

Emergency Load Reduction Program (ELRP)

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ELRP



- ELRP is designed to address reliability needs.
- Forms part of the Emergency Operating State Control Action (EOSCA).
- Permanent feature of the wholesale market – no end date.
- Has to be up and running by this summer.
- Participants have to be Market Participants, register for ELRP and submit a Measurement and Verification plan (M&V plan).

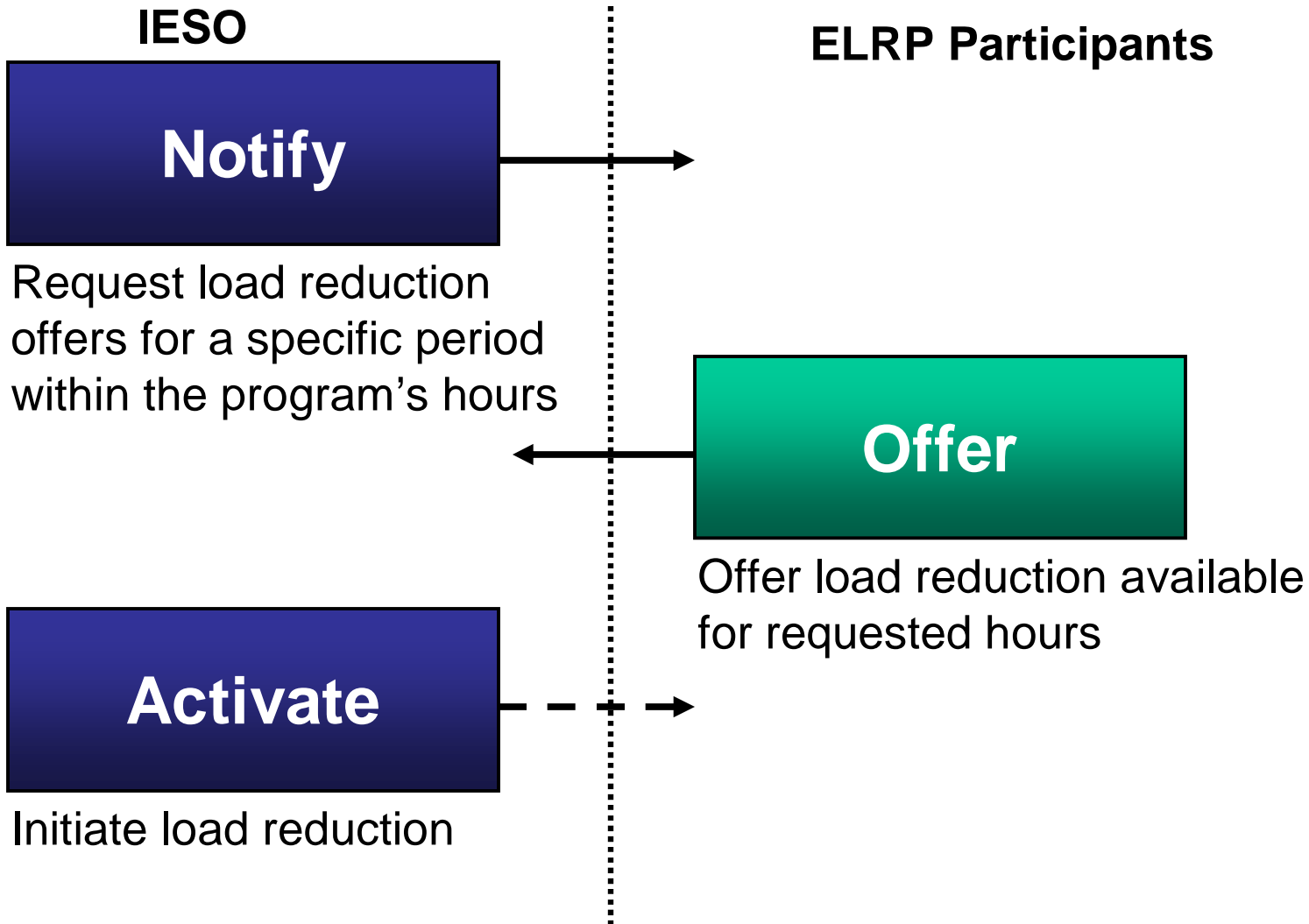
ELRP (cont)

- Whenever the IESO foresees an emergency event – day ahead, or day at hand – the IESO initiates ELRP.
- Process:
 - IESO notifies participants
 - ELRP participants submit proposed load reduction (MW) and duration 2, 3, or 4 hours
 - Participants on standby 8:00 to 20:00 (day ahead) or 12:00 to 20:00 (day at hand)
 - IESO activates load reductions as required
- ELRP participants do not have to offer a load reduction – this is a voluntary program.
- Participants have a choice of Measurement & Verification plan.

Payment

- Participants are paid:
 - Standby at \$15 per hour per MW
 - Activated load reduction at greater of HOEP,
or:
 - \$400 per MW per hour for 2 hours (consecutive)
 - \$500 per MW per hour for 3 hours (consecutive)
 - \$600 per MW per hour for 4 hours (consecutive)

How the Program Works



Program Timeframe



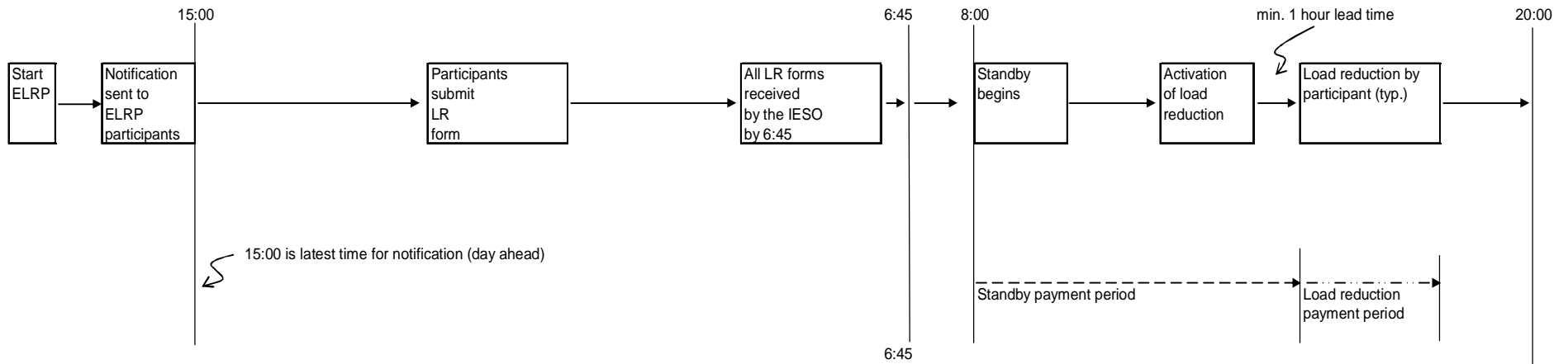
- Two timeframes for running the program:
 - Day-ahead
 - Day-at-hand
- The only difference is in the timing of notification and offer process
- Either day-ahead or day-at-hand notification will occur for any given day for an ELRP facility, but not necessarily for a participant with many ELRP facilities.

Notification & Activation Times



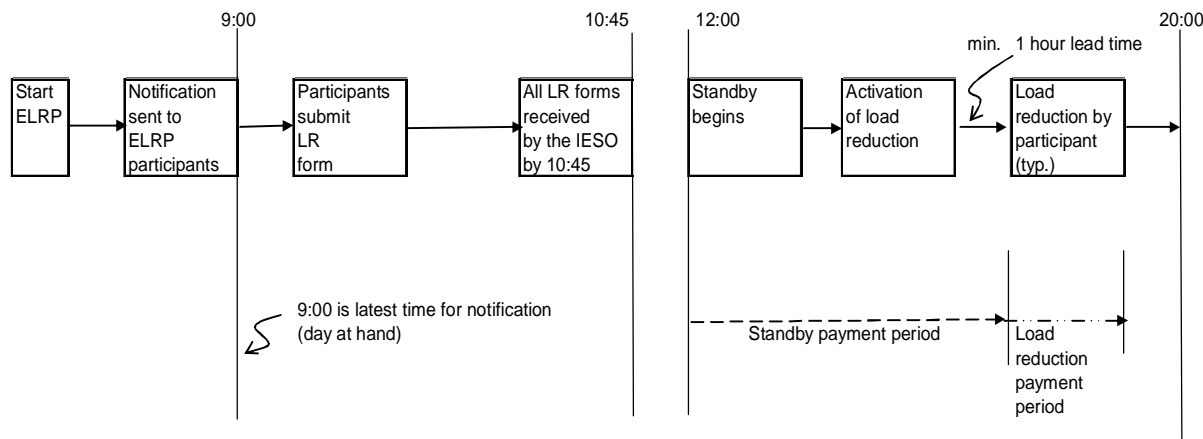
ELRP - Day Ahead - Activation

All times are EST



ELRP - Day at Hand - Activation

All times are EST

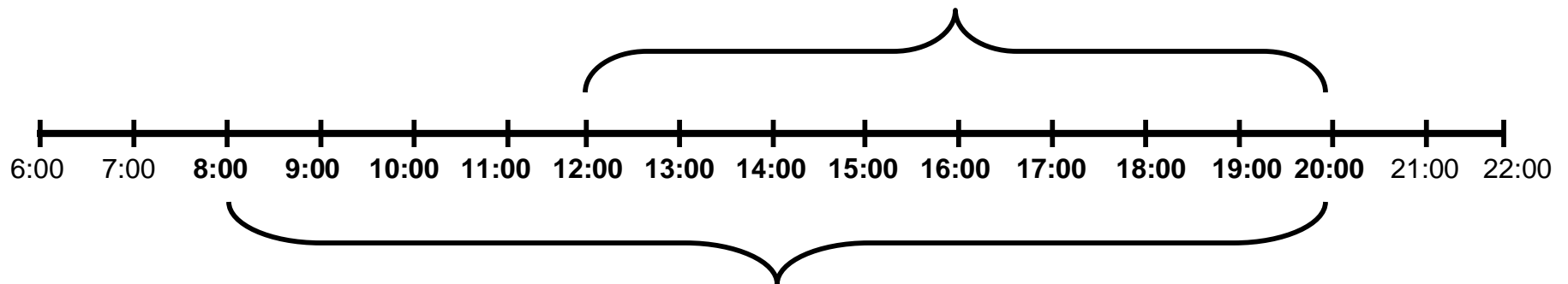


Program Hours



Monday – Friday
(excluding holidays)

Maximum potential load reduction
hours when we notify day at hand



Maximum potential load reduction
hours when we notify day ahead

No activation on Saturday,
Sunday or Statutory holiday.

Offer, Standby & Activation Example



ELRP Payments

N - notification payment
A - activation payment

A2 -\$400, A3 - \$500, A4 - \$600

Offers in MW

Participant	Hours (2, 3, or 4)	M&V Plan	Hour-end											
			1 9:00	2 10:00	3 11:00	4 12:00	5 13:00	6 14:00	7 15:00	8 16:00	9 17:00	10 18:00	11 19:00	12 20:00
A	2	1	5	5	5	5	5	5	5	5	5	5	5	5
B	3	2	0	0	0	0	0	0	10	10	10	10	0	0
C	4	1	10	10	10	10	10	10	10	10	10	10	10	10
D	2	2	0	0	8	8	8	0	0	0	0	0	0	0
E	3	2	18	18	18	0	0	0	0	0	0	18	18	18

Payments - activation

Activated A, B & C in hour 7, E in hour 10

Participant	Hours (2, 3, or 4)	M&V Plan	Hour-end											
			1 9:00	2 10:00	3 11:00	4 12:00	5 13:00	6 14:00	7 15:00	8 16:00	9 17:00	10 18:00	11 19:00	12 20:00
A	2	1	N	N	N	N	N	N	A2	A2	0	0	0	0
B	3	2	0	0	0	0	0	0	A3	A3	A3	0	0	0
C	4	1	N	N	N	N	N	N	A4	A4	A4	A4	0	0
D	2	2	0	0	N	N	N	0	0	0	0	0	0	0
E	3	2	N	N	N	0	0	0	0	0	0	A3	A3	A3

Notification total

4 18 18 26 8 8 0 0 0 0 0 0 0 0

Activated total

0 0 0 0 0 0 25 25 20 28 18 18

Note: D receives notification, but no activation payment

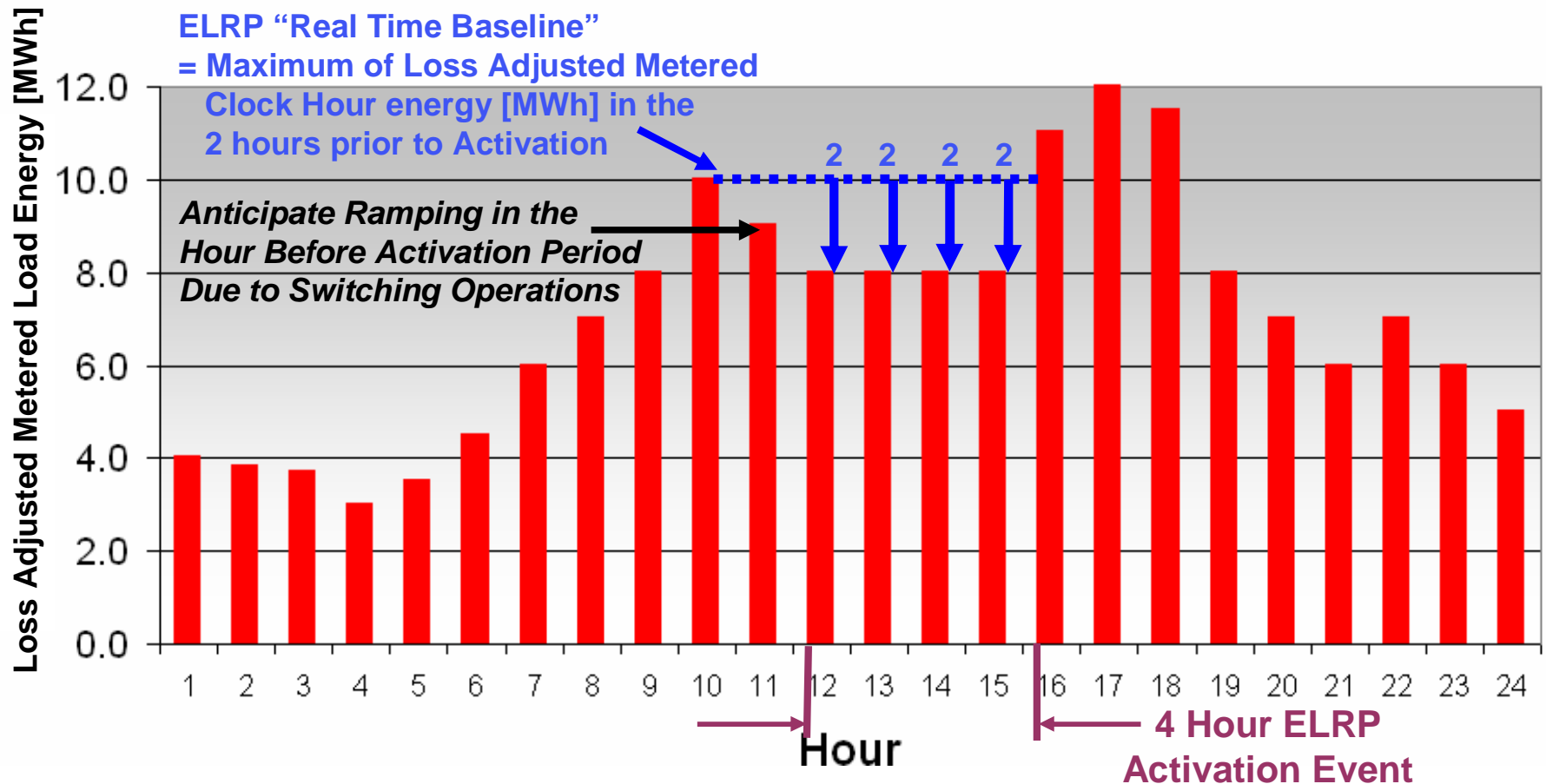
M&V Options

- Baseline Option 1 – requires you to provide a flat quantity of load response, i.e., all the offer hours must have an identical MW value.
- Baseline Option 2 – allows you to provide a variable quantity of load response, i.e., the quantity can vary for each hour offered.
- Baseline Option 3 – use this for backup or load displacement generation. Similar to Option 1, Option 3 requires you to provide a flat quantity.
- Baseline Option 4 – statistical sampling method. Option 4 allows you to provide a variable quantity of load response, i.e., the quantity can vary for each hour.

MW Reduction Calculation for Option 1 "Real Time Baseline"



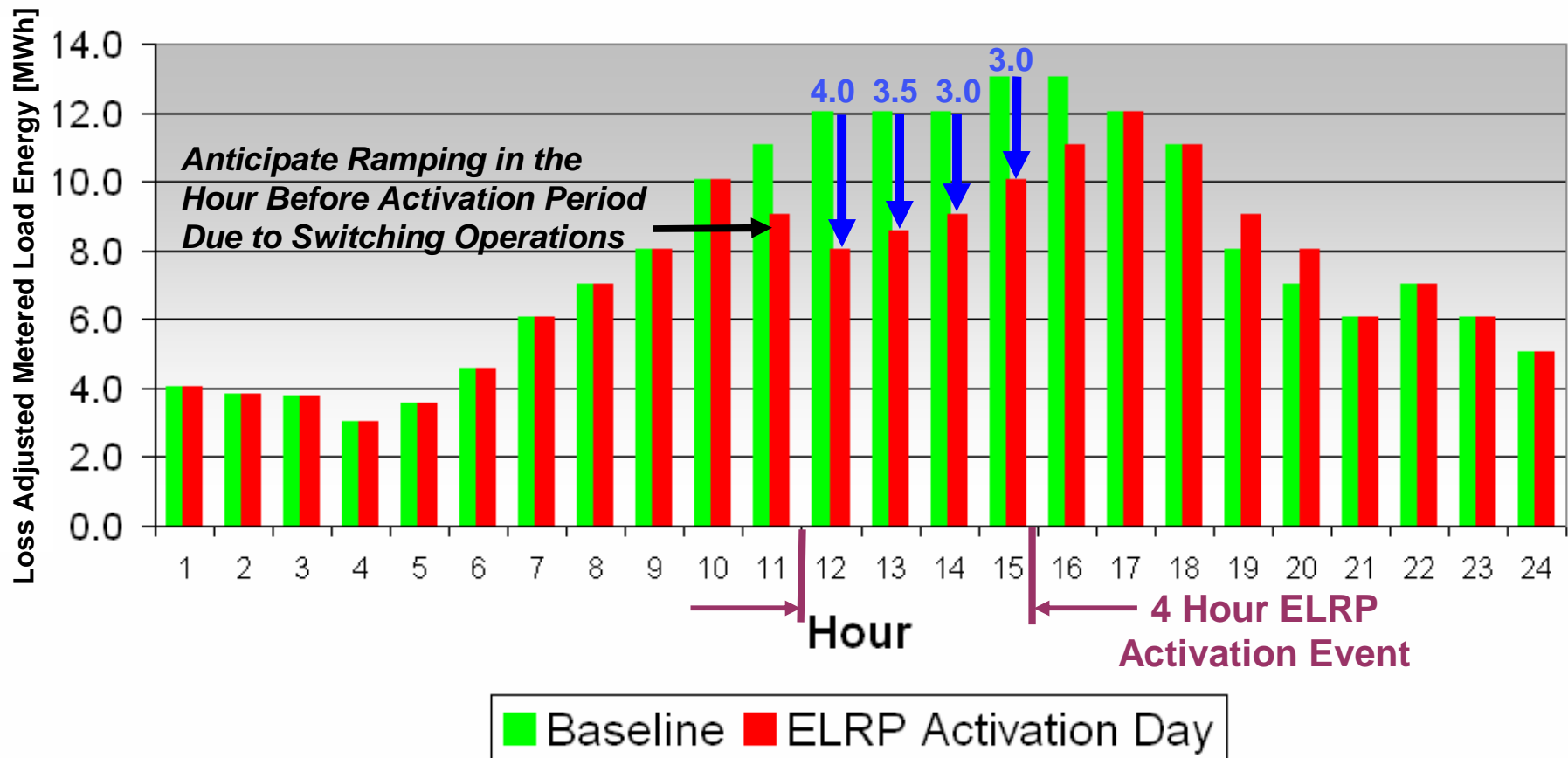
ELRP Calculated MW Reduction



MW Reduction Calculation for Option 2 "Historic Baseline"



ELRP Calculated MW Reduction



ELRP Settlements



- Participants can use registered revenue meters, retail meters, or operational meters as a source of metering data.
- Participants have to submit a claim c/w metering data.
- Two payments:
 - Paid standby in the month (N) following,
 - Paid activation N+1 months after we have verified the metering data.
- Settlement follows the normal procedure – PSS, NoDs, and FSS.
- IESO may audit participants.
- There is a 20% tolerance applied to under delivery and over delivery.

Under-delivery

Example of under-delivery

Participant	Offered Activation	HE15	HE16	HE17	HE18	HE19	HE20
A	4 hours	10	10	10	10	10	10
Actual Reduction				7	5	5	5

- Average = $(7+5+5+5)/4 = 5.5$ MW which is outside the dead band of – 20% (realized 55% of offered MW, short by 25% of acceptable compliant level).
- Activation: $(5.5 \times 4) \times \$600 = \$13,200$
- Standby: paid $(2 \times 10) \times \$15 = \300 but because of the dead band there is a claw back of $2 \times (10 \times 0.8 - 5.5) \times \$15 = \$75$ giving a net standby of \$225.

Over-delivery

Example of over-delivery

Participant	Offered Activation	HE15	HE16	HE17	HE18	HE19	HE20
A	4 hours	10	10	10	10	10	10
Actual Reduction				7	14	12	12

- Average = $(7+14+12+12)/4 = 11.25$ which is within + 20% therefore full payment for all hours.
- Activation: $(11.25 \times 4) \times \$600 = \$27,000$
- Standby: $10 \times 2 \times \$15 = \300 with no claw back

Participation

- ELRP is open to market participants.
- Does not require an OEB license solely for ELRP.
- Does not require prudentials
- To participate:
 - Apply to become an ELRP participant
 - MP name, MP ID
 - Address of registered entity/entities
 - Proposed load reduction MW
 - Contacts email and phone number
 - M&V Plan for each registered ELRP facility.
- See Market Manual 10 Emergency Load Reduction Program (ELRP) for additional details.

OPA Economic Demand Response Program (250 MW) Criteria:	IESO Emergency Load Reduction Program Criteria:
Minimum load required 0.5 MW	Minimum load required 1 MW
Participant's Measurement & Verification plan accepted by the OPA	Participant's Measurement & Verification plan is deemed satisfactory to the IESO
Participant bids in a target strike price (\$/MWh) and load reduction capacity (MW)	Participant registers as market participant with expected load reduction capacity (registration fee \$1000 plus GST)
Participant is price responsive (no directive)	<p>Participant receives a directive to reduce demand (not price responsive)</p> <p>Participants receive IESO notification to submit ELRP Offer Submission Form and participant decides if they wish to be available to reduce demand.</p> <p>Receives standby fee \$15 per MW per hour until activation</p>
Participant may voluntarily curtail load (after submission of an intention to curtail to the OPA) for hours when the IESO 3-hour-ahead pre-dispatch price exceeds the participant's target strike price	If participant declares availability, their demand reduction is mandatory when directed by IESO

<p><u>OPA</u> Receives bid strike price. Minimum presently defined as a “Strike Price Floor for the season”:</p> <p>Summer July 1 – September 30, 2006 \$90/MWh</p> <p>Fall October 1 – December 31, 2006 and Winter January 1 – March 31, 2007 \$80/MWh</p>	<p><u>ELRP</u> If directed to reduce, participant receives activation payment of higher of HOEP or \$400, \$500 or \$600</p>
<p>Program operates 24/7</p>	<p>Program operates Mon-Fri 8:00-20:00 EST</p>
<p>Minimum curtailment required of 1 hour per event. Participant can continue to claim curtailment for up to two hours following an event hour</p>	<p>Minimum curtailment required of 2 hours per event, maximum 4 hours – curtailment hours indicated when participant declares their availability to reduce (on ELRP Offer Submission Form)</p>
<p>Clear ability to participate in at least one event per active season</p>	<p>Annual testing required</p>
<p>No penalties for under or over performance</p>	<p>Under performance greater than 20% may result in performance review</p>
<p>No project security, deposit, or registration fee required</p>	<p>No prudential support requirements</p>
<p>On the event of over-subscription the OPA reserves the right to select proposals based on a procedure under development.</p>	<p>Notification and activation may be by zone, as reliability needs dictate.</p>

Thank you

