

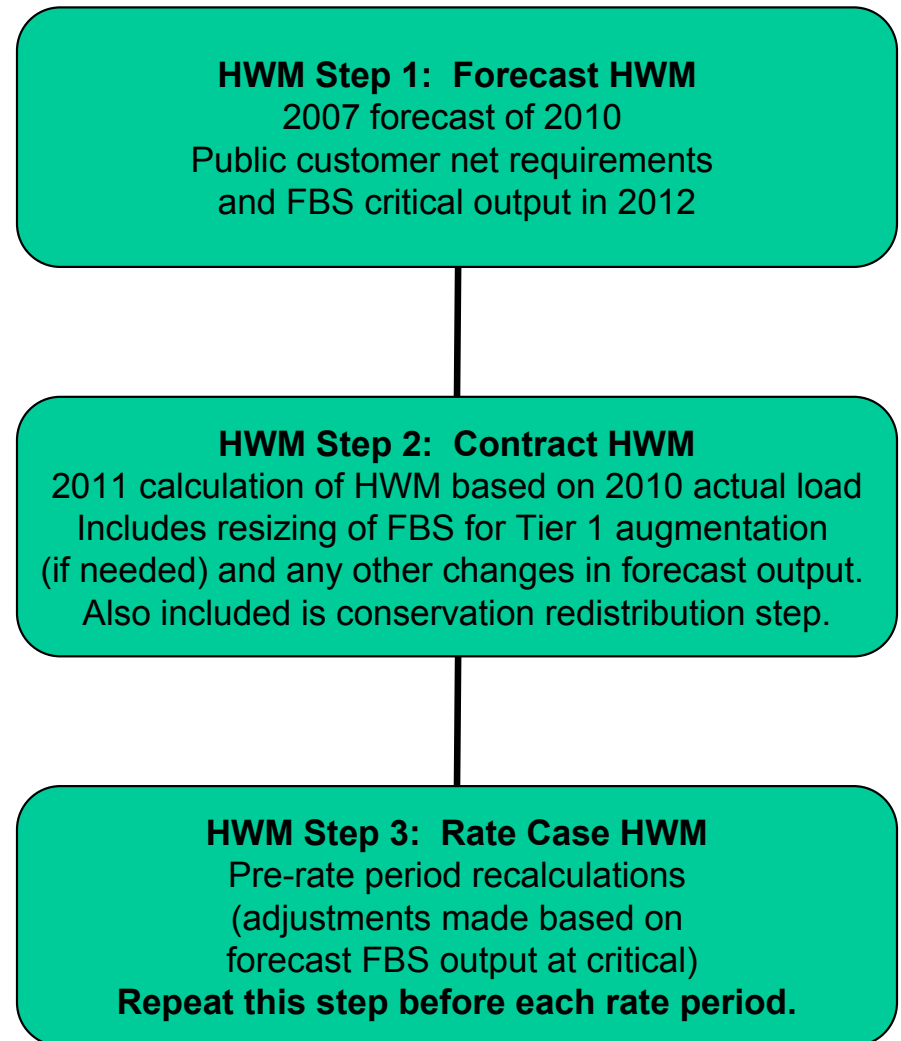
# A Load Following Customer: from Subscription to Regional Dialogue

## Two Possible Future Power Supply Scenarios



# Background on Lotsa Power and Light

- Full Service customer through 2011
- For the Forecast HWM:
  - Forecast net requirement for 2010 is 44 aMW
  - Total public net requirement forecast to be 7050 aMW in 2010 and FBS is forecast to produce 7110 aMW with 1937 critical water in 2012.
  - LPL’s forecast HWM is:  
 $(44/7050)*7110 = 44.4 \text{ aMW}$
- LPL signs a Load Following contract for post-2011 service from BPA
- For the Contract HWM:
  - LPL’s actual load on BPA in 2010 is 45 aMW
  - Total customer net requirement in 2010 is 7300 aMW (calculated per the method used in HWM Step 2)
  - New forecast FBS output at critical in 2012 is 7100 aMW, so BPA plans to augment 200 aMW
  - Due to the conservation redistribution step, 1 aMW is removed from LPL’s 2010 amount
  - Lotsa’s Contract HWM is:  
 $(44/7300)*7300 = 44 \text{ aMW}$



# Background, continued...

Assuming the July 13th Regional Dialogue Proposal is adopted as proposed:

## **Load Following.**

- The arrangement LPL entered into with BPA obliges BPA to follow LPL's load, less any declared non-federal resources it commits to serve load.

## **Tiered Rates.**

- LPL will have to pay for the energy and capacity necessary to have its load followed, and if LPL elects to have BPA serve all or a portion of its load above its HWM, then the energy costs will be bifurcated between Tier 1 and Tier 2.

## **Load Variance.**

- LPL pays for load variance associated with its load under the charge for Tier 1 service. The Load Variance charge is forecast in the rate case and allows loads to be greater and less than forecast during the rate period. Only Load Following customers pay for this service.



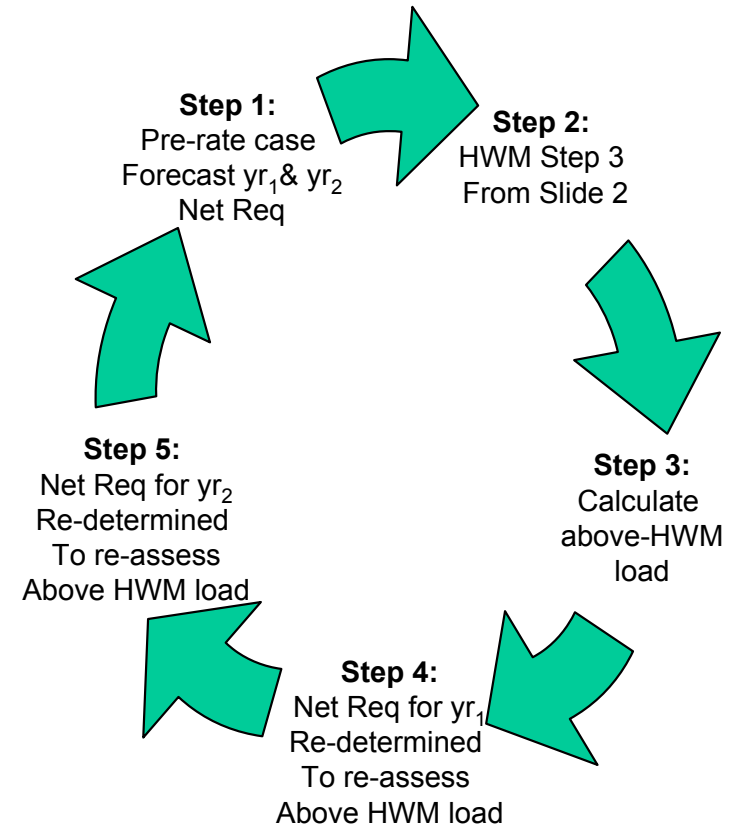
# Background, continued...

## Establishing the Rate Case HWMs.

- For every rate case, BPA would go through the process diagrammed to the **right** to determine either how much Tier 2 LPL needs or how much non-federal resource LPL will have to acquire and commit to serve load. This process is illustrated in the **RD Application Timeline document**.

## Remarketing Charges/Credits.

- These scenarios outlined below assume “Approach 2,” from the RD Application Timeline document. Assuming this approach was adopted, there would be additional charges or credits associated with remarketing any unused Tier 2 within a rate period.
- If the forward market price at the time of remarketing is less than the Tier 2 price assumed in the rate case, the customer is charged the difference.
- If the forward market price is greater than the Tier 2 price, then the customer is credited the difference.



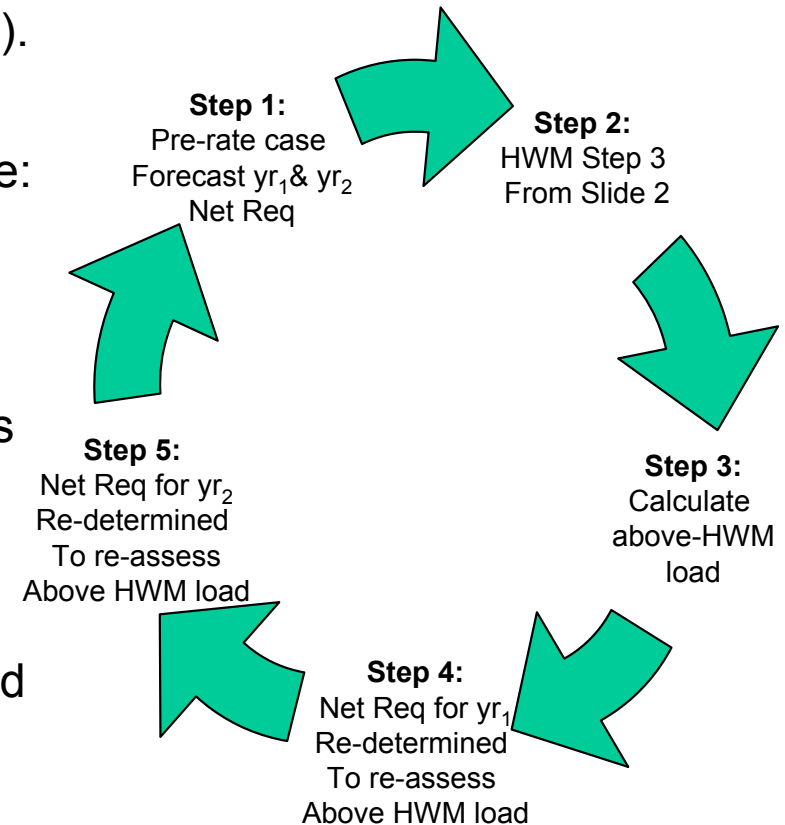
## Background, continued...

- As a Load Following Customer, LPL has choices about how it will have its load above its HWM served.
  - BPA Tier 2: shortest commitment term is five years and three year's notice is required to change
  - Non-federal resources, according to rules in BPA's product catalog. Resource decisions may require purchase of additional services from BPA.
    - Whether applied in the "benchmark" shape (a flat annual Block, in this case) or in a shape that deviates from it, that shape is set for the commitment period.
    - A charge or a credit might be applied to make up the difference in value between the chosen shape and the benchmark shape.
  - Potentially a pre-established combination of BPA Tier 2 and non-federal resources



# Scenario 1: Lotsa chooses BPA Tier 2 service. FY2012 (1st year of rate period)

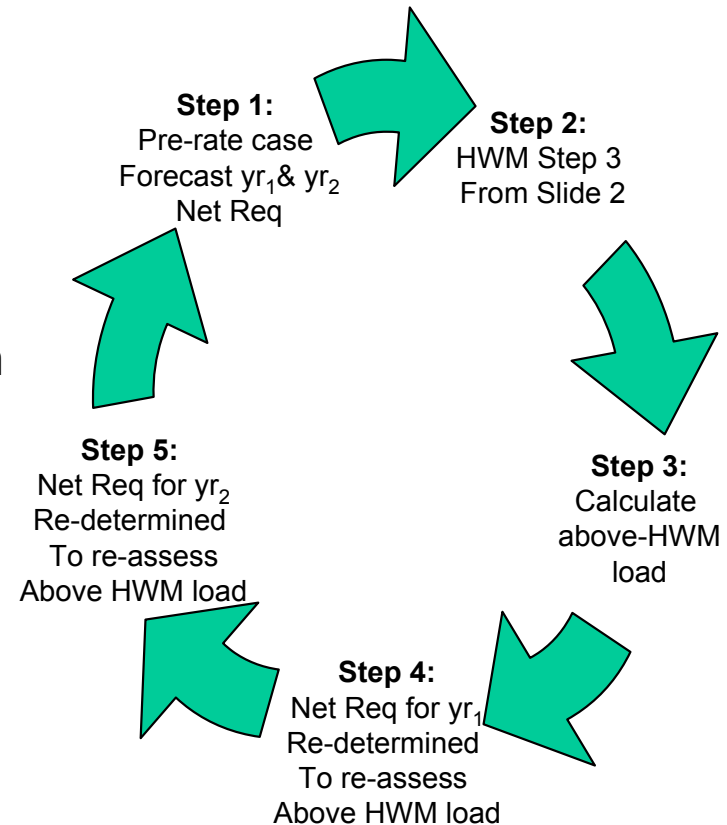
- When LPL signed its 20-year contract, it specifies neither non-federal resources nor an alternative Tier 2 pricing alternative, LPL by default elects BPA's Tier 2 default service (5-year commitment).
- LPL's Contract HWM is 44 aMW.
- **Step 1.** LPL's net requirement load forecasts are:
  - 46 aMW in FY12
  - 47 aMW in FY13
- **Steps 2 & 3.** No change to the contract HWM from Step 2. From Step 3, LPL's Tier 2 forecasts are:
  - 2 aMW in FY12
  - 3 aMW in FY13
- **Step 4.** No change to LPL's net requirement load forecast or Tier 2 amount for FY12.
- **Actual FY12 Loads.** LPL's actual load on BPA turns out to be 47 aMW. The 2 aMW of Tier 2 had been locked down, so the additional 1 aMW of load is sold and covered by the load variance charge. The risk associated with this variance will be mitigated through risk mitigation tool(s).



# Scenario 1, continued...

## FY2013 (2nd year of rate period)

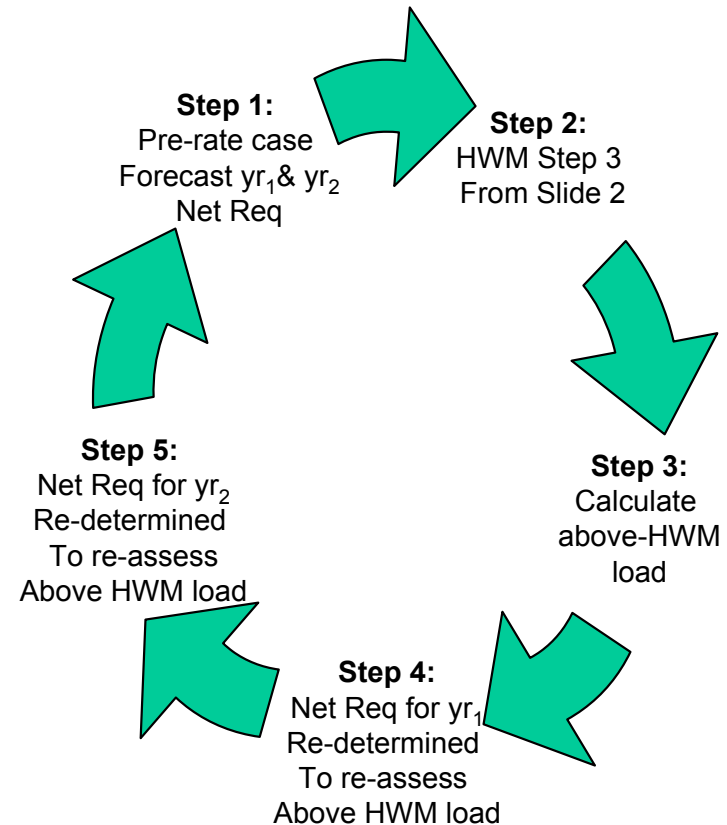
- **Step 5.** LPL's new FY13 net requirement load forecast is 48 aMW.
- **No Increase to Tier 2 Amount Within Rate Period (Approach 2).** LPL's Tier 2 amount remains 3 aMW because this amount was locked down in the rate case. The additional 1 aMW will be covered through the load variance charge.
- **Actual FY13 Load.** LPL's actual load on BPA is 47 aMW.
- **Notice to Change Tier 2.** In FY13, the first year LPL could notify BPA of a change to its minimum 5-year commitment, LPL chooses not to notify BPA of any change to its Tier 2 service. BPA continues to have the default service obligation after FY16. Every year of no notice to change adds a year to the BPA obligation and LPL commitment.
- LPL could have chosen to switch to one of BPA's other Tier 2 options or to diversify away from BPA's Tier 2 service.



# Scenario 1, continued...

## FY2014 (1st year of rate period)

- **Step 1.** LPL's net requirement load forecasts are:
  - 48 aMW in FY14
  - 49 aMW in FY15
- **Step 2 & 3.** No change to the contract HWM from Step 2. From Step 3, LPL's Tier 2 forecasts are:
  - 4 aMW in FY14
  - 5 aMW in FY15
- **Step 4.** No change to LPL's net requirement load forecast or Tier 2 amount for FY14.
- **Actual FY14 Load.** LPL's requirement load on BPA turns out to be 47 aMW. The 4 aMW of Tier 2 had been locked down, so LPL purchases less Tier 1 than its HWM provides for.

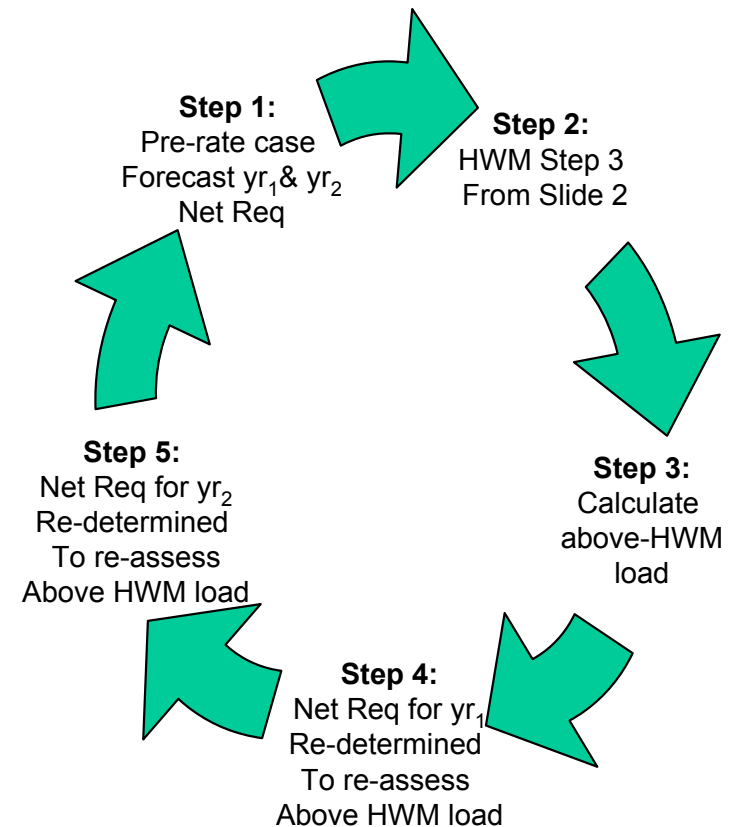




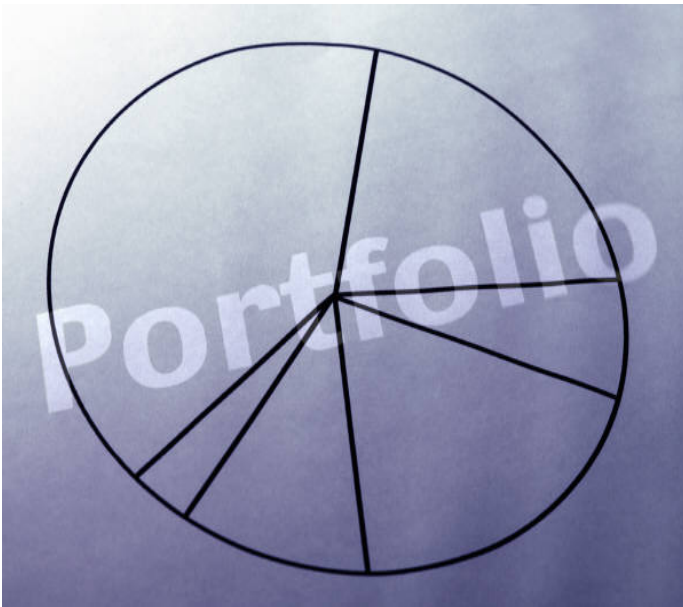
# Scenario 1, continued...

## FY2015 (2nd year of rate period)

- **Step 5.** LPL's new FY15 net requirement load forecast is 48 aMW.
- **Reduction of Tier 2 Amount for Load Loss Within Rate Period (Approach 2).** To preserve the amount of Tier 1 LPL purchases from BPA, 1 aMW of LPL's Tier 2 take-or-pay obligation is remarketed by BPA.
- **Tier 2 Remarketing Charge/Credit.** BPA remarkets the 1 aMW, and to keep BPA's other power purchasers' cost neutral from the outcome, BPA will charge or credit LPL the difference in market versus rate case value of the 1 aMW amount remarketed.
- In this case, the forward market price used at the time of remarketing LPL's unused FY15 Tier 2 is greater by \$5/MWh than the Tier 2 rate for FY15. This means that LPL will be credited \$43,800 for the unused 1 aMW of Tier 2.
  - $\$5/\text{MWh} \times 8760 \text{ hours} \times 1 \text{ aMW} = \$43,800$
- **And They Lived Happily Ever After.** Things continue on like this for LPL and BPA through the rest of the contract until LPL gives notice.



## Scenario 2: Lotsa chooses non-federal resources to meet its load above its HWM for FY2012-16



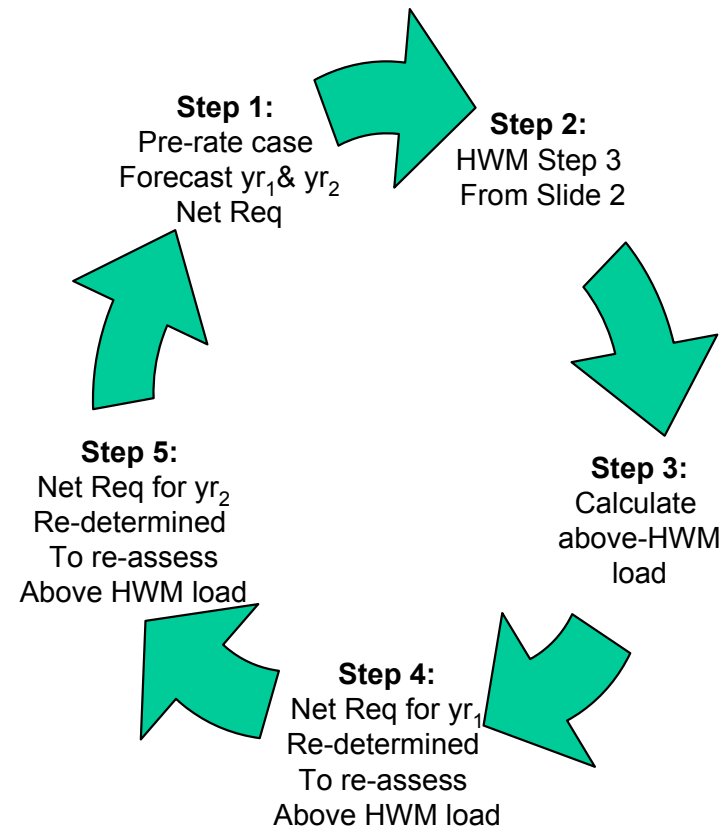
- When LPL signed its 20-year contract, it elected to serve its load above its HWM entirely with non-federal resources. To prepare for this change, LPL staffs up with schedulers and a power/risk manager.
- In addition, LPL secures a line of credit to help it weather unanticipated changes in the market and its above-HWM load. This line of credit also helps LPL secure its creditworthiness in the market.
- LPL has notified BPA that it will serve the load above HWM with flat blocks of power purchased from MWMarketer, a regional power marketer.
- A flat block is the Tier 2 “benchmark” shape in this scenario. Because Lotsa’s non-federal resources is in the benchmark shape, there is no additional value or cost generated to BPA or its other customers’ benefit or detriment, so no additional neutralizing credits or costs will be applied to LPL.



## Scenario 2, continued...

### FY2012 (1st year of rate period)

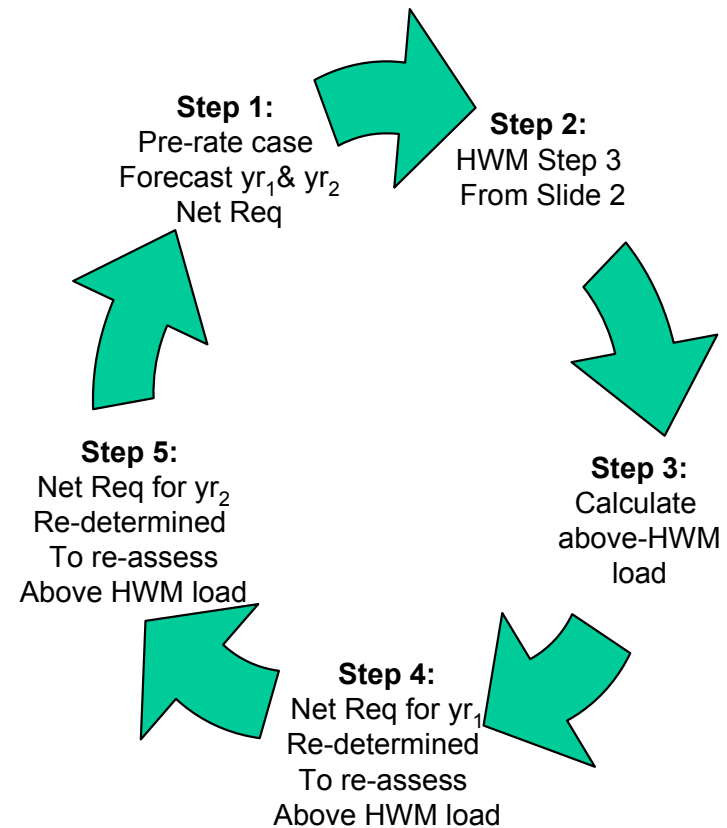
- As in Scenario 1, LPL's Contract HWM is 44 aMW.
- Step 1.** BPA forecasts LPL's total retail load to be 46 aMW in FY12 and 47 aMW in FY13.
- Step 2 & 3.** No change to LPL's contract HWM from Step 2. LPL will need to acquire 2 aMW of non-federal resources in FY12 and 3 aMW in FY13.
- Step 4.** No change to the forecasts.
- Actual Load in FY12.** BPA ends up serving 43 aMW of LPL load, so LPL ends up purchasing less Tier 1 than forecast.



# Scenario 2, continued...

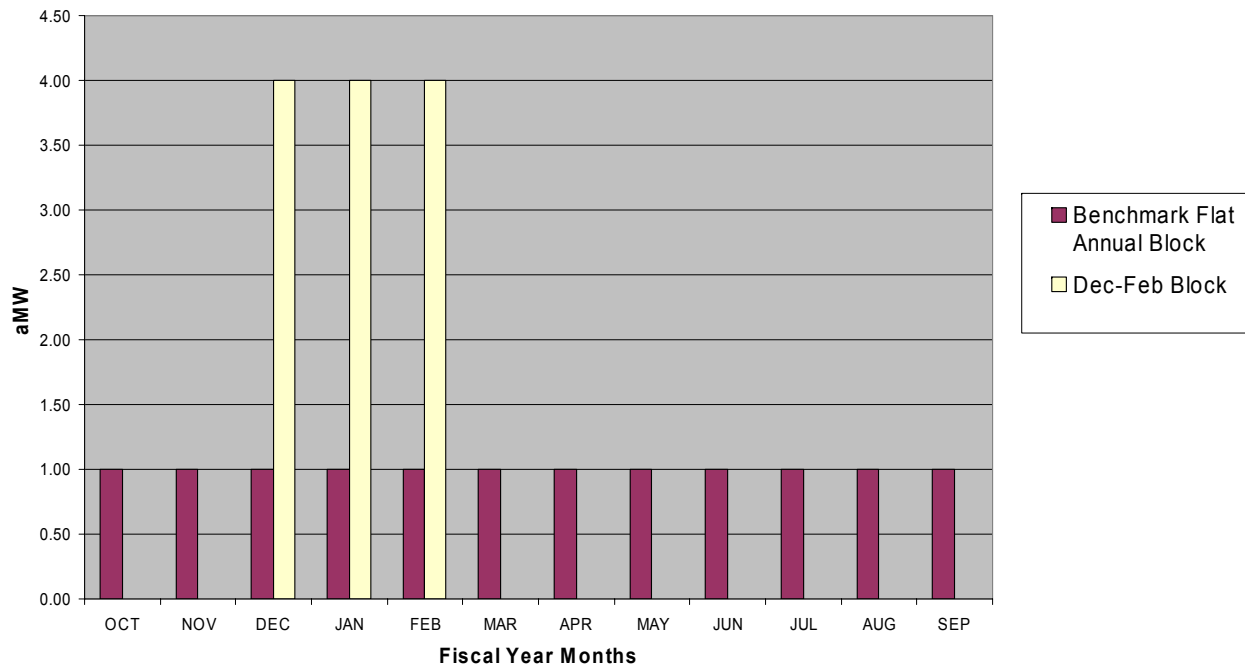
## FY2013 (2nd year of rate period)

- **Step 5.** LPL's total retail load forecast is revised downward by 1 aMW.
- **Removal of Resource Amount.** LPL exercises its right to remove for load loss, 1 aMW of its new non-federal resource to maintain its Tier 1 purchase at 44 aMW. LPL endeavors to remarket this amount, incurring the costs or benefits from doing so.
- **Actual Load in FY13.** BPA serves 45 aMW of LPL load, with that additional 1 aMW deviation from forecast charged at BPA's load variance rate.



# Scenario 2, continued...

Dec-Feb vs Flat Annual Block (per Annual aMW)



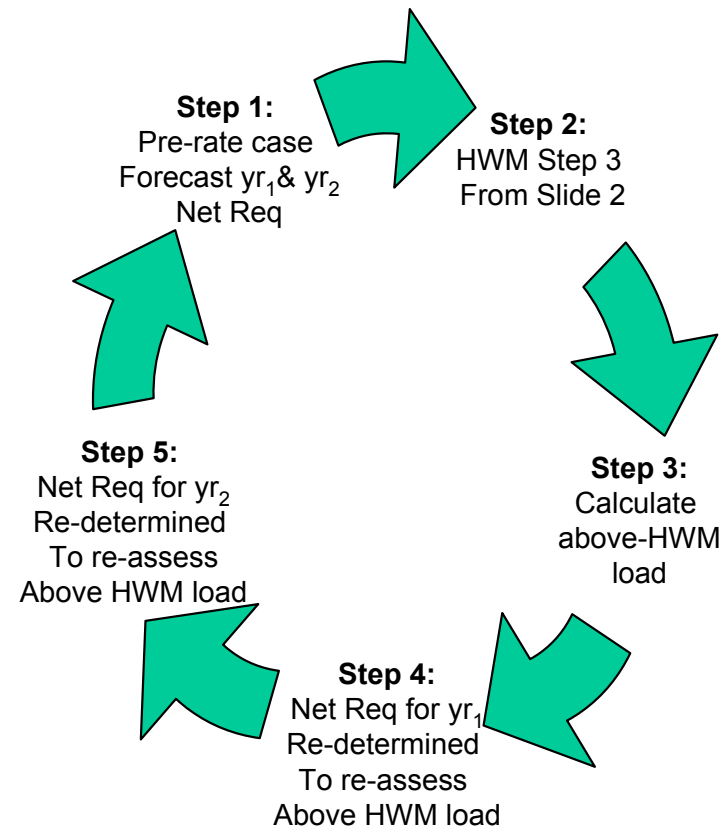
- Three-year Notice.** Also in FY13, LPL decides to continue to serve its above-HWM load with non-federal resources after FY16 (when the original 5-year commitment concludes).
- Change in Resource Shape for FY17.** LPL provides notice to BPA that it will no longer apply the non-federal resource in a flat block. Beginning in FY17, LPL will acquire a non-federal resource that is established in the shape of a three-month (Dec-Feb) winter block with equal hourly amounts.



# Scenario 2, continued...

## FY2014-15 (1st and 2nd year of rate period)

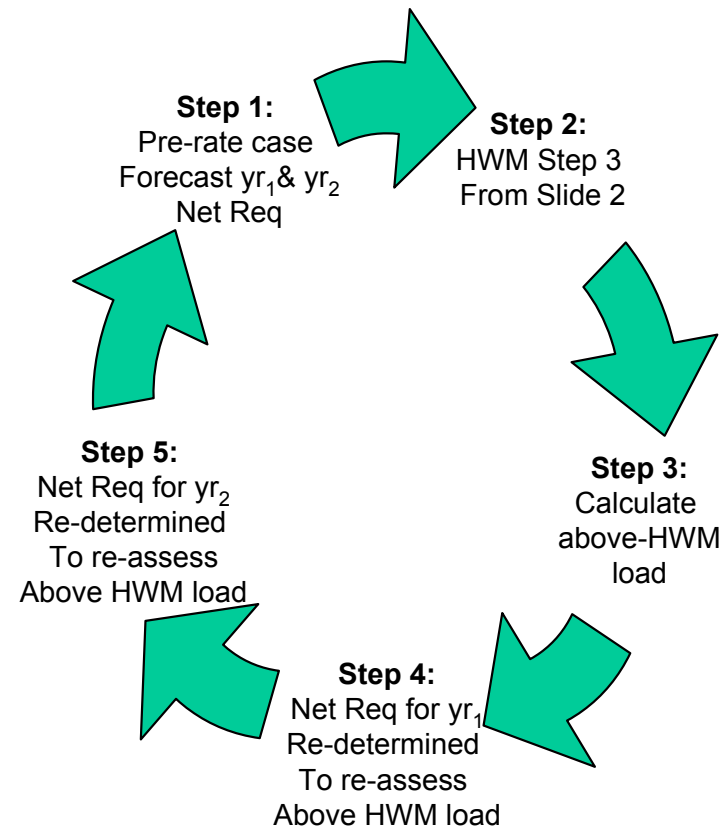
- **Step 1.** LPL's forecast total retail load is 48 aMW in FY14 and 48 aMW in FY15.
- **Step 2.** BPA forecasts a 4.5% reduction in the critical "Tier 1" FBS. This reduces LPL's Contract HWM by 2 aMW to 42 aMW for the FY14-15 rate period.
- **Step 3.** LPL must acquire 6 aMW of non-federal resources for both FY14 and FY15. MWMarketer sells LPL the additional flat blocks of power it now needs.
- **Perfected Forecasting.** Everything else turns out according for forecast for the rest of the rate period.



# Scenario 2, continued...

## FY2016-17 (1st and 2nd year of rate period)

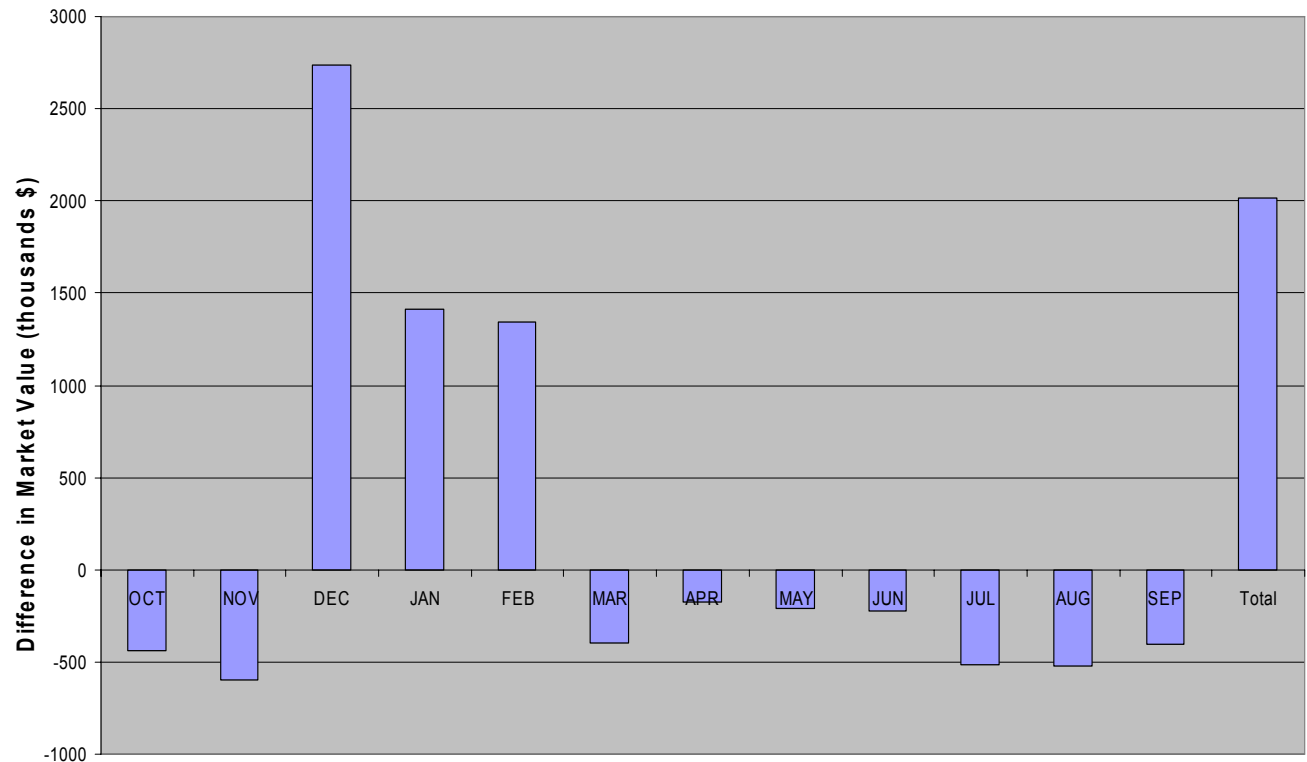
- **Step 1.** BPA forecasts LPL's total retail load to be 50 aMW in FY16 and 51 aMW in FY17.
- **Step 2 & 3.** The same reduction to LPL's Contract HWM remains from the previous rate period. So LPL must acquire a flat block of 8 aMW in FY16 and a shaped block of 9 aMW for FY17.
- **Self-supplied Tier 2 Resource Shape Adjustment.** In the rate case, BPA calculates the value/cost of LPL's Dec-Feb block by comparing it to the value/cost of a flat annual block, given the market price forecasts in the rate case. (See next page.)



# Scenario 2, continued... FY2017 (2nd year of rate period)

- The winter shape of the LPL's non-federal resource leads BPA to forecast a reduction in Tier 1 balancing purchases of about \$2 million in FY17, compared to the case of LPL applying its non-federal resource in the benchmark shape.
- The forecast reduction in balancing purchase costs is credited to LPL.

Deviation in value of Dec-Feb Block compared to 9 aMW Flat Annual Block

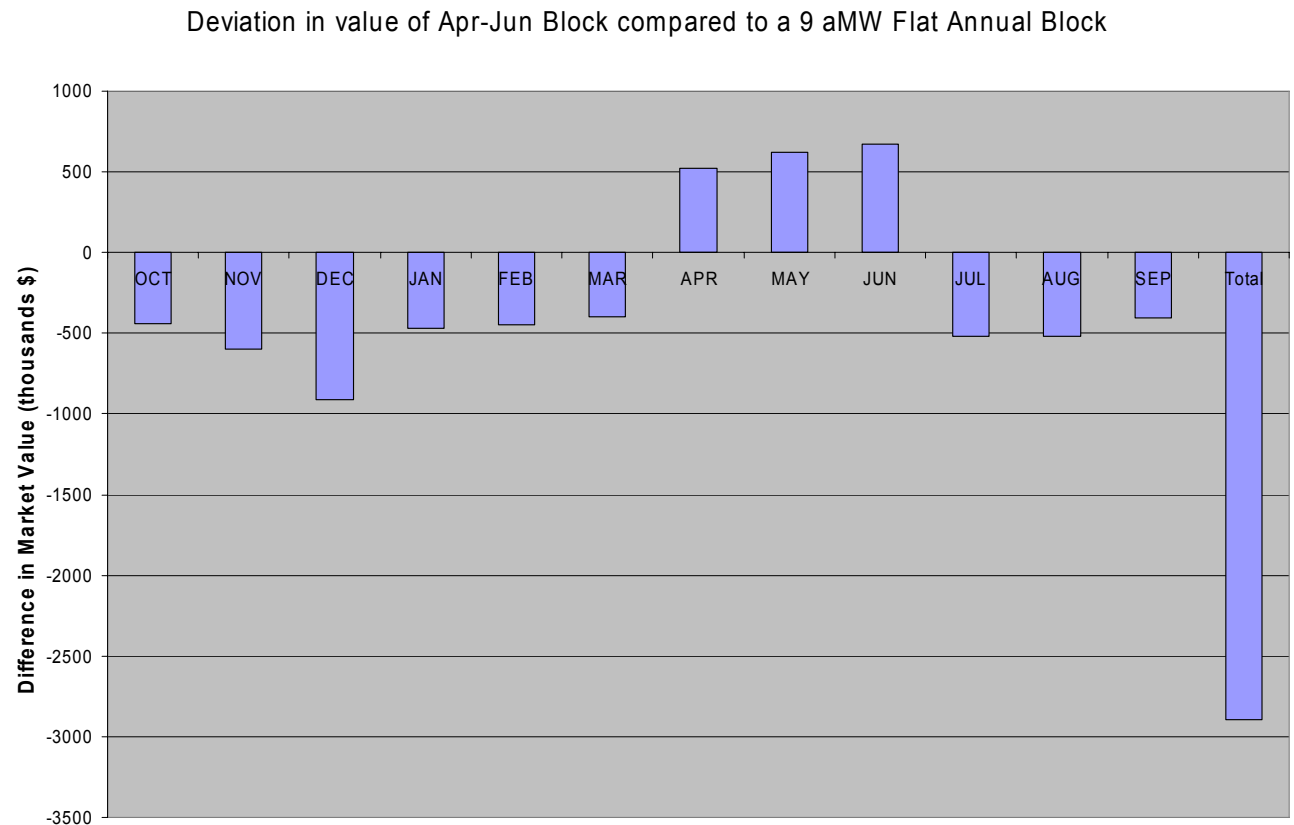




# Scenario 2, continued...

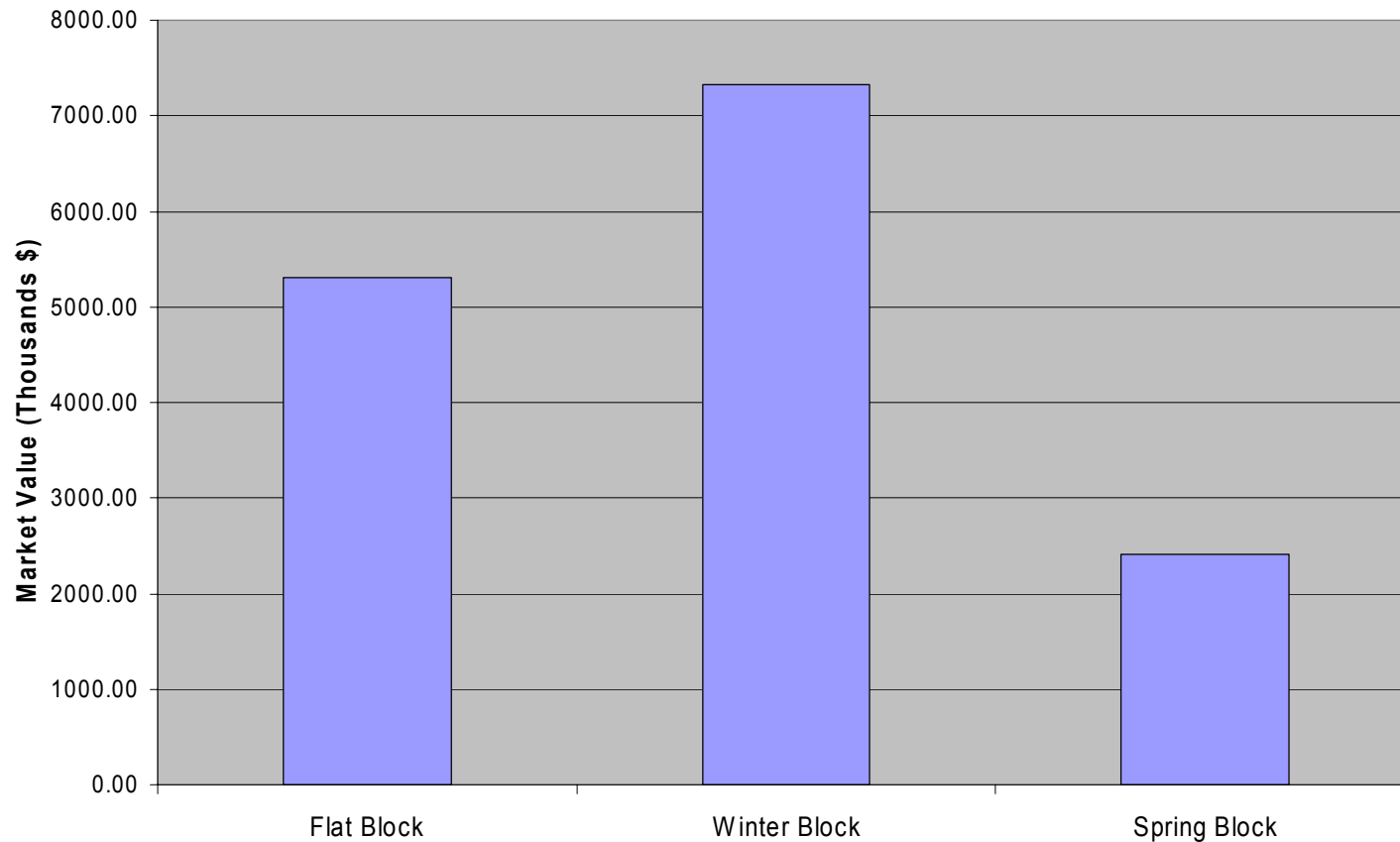
## FY2017 (2nd year of rate period)

- If LPL had committed to a different shape, for example, an April-June block, the balancing purchase costs would be greater than the benchmark case. The difference in value as compared to the benchmark is illustrated in the chart to the left.
- This shape has created an additional cost to BPA and BPA's power customers of about \$2.9 million in FY17.
- BPA would charge LPL this additional amount to keep its Tier 1 purchasers whole.



# Scenario 2, continued... FY2017 (2nd year of rate period)

Annual Market Value of 9 aMW (Flat vs Shaped)



For Regional Dialogue Discussion  
Purposes Only -- Pre-decisional

