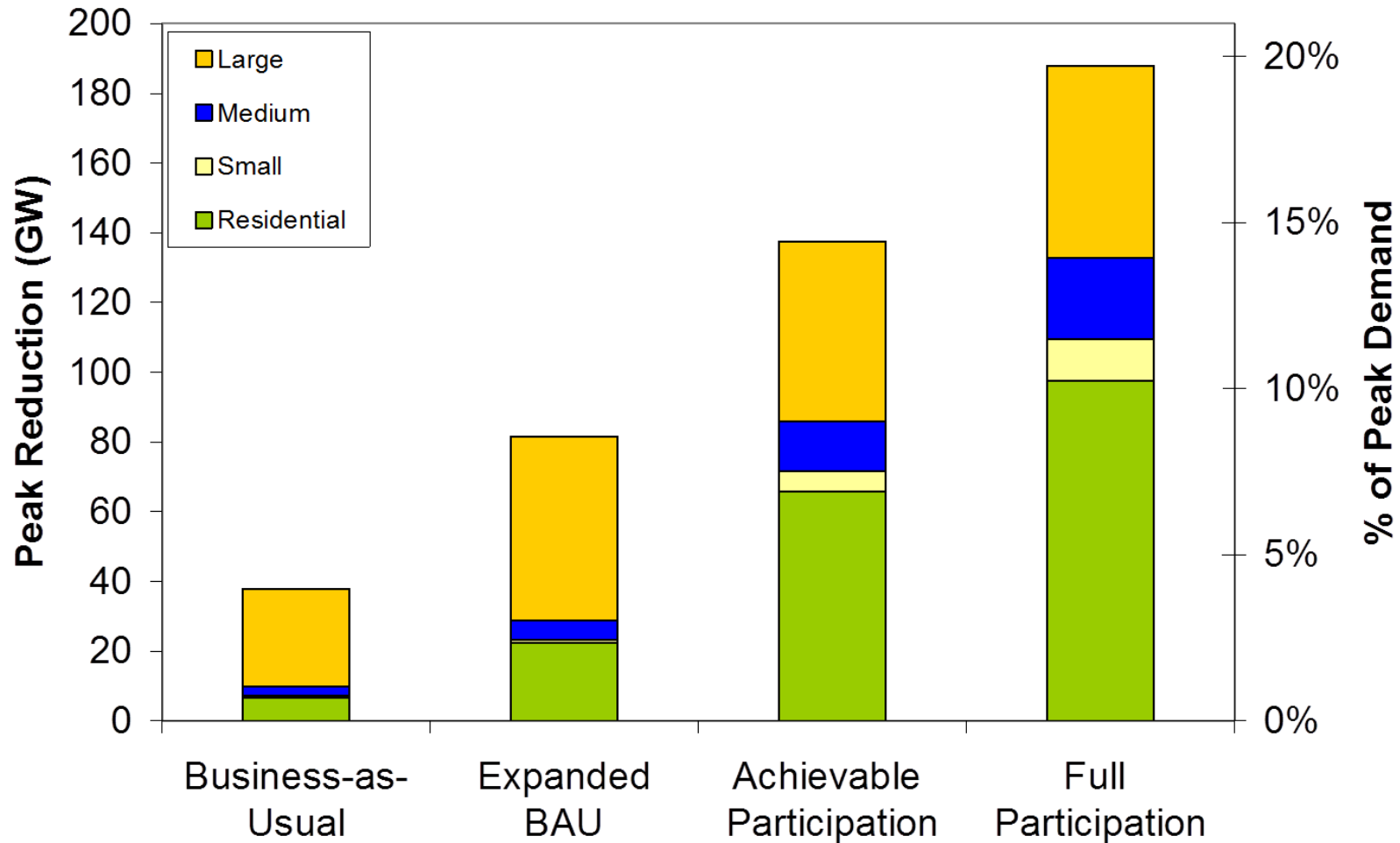


Business NZ Demand Response

Scott Coe
Utility Integration Solutions

FERC Estimated DR Potential (2019)



FERC's National Assessment of Demand Response, June 19, 2009
<http://www.ferc.gov/legal/staff-reports/06-09-demand-response.pdf>

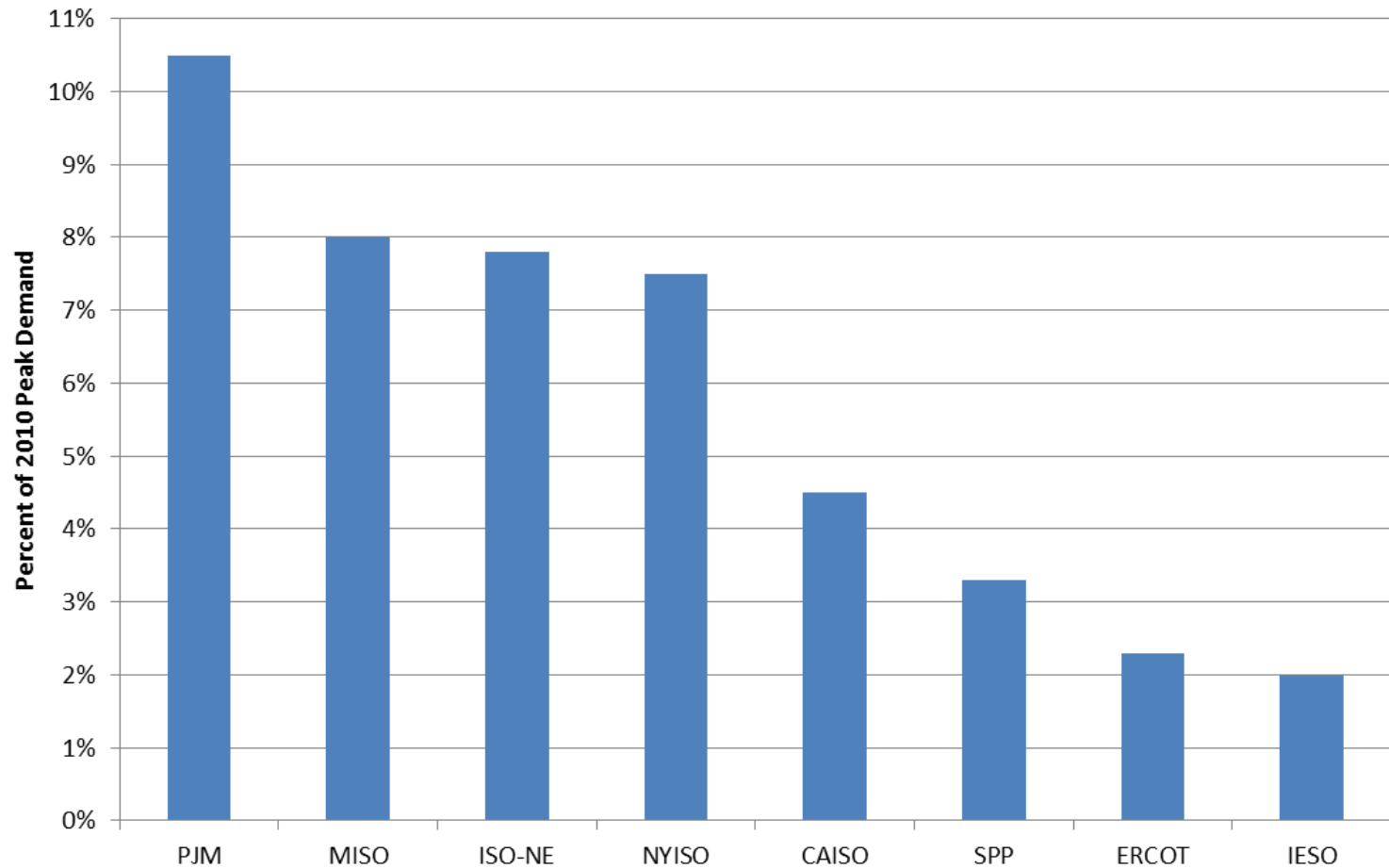
Wholesale DR: Absolute Levels

Region	DR MW
CAISO	2,135
ERCOT	1,484
ISO-NE	2,116
MISO	8,663
NYISO	2,498
PJM	13,306
SPP	1,500
RTO/ISO Total	31,702

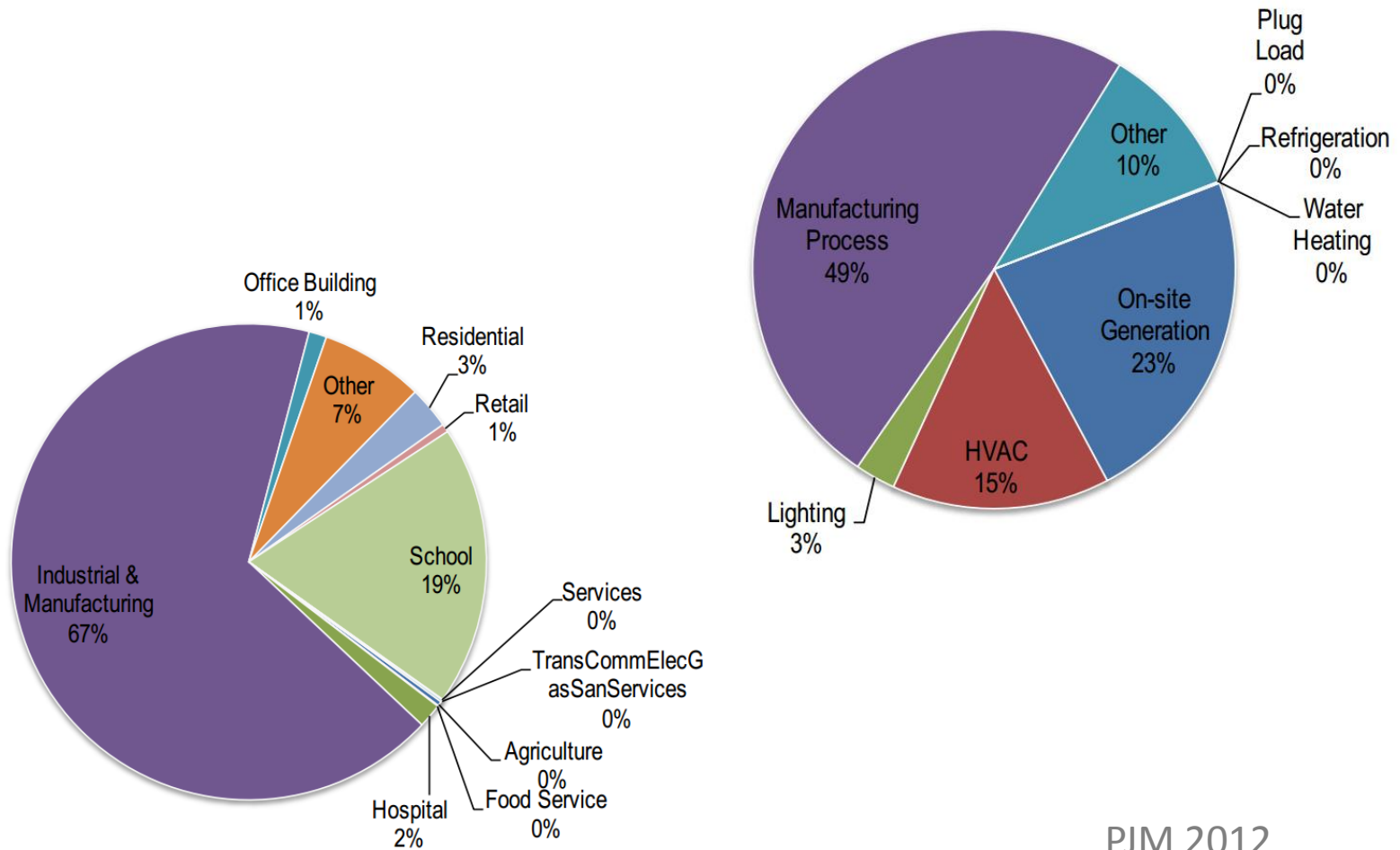
*2010 Demand Response levels from
FERC Assessment of Demand Response and Advanced Metering
Staff Report, November 2011*

Wholesale DR: Relative Levels

2010 Demand Response Capacity



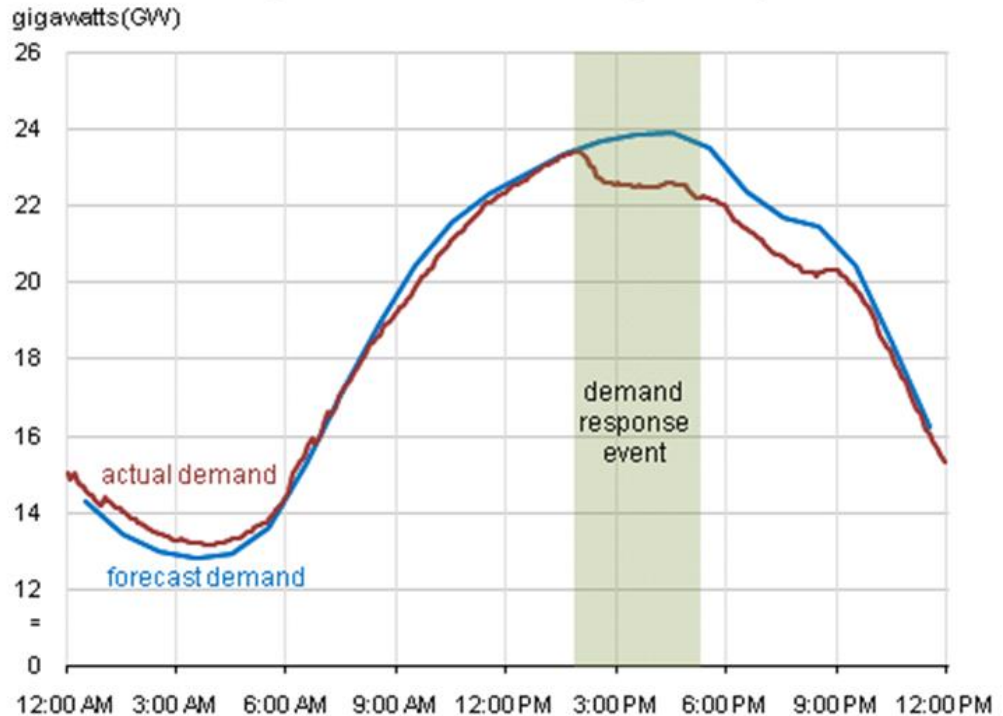
Typical Demographics



PJM 2012

New England June 24, 2010

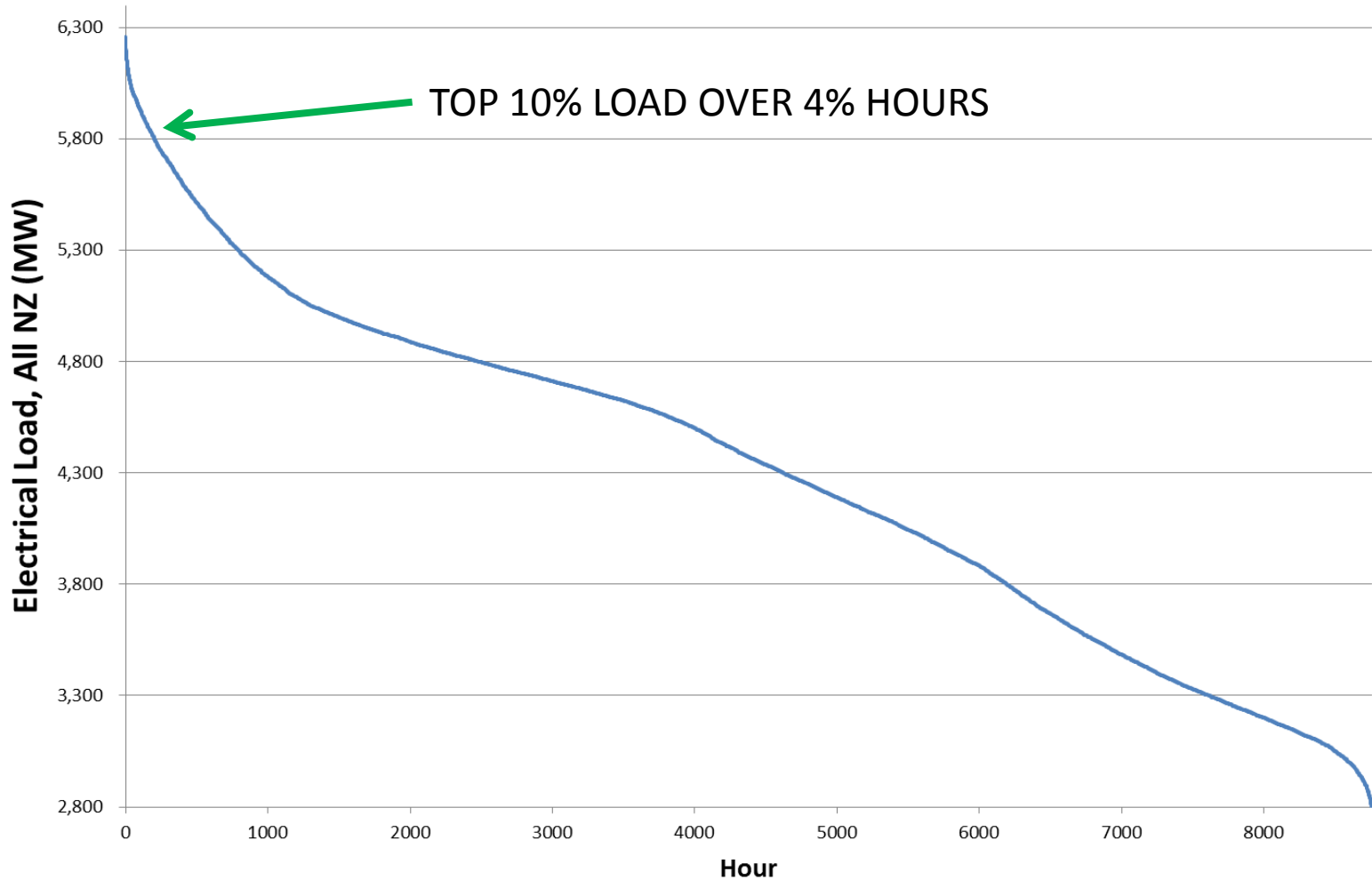
- Loss of 6x major generators; price spikes > \$1,000/MWh
- Average hourly hub-LMP reaches \$270/MWh
- Dispatch 670 MW of DR
- Hourly LMP drops to \$65/MWh
- Saving ~ \$ 50 M



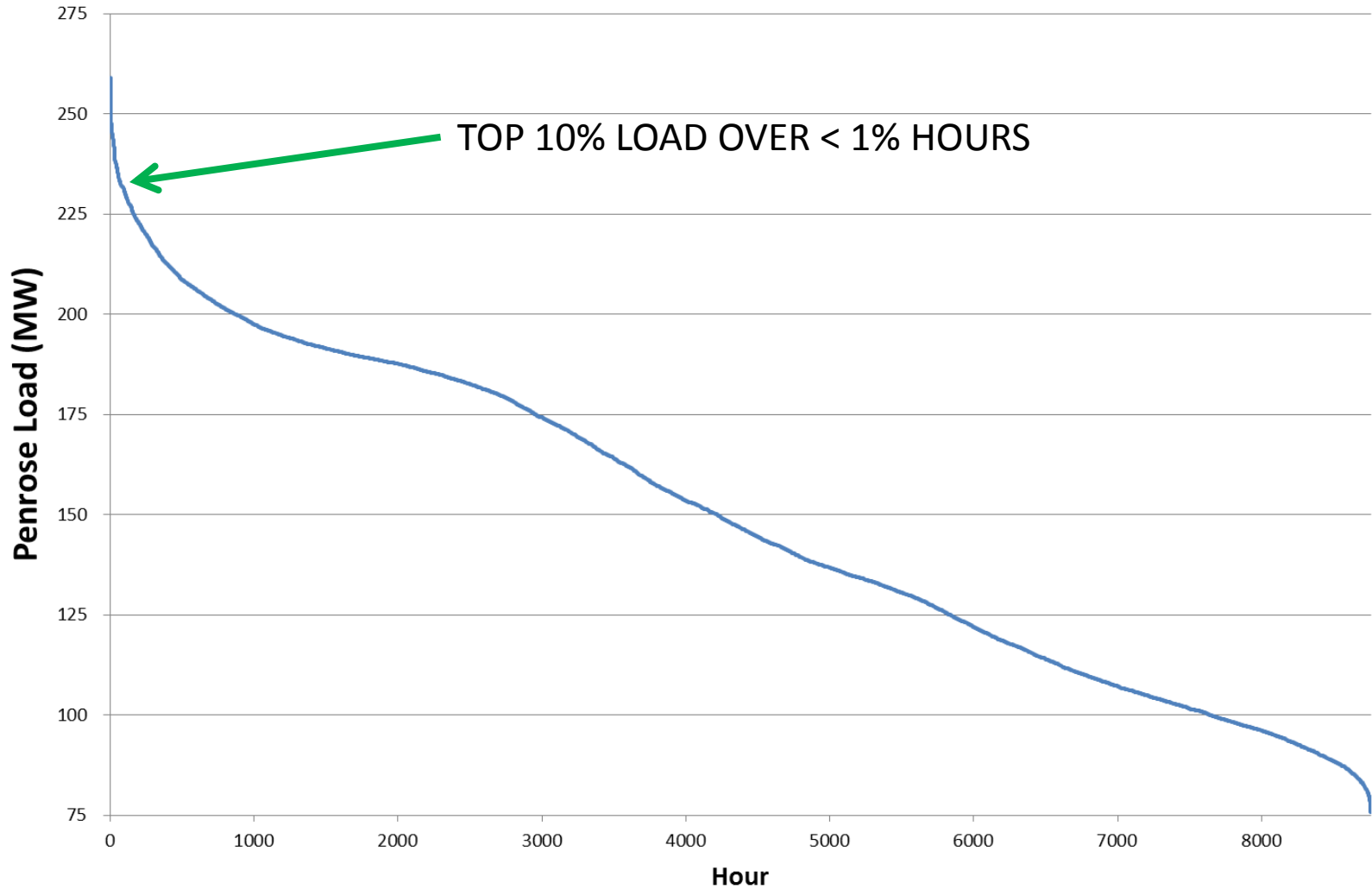
<http://www.eia.gov/todayinenergy/detail.cfm?id=130>

New Zealand Demand Response Cost Recovery

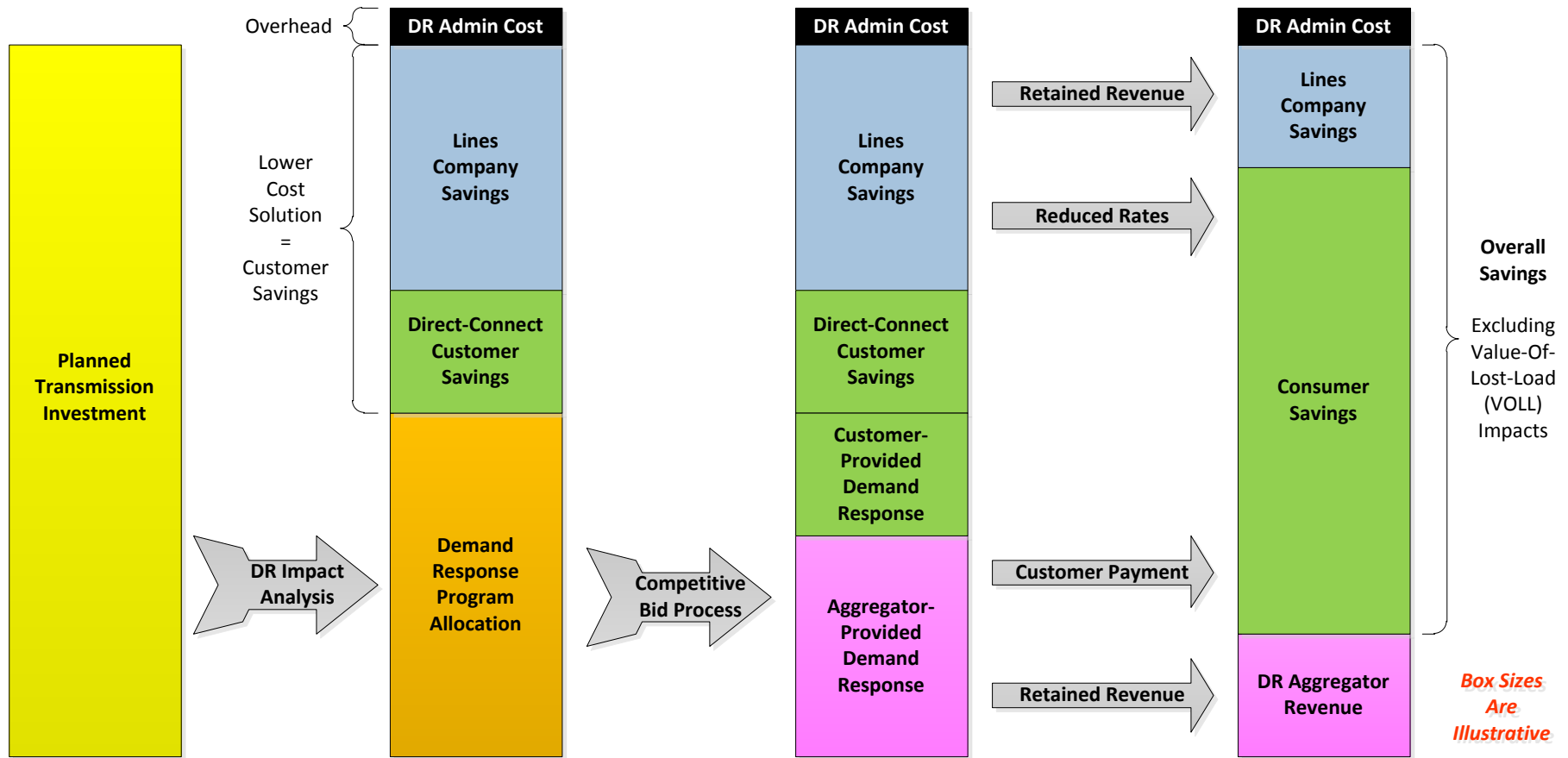
Load-Duration Curve - All NZ



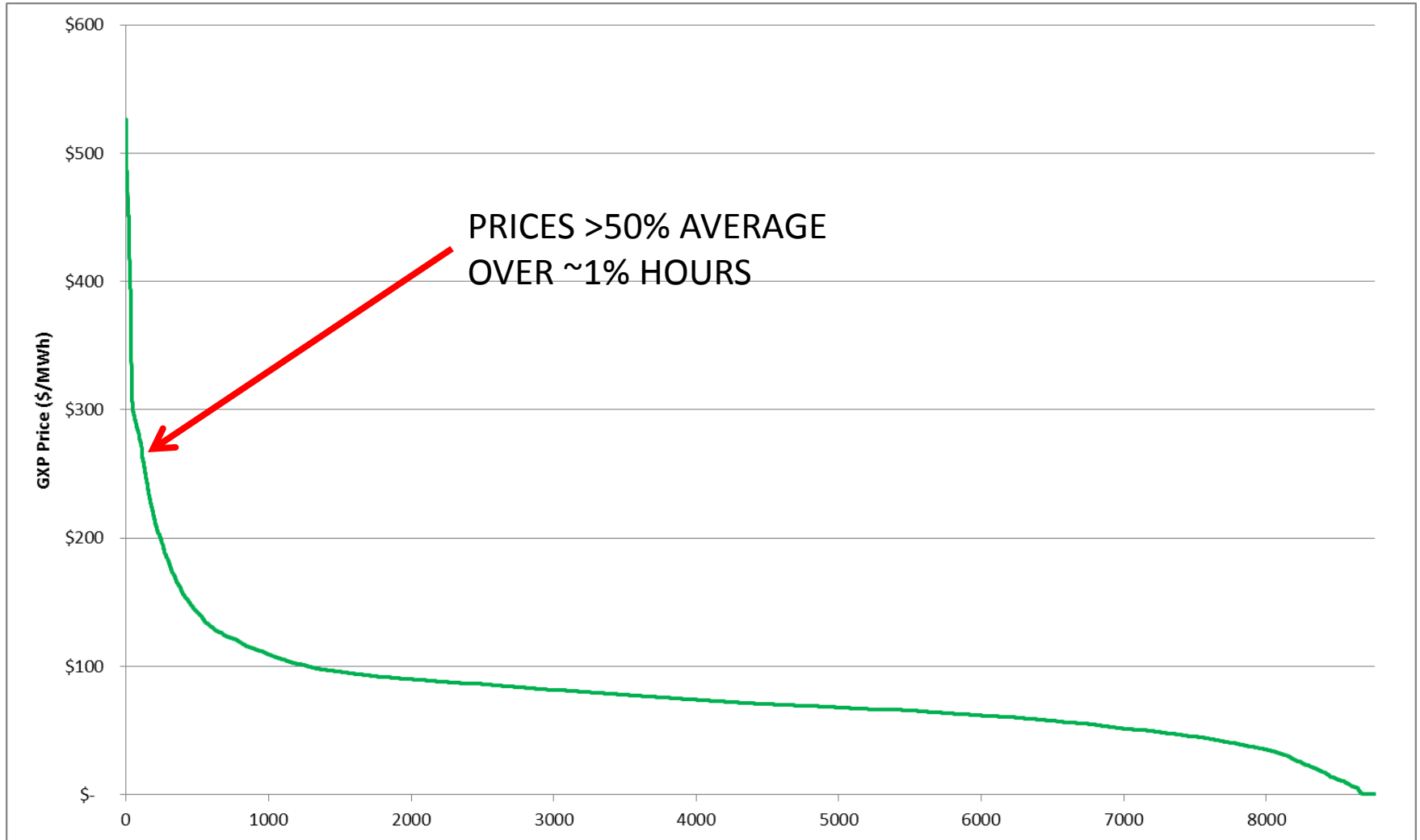
Load-Duration Curve - Single GXP



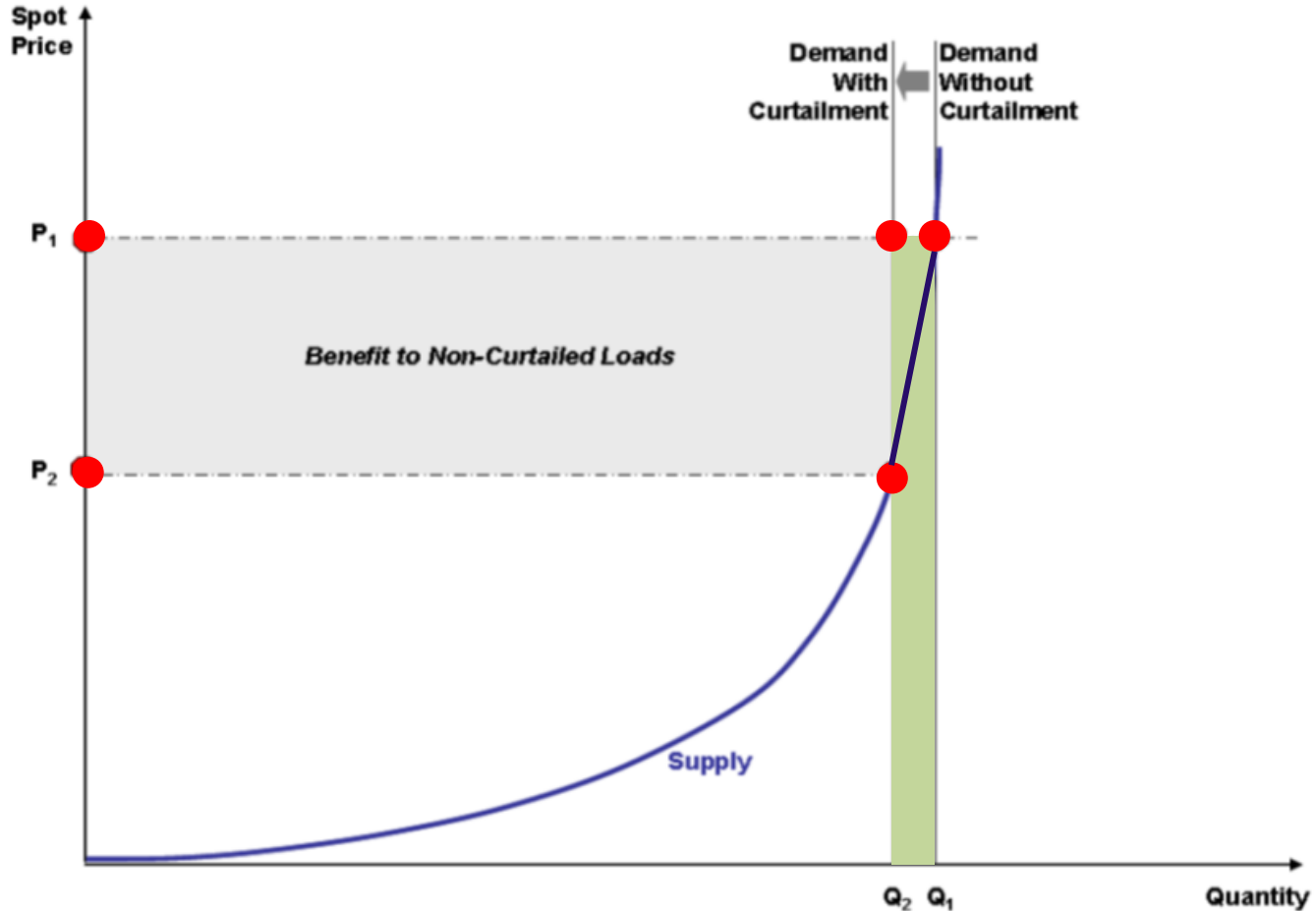
Transmission Investment Deferral



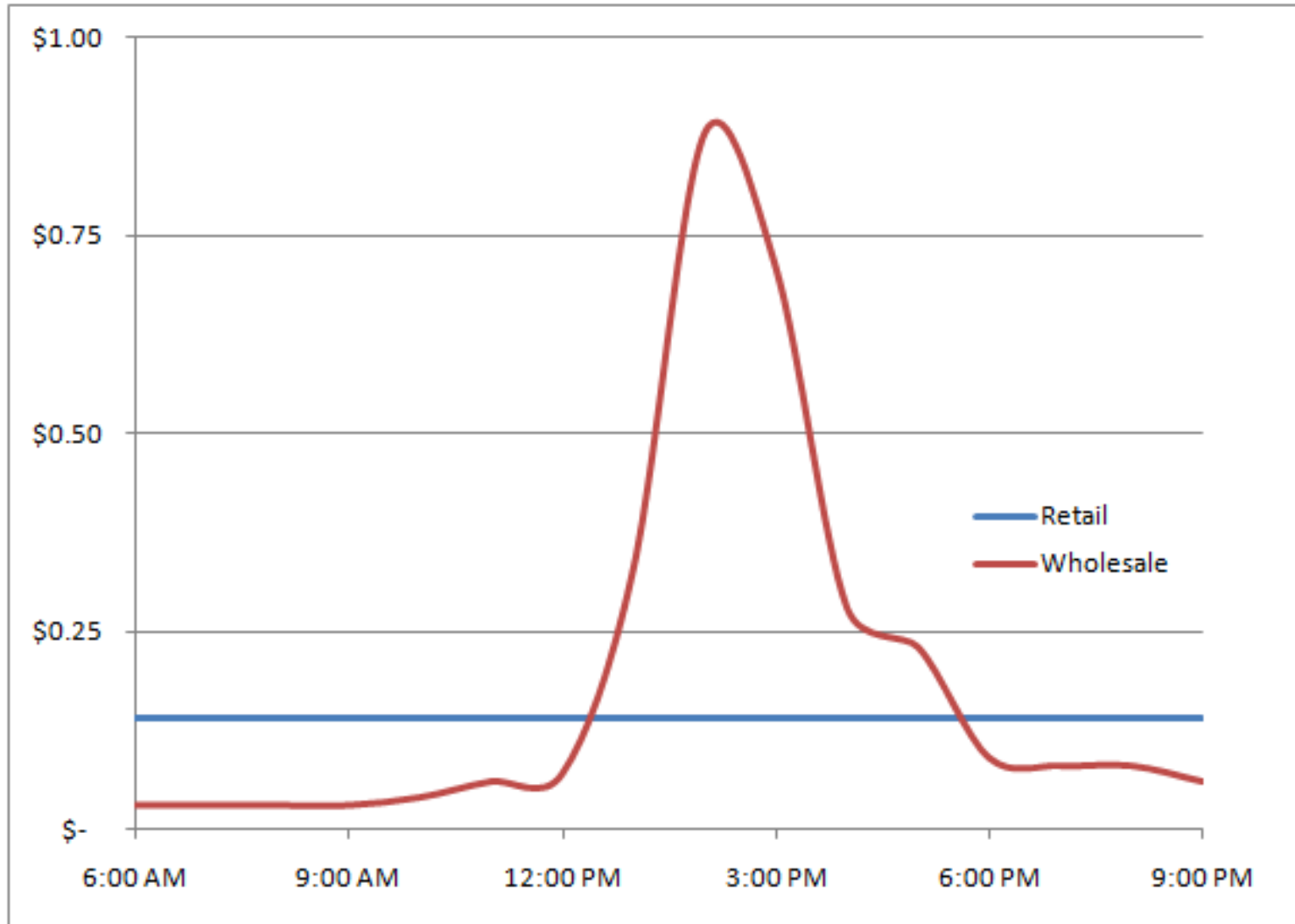
Price-Duration Curve - Single GXP



Net Benefit Analysis

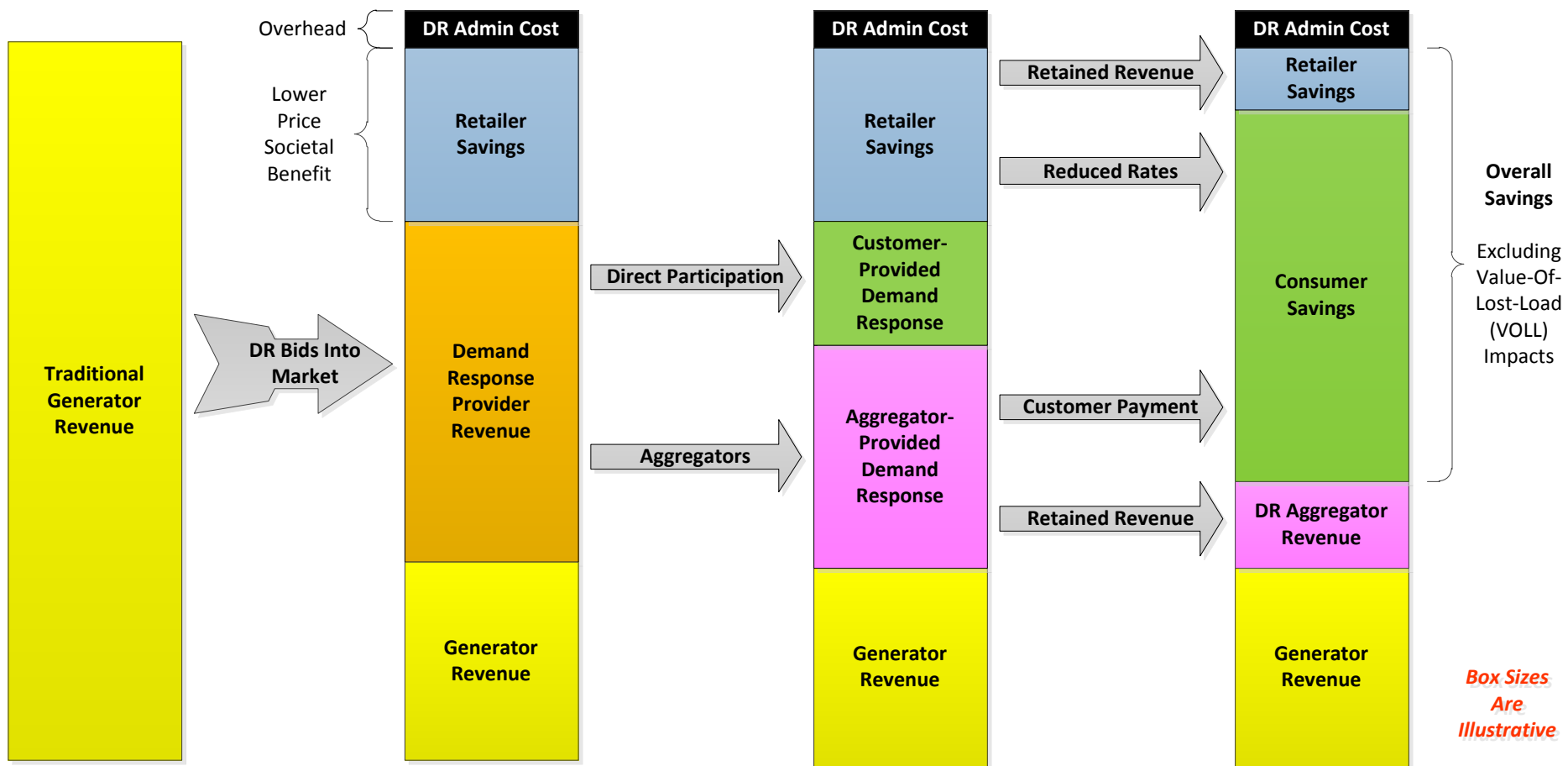


Wholesale vs. Retail Rates



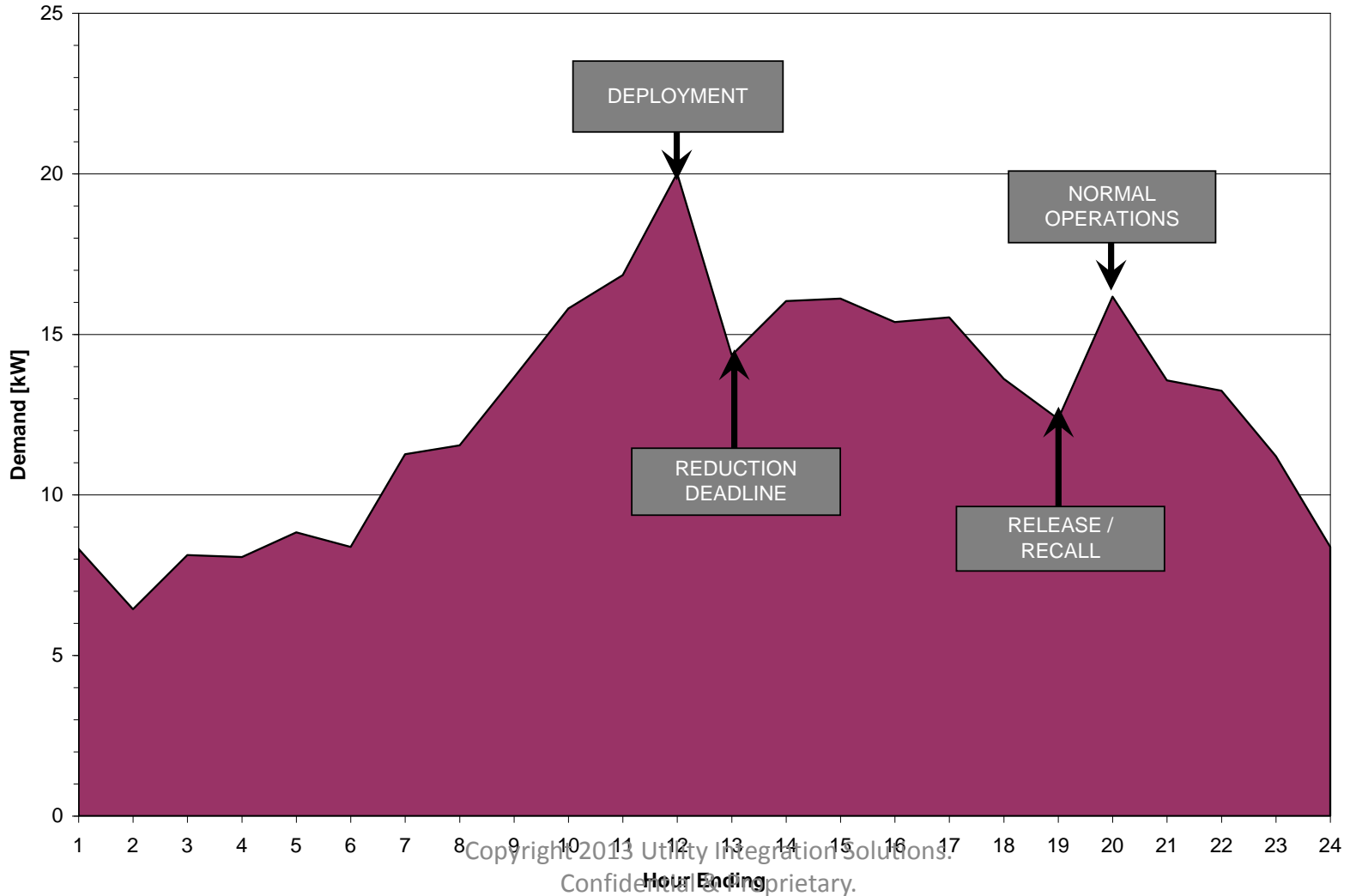
Future Option

Energy & Reserve Market Competition

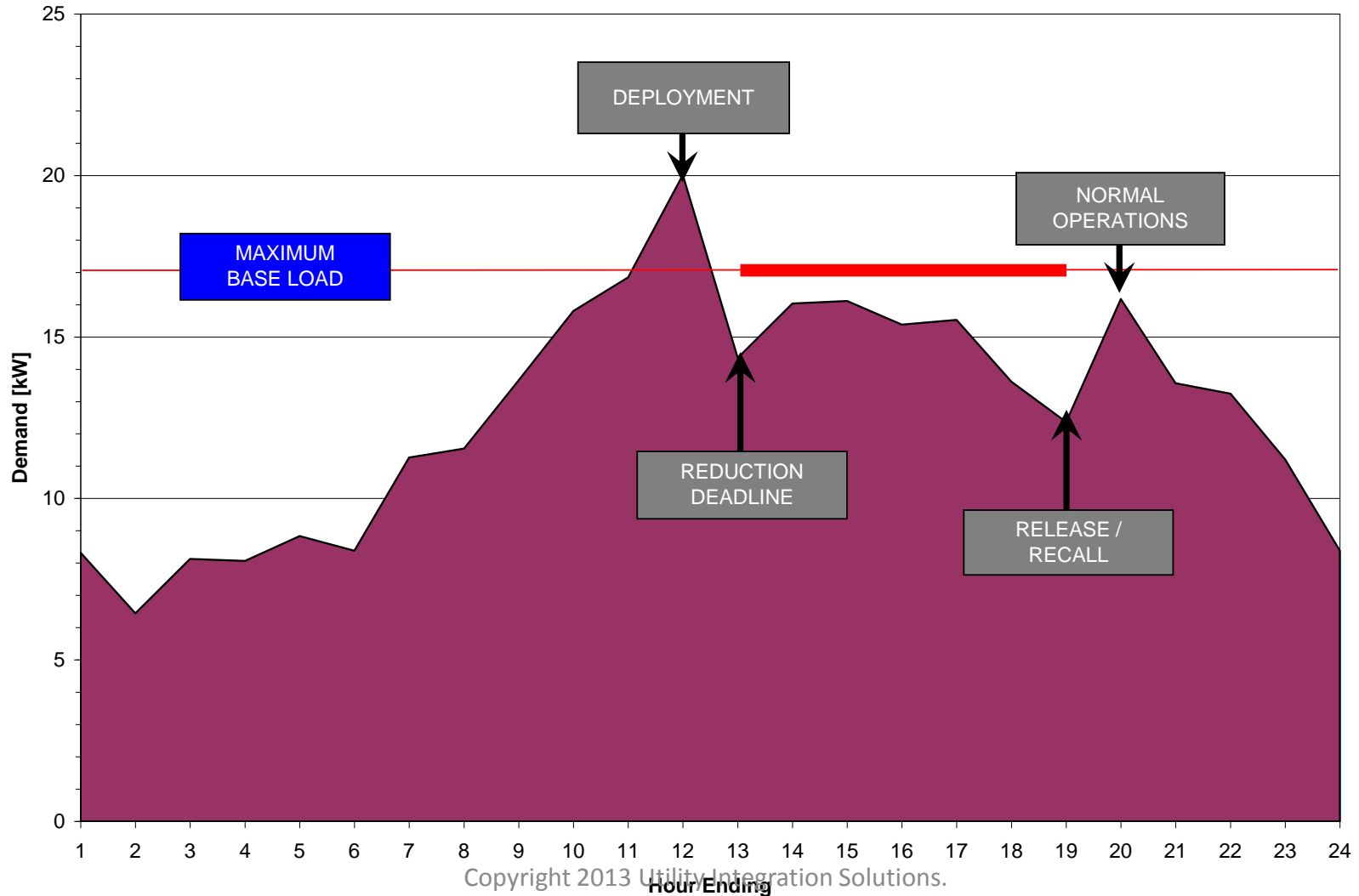


Performance Evaluation

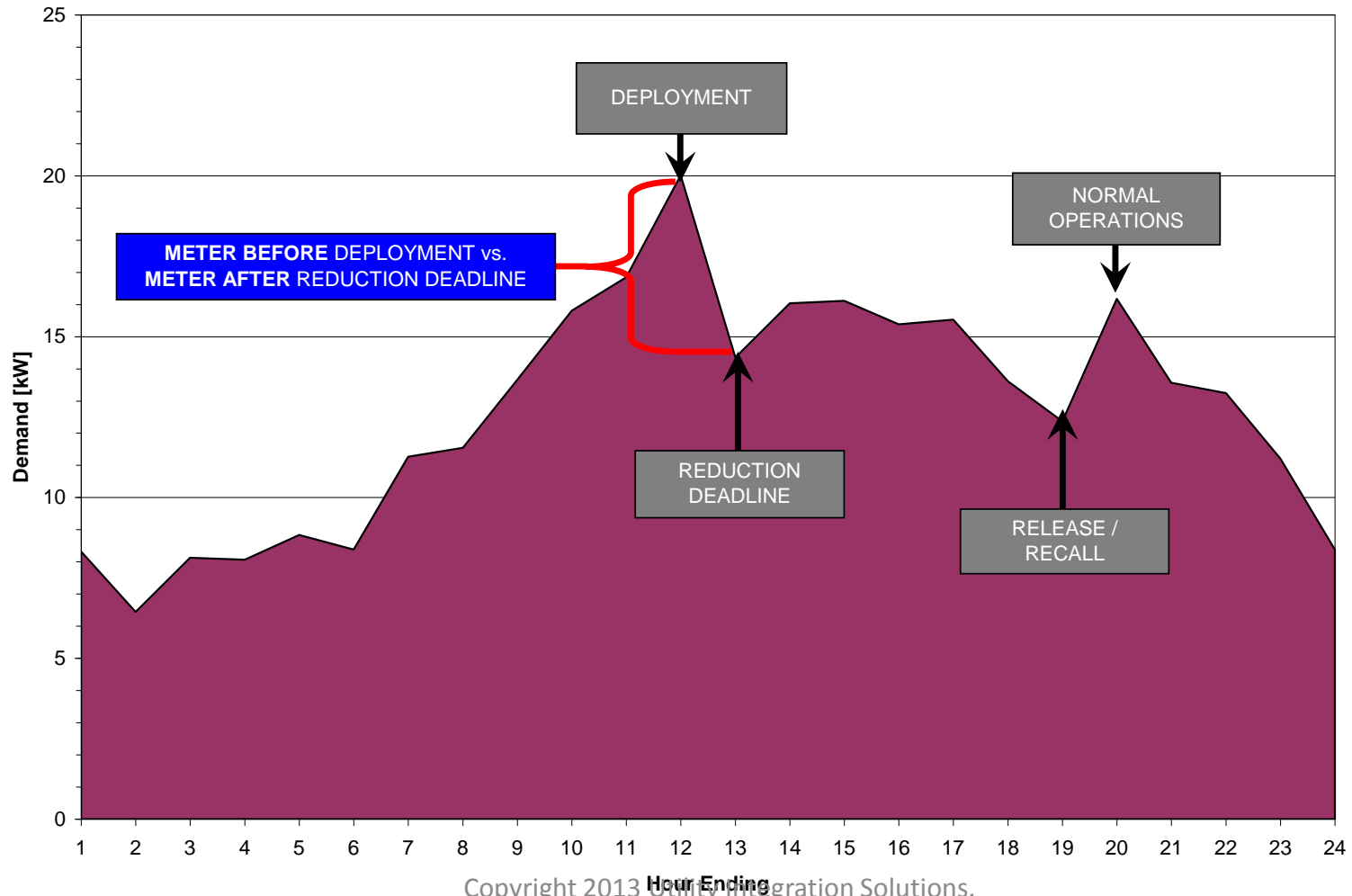
Demand's Response



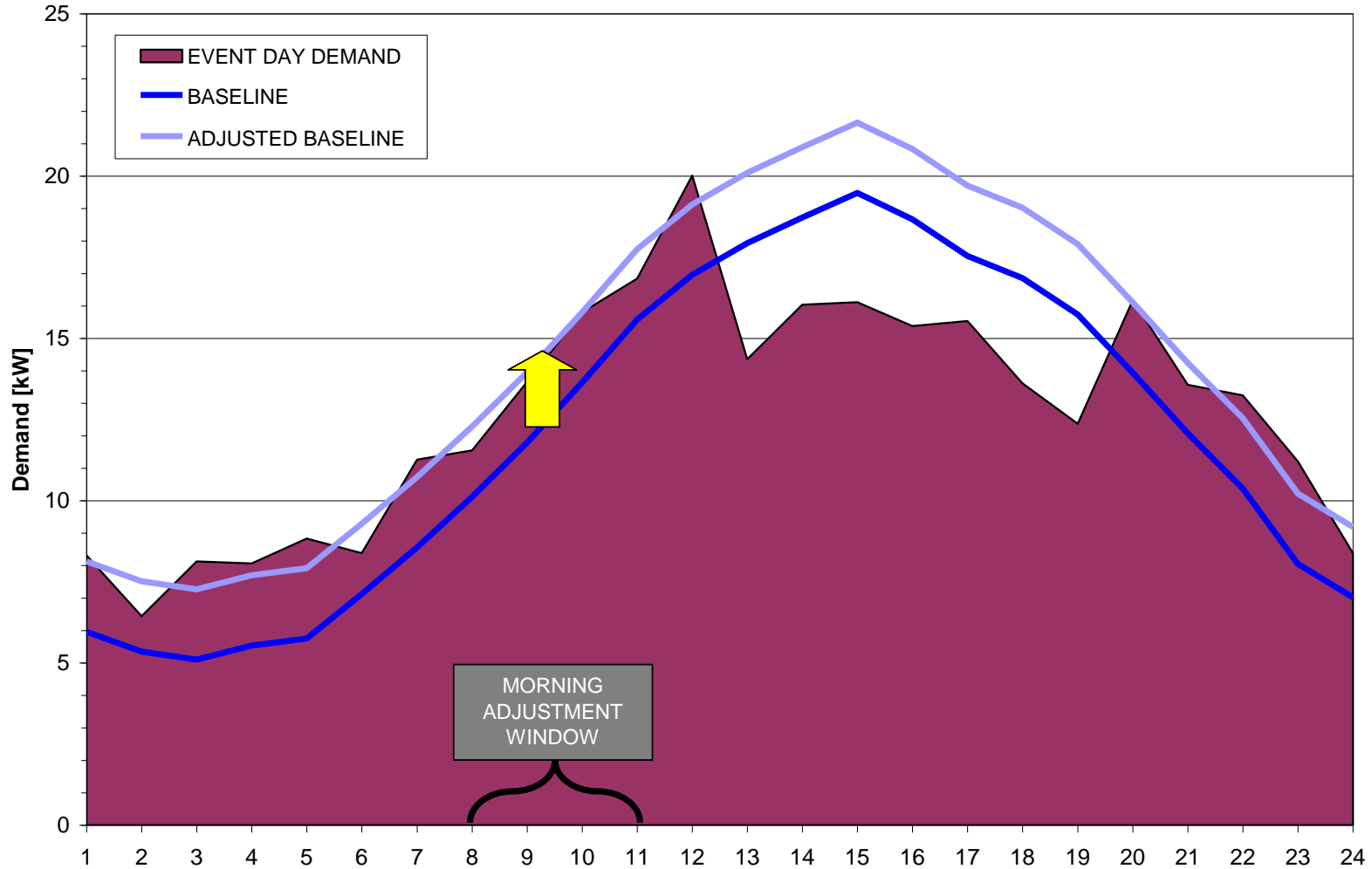
Maximum Base Load



Meter Before / Meter After



Customer Baseline Load



For more information
please contact me at:

scoe@uisol.com