why Peak Load Management? continued...



- “Over the next few years without new resources, the probability of being unable to serve loads at some level during the winter is 24 percent.” Regional Power Supply Adequacy/Reliability Study, Northwest Power Planning Council, December 8, 1999.
- There is a greater emphasis being place on “reliable” economic load reduction as a resource of the future.

Why the Demand Exchange (DEMEX)?

- Utilities and consumers are always looking for methods to reduce the cost of electricity. Often, the most expensive period of time for a utility to purchase electricity to meet load is during the coldest or hottest days of the year.
- Finding ways to reduce electrical demands during those times represent another opportunity for us to work with our customers to cut costs and increase system reliability.
- Our DEMEX will take a customer's ability to reduce load or run back-up generation typically too small to justify marketing by itself, and aggregate it with other similarly situated participants and represent them to the wholesale energy market as a reliability option.

Why the Demand Exchange (DEMEX)? continued...

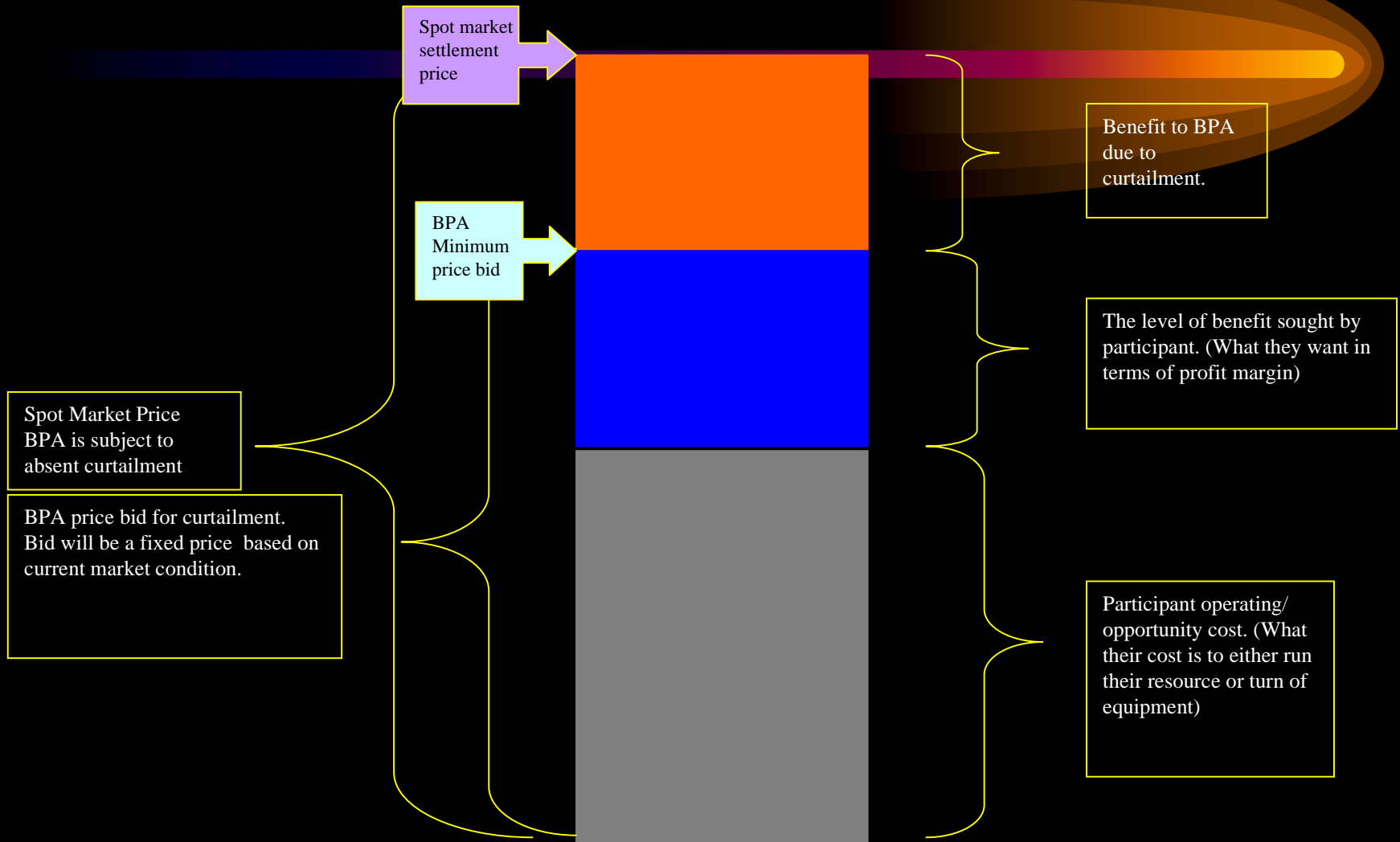


For participants of the DEMX pilot program, participating represents an opportunity to;

- ✓ contribute to the reliability of the Northwest power system
- ✓ solidify key account relationships
- ✓ maximize their ability to generate revenues
- ✓ Participate with no obligation, minimal risk

We work as your broker and agent, sharing the benefits!

Distribution of Benefits



In Addition

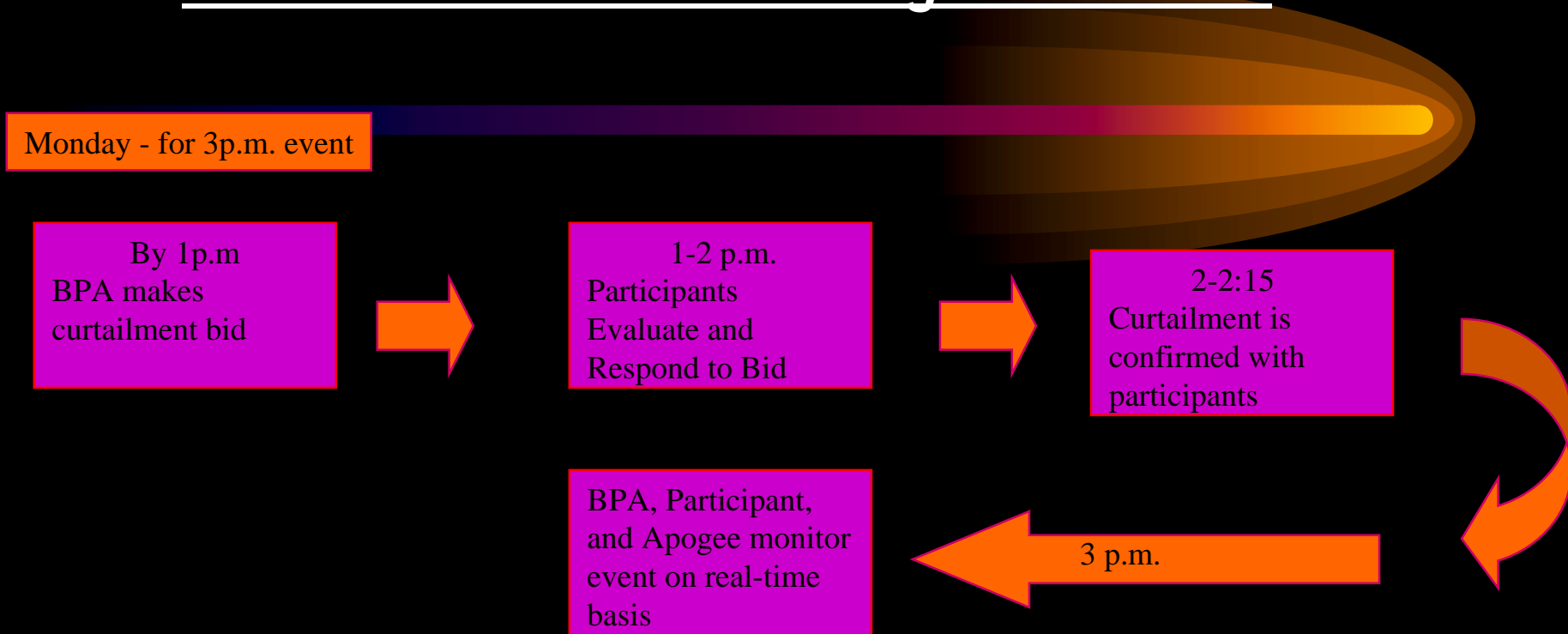
- We work with participants to define their capability and help estimate savings
- Each participant is given a unique Internet home page on which your specific capabilities are noted and the expected hourly electricity savings are indicated

Most importantly

- ***All of this is voluntary on their part!*** If business concerns shift priorities and make participation unattractive, Participants simply ignore the price alerts we give them.

So how does the DEMX work?

Real-Time Demand Exchange Mechanics



So how does the DEMX work?

One Day Demand Exchange Mechanics

Tuesday - 1 day prior to event

By 9a.m.
BPA makes
curtailment bid

9 a.m.-12 p.m.
Participants Evaluate
and Respond to Bid

12-3 p.m.
Pledges are
summarized and
provided to BPA.



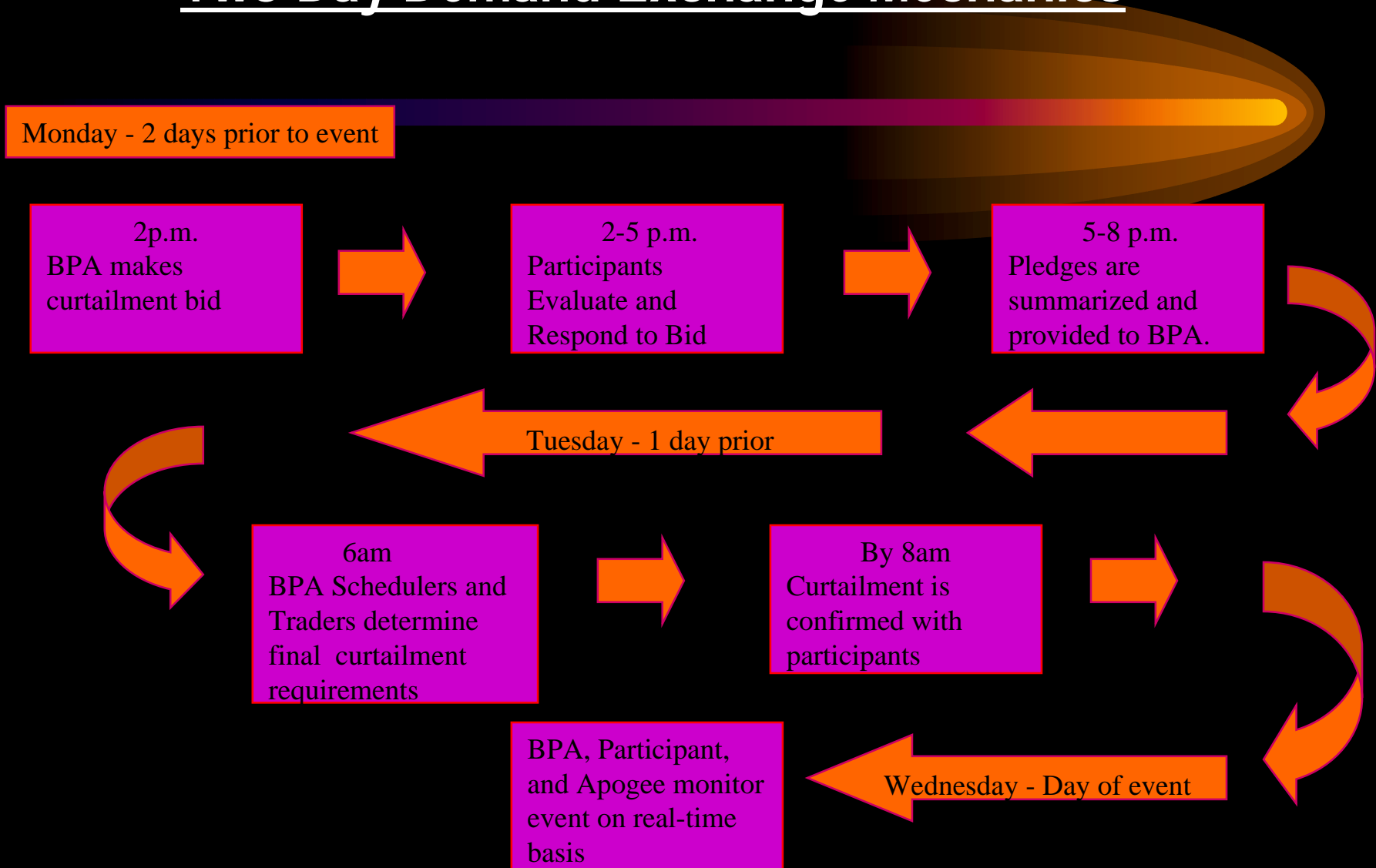
By 3pm
Curtailment is
confirmed with
participants

Wednesday - Day of event

BPA, Participant,
and Apogee monitor
event on real-time
basis

So how does the DEMX work?

Two Day Demand Exchange Mechanics



When and how Often will there be DEMX Bids?

- The DEMX will be primarily used during the winter and summer months. Generally regionally during winter and extra-regionally during summer.
- The price signals associated with peak load events have “historically” occurred for less than 300 hours per year in the Pacific Northwest, consequently:
 - ✓ participants will not be overburdened by the program; and
 - ✓ any use of their back-up generator under the DEMX will fall well within their operating permits issued by the EPA.

Who are we seeking?

- Our Demand Exchange Pilot Program will consist of a Maximum 25 participants.
- Pilot participants are located both within and outside the BPA control area.
- Participants have an ability to either temporarily shed or generate a minimum of 1 MW. (Participants may aggregate several of their resources to meet or exceed the 1 MW minimum.)

Who are we seeking? continued...

- Pilot participants have or are willing to implement adequate metering equipment for proper measurement and verification. In most cases existing metering is adequate, however, for pilot participants we :
 - ✓ investigate metering upgrades; and
 - ✓ identify the most cost-effective control alternatives.

What are the terms and conditions of DEMX participation



1. Fire drill participation

As a condition of participation in the Demand Exchange Pilot Program, the participant agrees to perform a verification of their peak electric load management capability.

The purpose of this step is to confirm and quantify the likely peak electrical load management effects of the participant's measure.

What are the terms and conditions of DEMX participation continued...



This is desirable on several fronts:

- ✓ it helps determine what a participant can achieve
- ✓ points out the required internal communications to make that happen; and
- ✓ assures BPA of the participant's mW impact.

2. Communication of Peak electrical load reduction pledges

Apogee Interactive will notify the participants by email, fax, and phone about potential peak electrical load management opportunities

- on a rolling basis for hourly bids, and
- by 9A.M. and 2 P.M. Prevailing Pacific Time (PPT) for one and two day ahead bids, respectively.
- The participant is expected to respond within the specific time parameters.

2. Communication of Peak electrical load reduction pledges continued...



✓ A pledge to participate constitutes a firm commitment by the participant excluded only by BPA cancel pledge prior to confirmation deadline.

3. The right for BPA to cancel requests

- BPA may anticipate a need for participants to participate and find that as the actual day approaches the need disappears.
- This is analogous to airlines asking for volunteers to take a later flight in potentially overbooked situations and then retracting the request if determined to be unwarranted.
- BPA will make its best effort to notify participants of cancellations as early as possible, but reserves the right to cancel up to an agreed upon time prior to the event.

4. Actual verified peak electrical load reductions

The participant's actual load reductions must conform to the pledged amount to within a specified error for BPA to gain full advantage and for the participant to receive the maximum compensation. However, if the participant fails to meet its total pledged amount, BPA will credit all pledged amounts under the following formula:

Shortages beyond the – 10% of pledged amount will be replaced at full market value.

4. Actual verified peak electrical load reductions continued...

For example:

say the participant said they would give you 1 MW in the pledge and only gave you 800 kW. They would be in default by 100 kW. They would only get 900 kW times the value for power as promised by BPA and would have a debit of 100 kW times the actual market price for power replaced.

5. Prices offered for actual peak electrical load reductions



Bids offered to participants will be:

- ✓ A fixed price bid from BPA
- ✓ Offered for each individual hour

5. Prices offered for actual peak electrical load reductions continued...

Bids may vary based upon:

- ✓ How much lead-time is required by the participant to confirm Pledge and begin load reduction.
 - ✓ Reliability of resource
 - ✓ Geographic location
- ✓ Willingness to allow BPA to centrally dispatch resource
 - ✓ Spot market expectations

When will the DEMX be Available?

Now!



- Participant inquiries and sign-up have begun
- We are now scheduling Fire Drills

Who do you contact about the DEMX

- Your BPA Account Executive, or
- BPA Energy Efficiency Representative