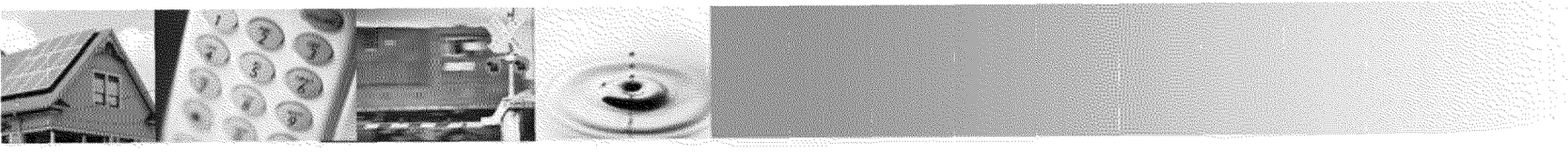
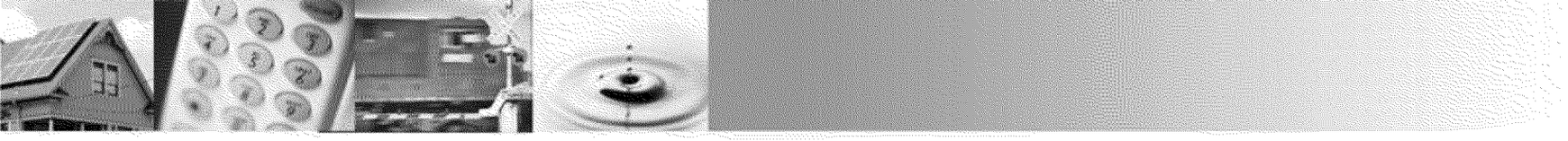


Joint Reliability Plan Workshop "B"

Overview of Reliability Planning and Programs

California Public Utilities Commission

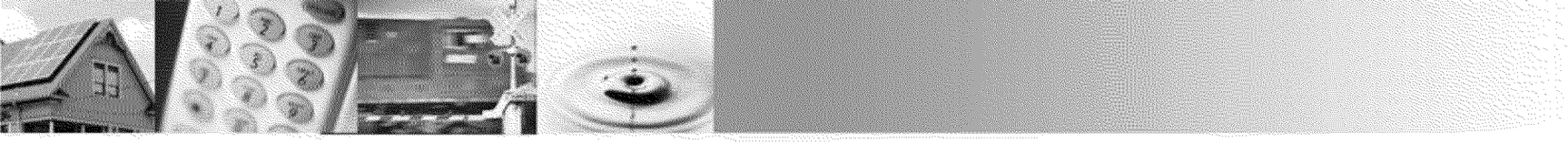
May 13th 2014



Questions in JRP Track 1

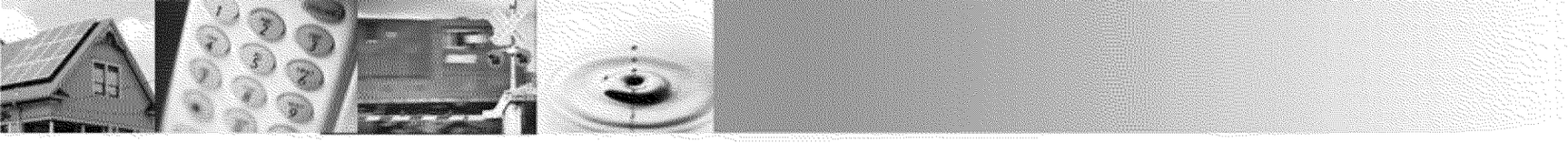
- Should we place multi-year RA requirements on jurisdictional LSEs due to reliability needs?
- What are the potential costs and benefits?
- What alternatives should be considered?
- What types of capacity should be included in multi-year requirements? What duration?
- How should multi-year requirements be designed to mitigate costs/maximize benefits?

JRP Workshop "A" JRP Workshop "B"



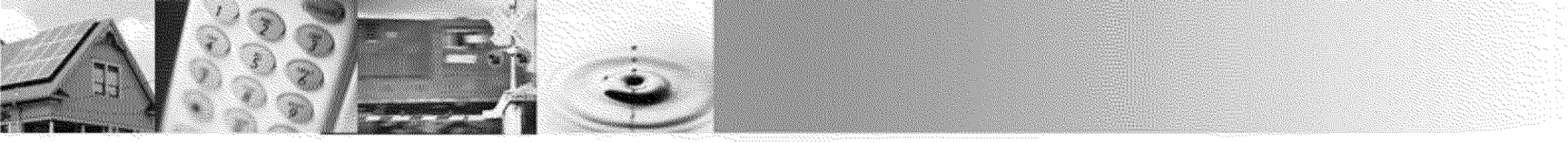
Focus of Workshop

- potential design elements for multi-year forward RA
- Consider, if implementing MY-RA:
  - What types of capacity?
  - What % of procurement is appropriate?
  - How should we forecast? What will requirements be based on?
  - What duration? Annual, monthly, seasonal?
  - How to ensure consistency with loading order?
  - Etc.
- Staff Report/Proposal expected July 1



Summary of 1st Workshop

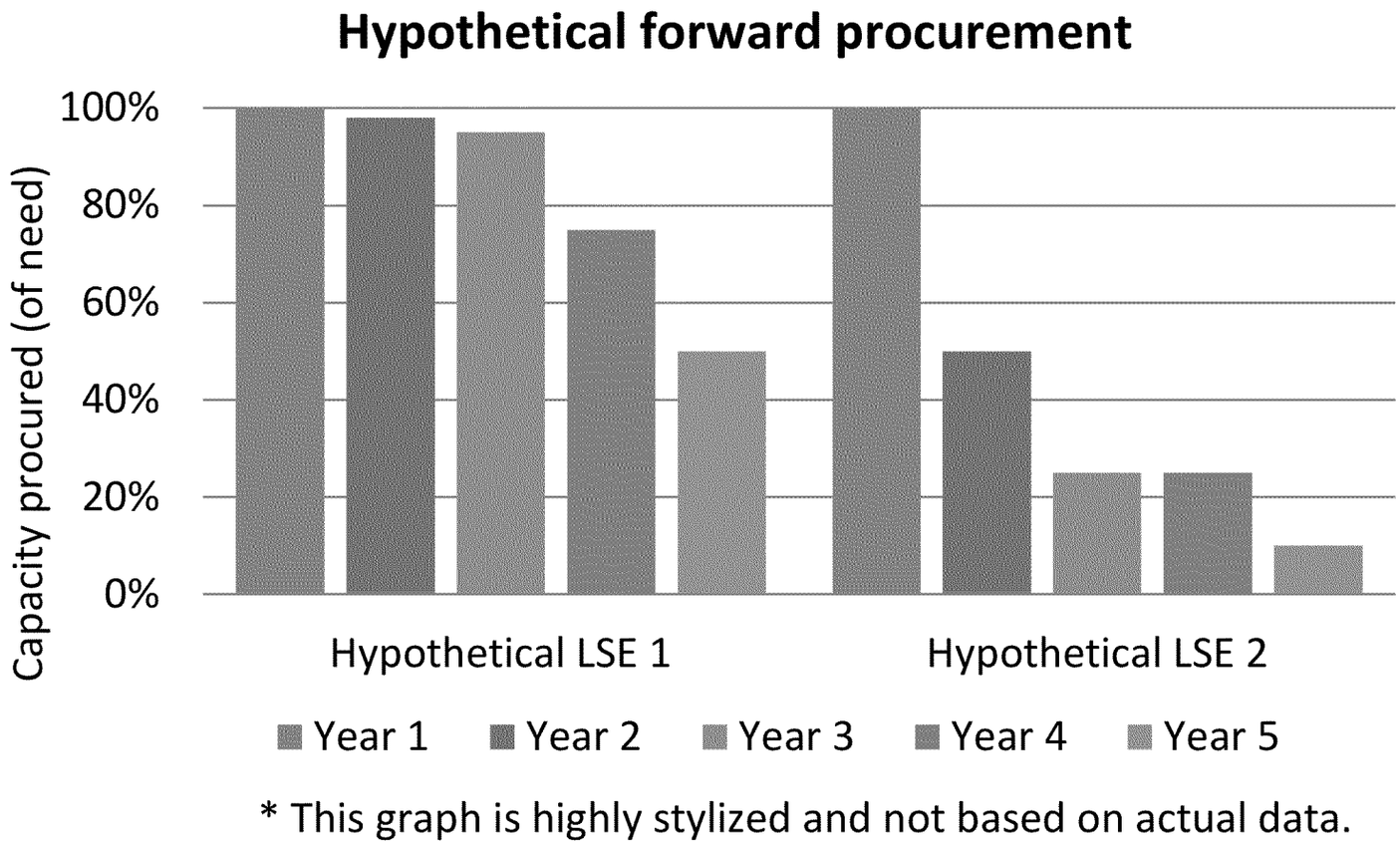
- at risk of retirement are the resources on the margin:
  - Resources with high operational costs
  - Resources in need of upgrades
  - Generic resources that will require investment to become flexible
- Do we need these resources?
- How do we know if we need them?
- Does information on forward contracting provide sufficient confidence regarding future reliability?



More Considerations….

- Multi-Year RA may be appropriate to provide generators a clearer market signal
- The costs (and benefits) would vary greatly depending on the requirements
- Requirements may be problematic for ESPs
- Requirements may be problematic for CCAs who aim to go beyond RPS
- CAM: should it be reviewed?
- Need for mechanism to efficiently allow procurement adjustments

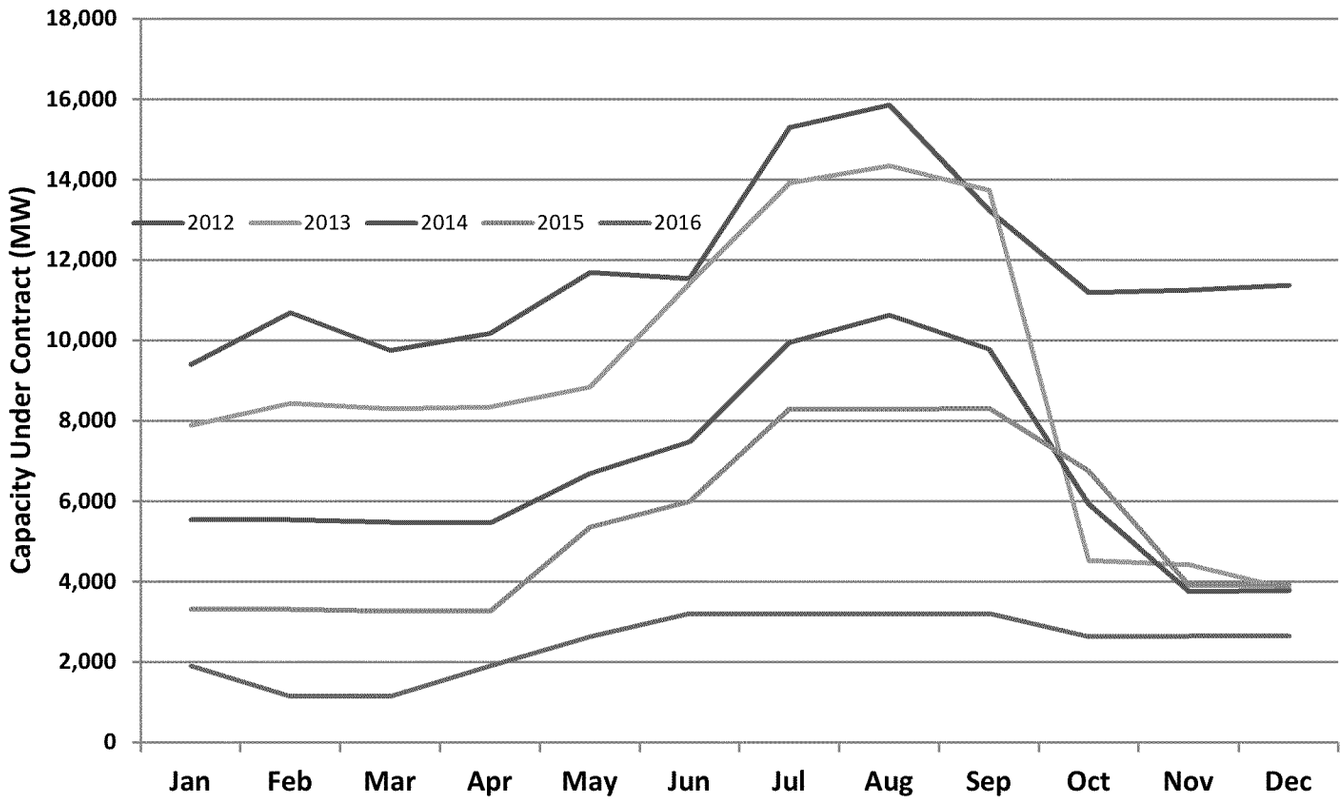
Should System Capacity Forward RA Requirements Mirror Existing Procurement patterns?



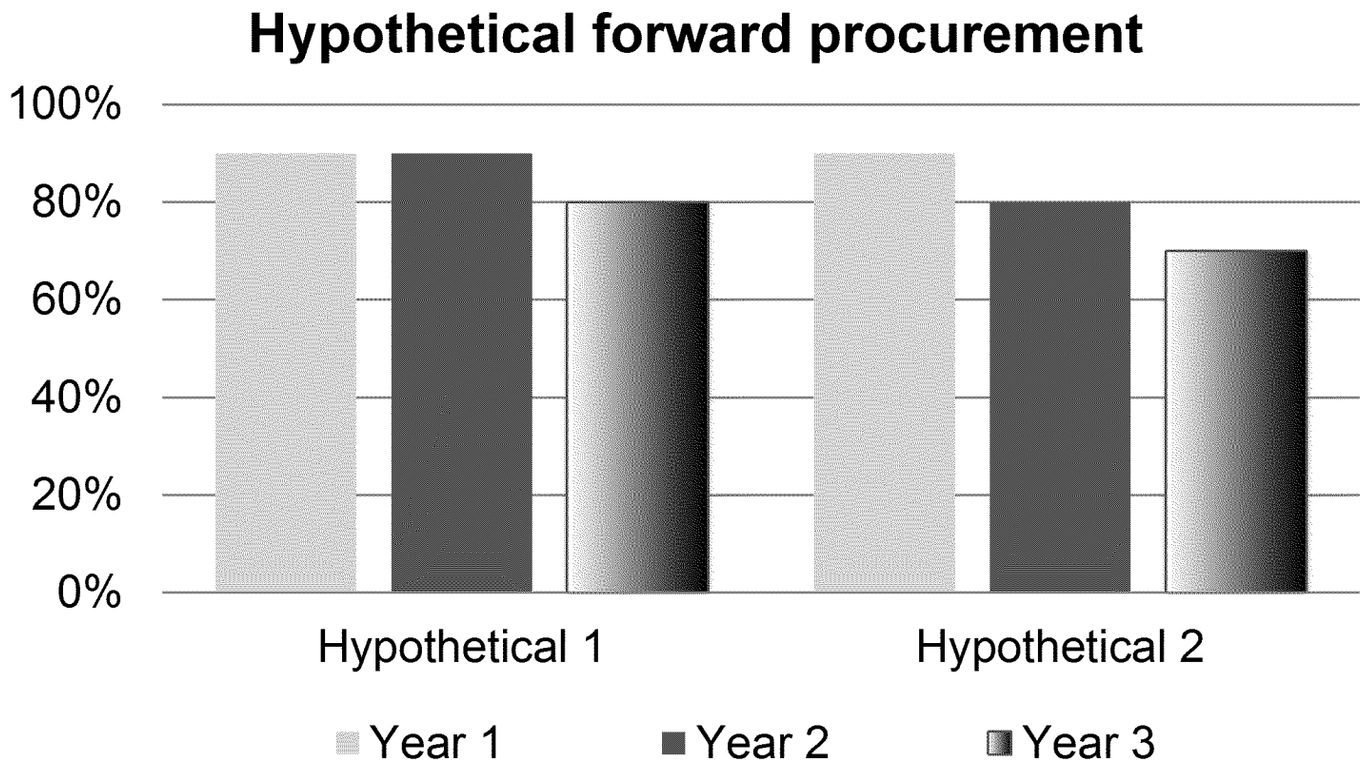
* This graph is highly stylized and not based on actual data.

Figure 8. Contracted RA Capacity by Month, 2012-2016

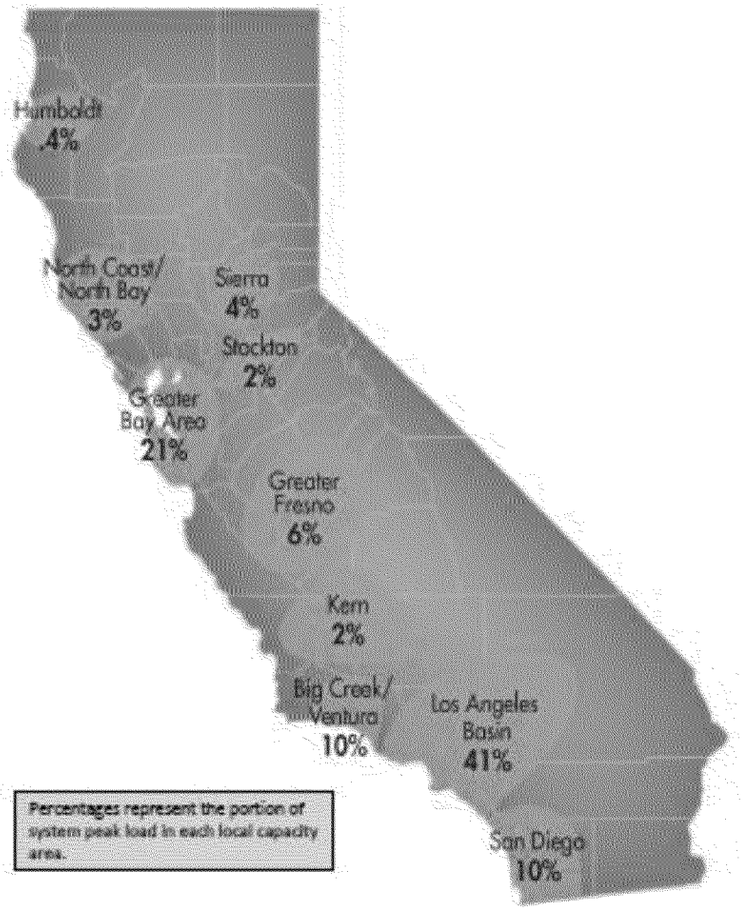
(from 2012 RA report)



Potential Forward System RA Requirements



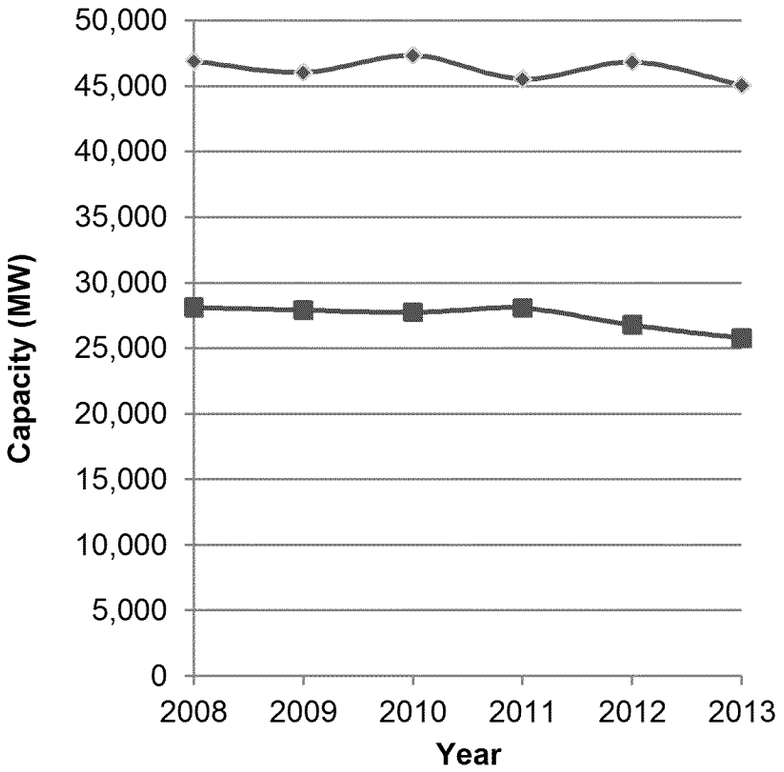
Local Capacity Requirements (LCR)



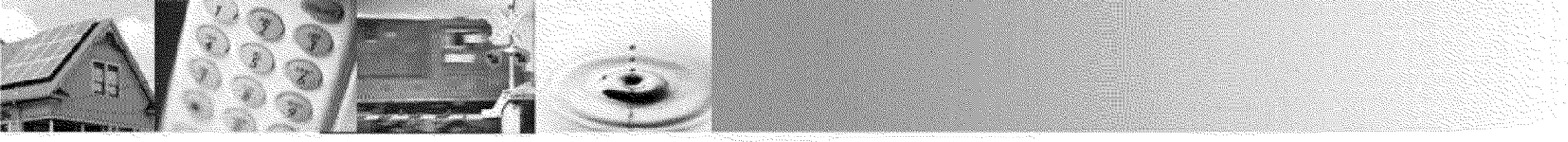
- CAISO Local Capacity Technical Study: power flow modeling determines LCR in 10 local areas using 1-in-10 year peak demand forecast with contingencies - loss of two major transmission elements (N-1-1)

CPUC adopts local procurement obligations annually through decisions issued in RA proceeding

Local Capacity RA Requirement Amounts to around 60% of CAISO System Peak



2013 Breakout:	MW
La Basin	10,295
Big Creek/Ventura	2,241
San Diego	3,082
Greater Bay Area	4,502
Other Areas	5,649
Total Local Requirements	25,769
CAISO System Peak in 2013 (6/28)	**45,097**

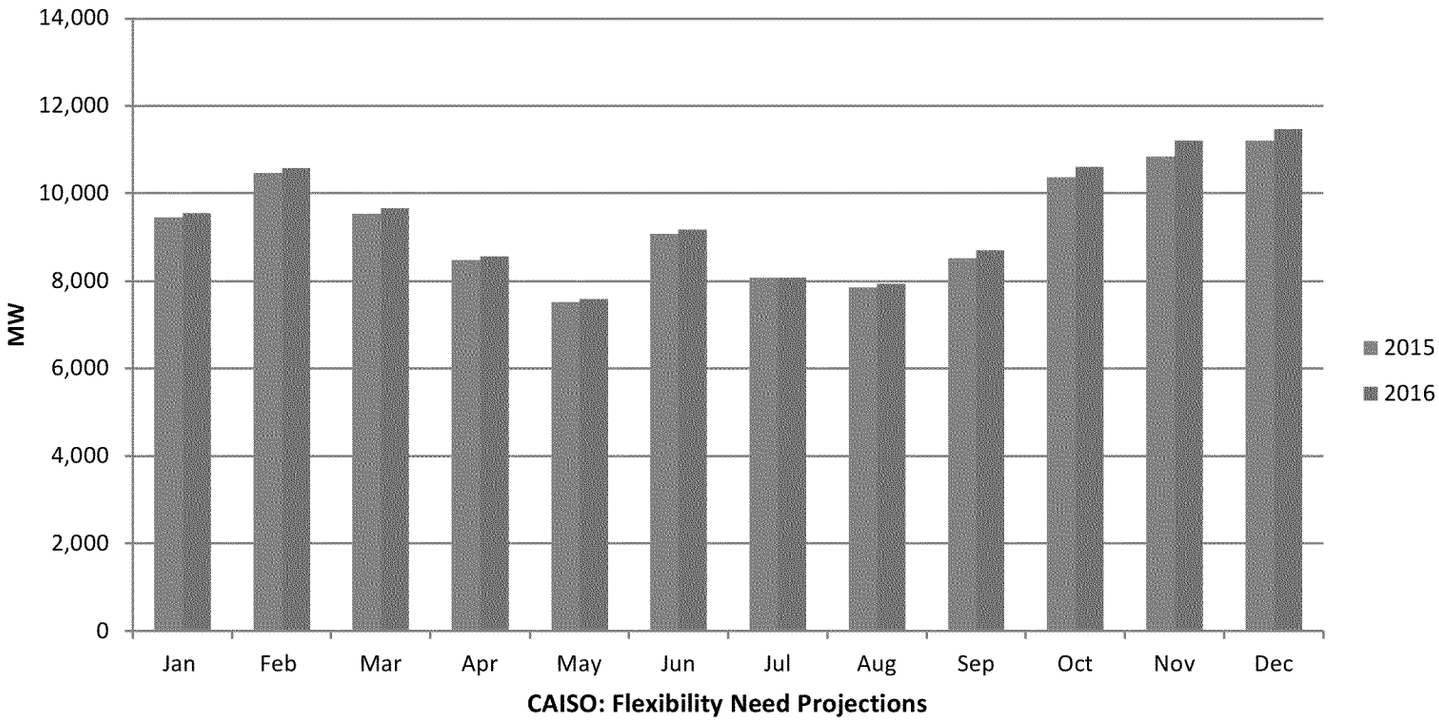


Should we have multi-year Local RA Requirements?

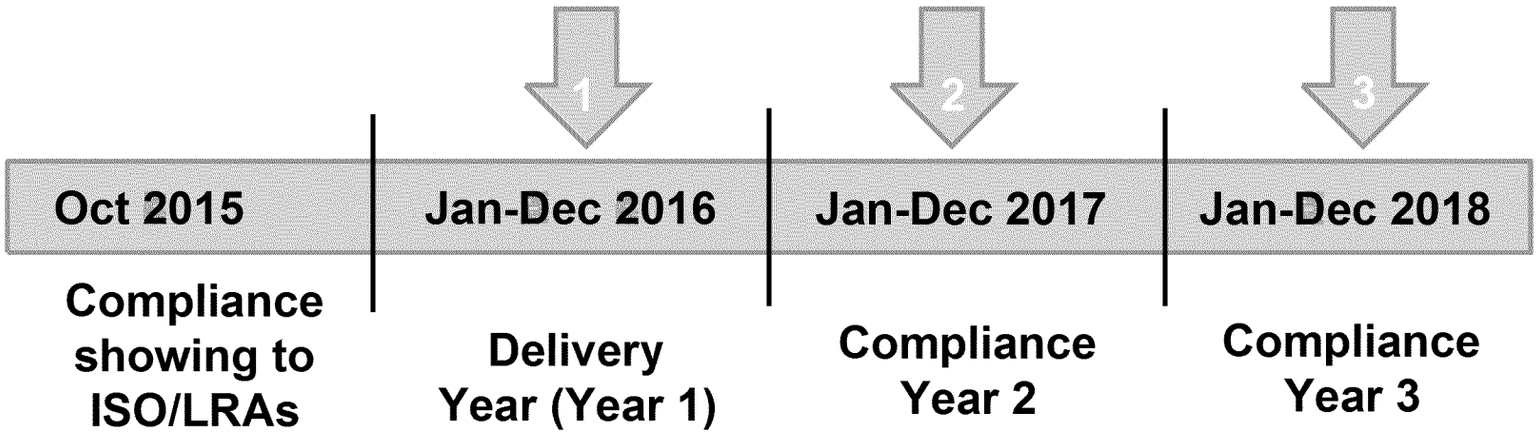
- Current local requirement is 100%
- What makes sense for years 2-3?
  - Only set requirements for specific areas?
  - Set requirements in specific, constrained areas on a temporary basis?
  - Require demonstration of 85% for year 2 , 75% for year 3?
- Local capacity already receives premium price

Should we have multi-year Flexible Requirements?

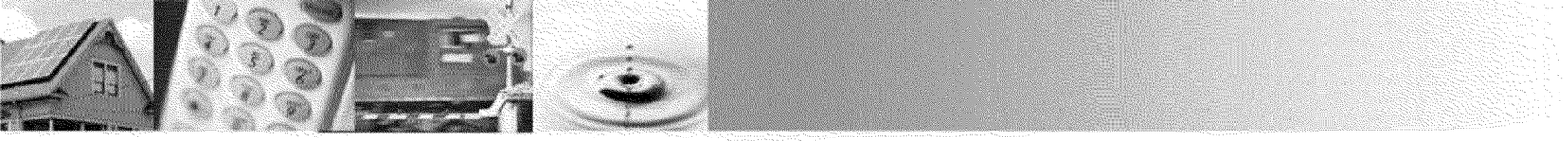
- Methodology is undecided for year 1 requirements—need is not clear



Conceptual Compliance Timeline



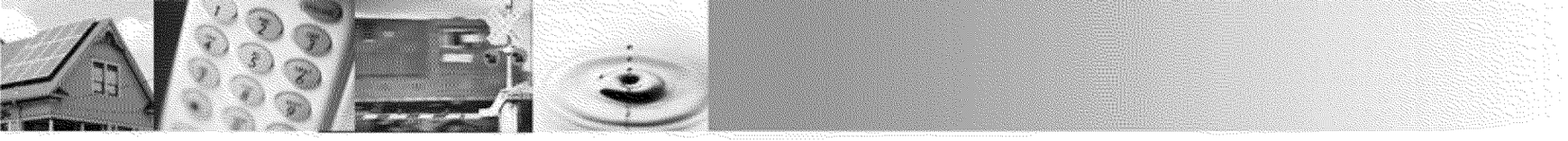
Capacity Type:	RA Compliance Showing - Procurement Requirements as a % of Forecast Needs		
System	90% (May-Oct)	80%	70%
Local	100%	85%	75%
Flexible	90%	90%	80%



Inter-Agency Panel:

Implementation/Mechanics of Multi-Year RA

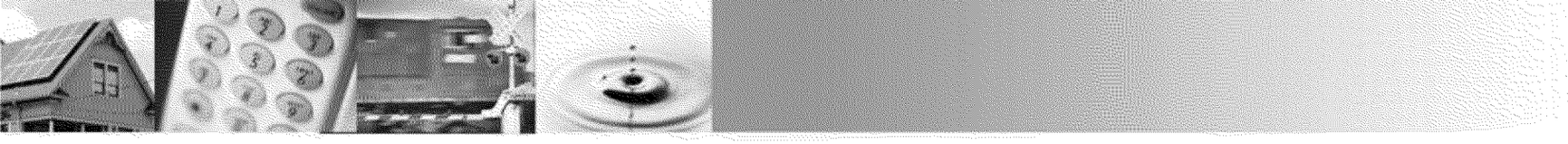
1) Load Determination for Years 2-3
   a) CEC currently developing Multi-Year Forecast
   b) Forward LSE Load Forecasts?
   c) Draw in other sources of information?
   d) Assumptions required for year 2,3?
2) CPUC RA Review & Assumptions Required
   Path 26, compliance review, NQC (COD/COM), DR, CAM & CHP allocations
3) CAISO: Supply Plan Review, Pmax, Backstop
4) Determination of Flexibility Needs?
   - Partitioning Load?



Implementation Issues for Forward RA Discussion Points:

Requirements:

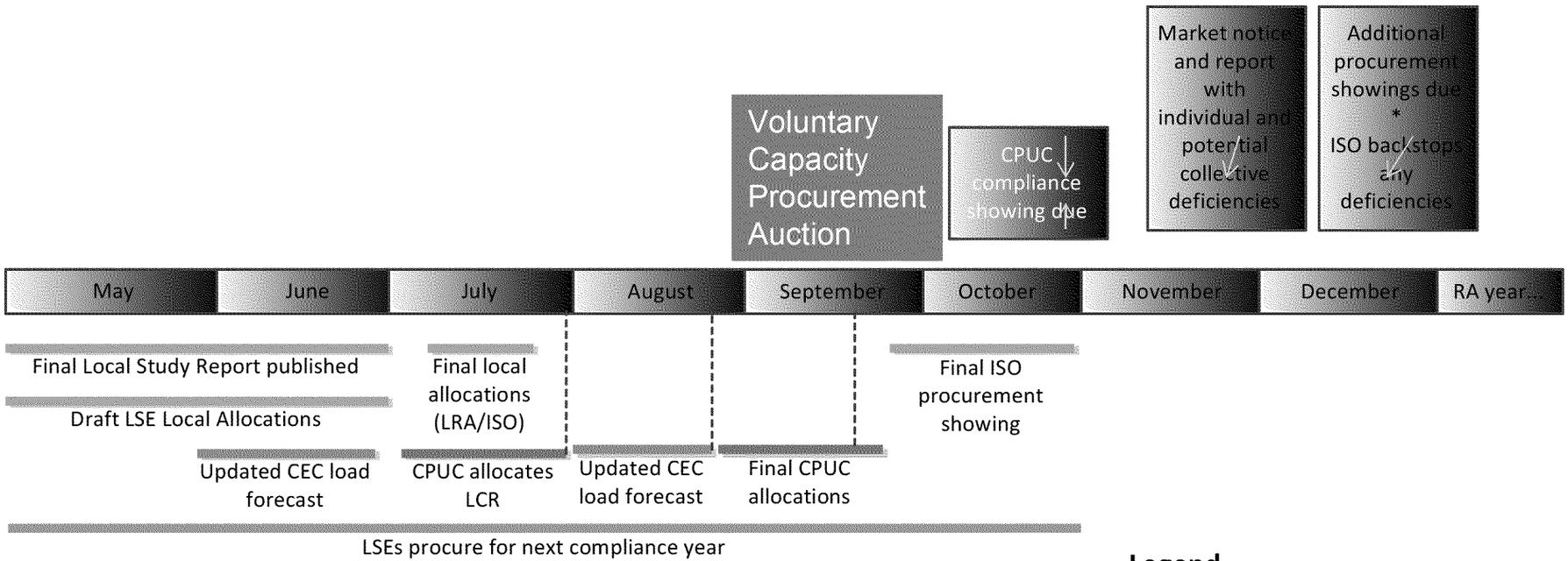
- "Feathering," ie, decreasing from year 1-3
- "Staging," ie, program requirements increasing over time (ex: beginning at 75% for 2016 but increasing to 90% by 2018)
- Penalty Structure?
- Program Sunset? Are reliability concerns temporary, as a result of SONGs/OTC plants closing, or are they permanent?

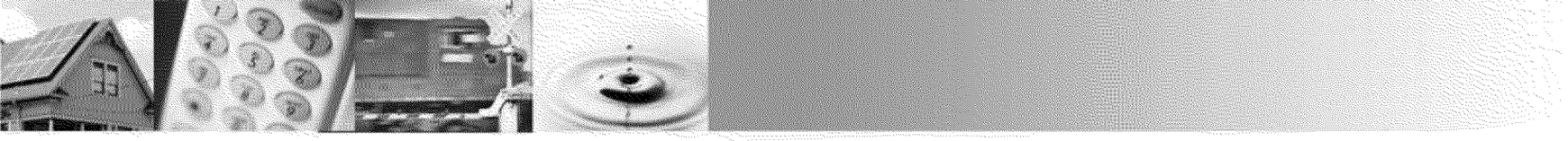


Mitigation of over-procurement: mechanisms for re-adjustment in the year ahead

- Voluntary forward auction
- “bulletin board”
- How can we facilitate a “marketplace”
- Bilateral procurement, will it work?
- If everyone overprocures—then what?

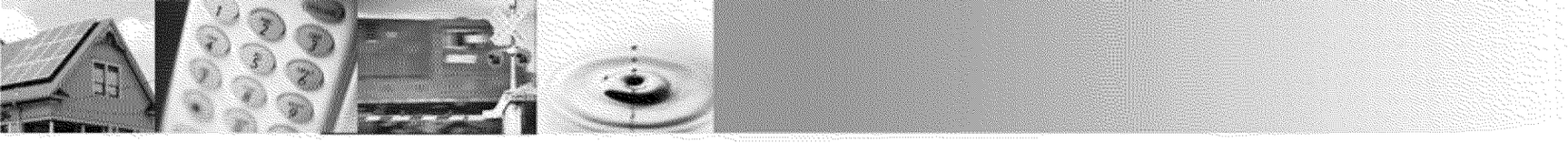
Proposed in RSI: potential timeframe for voluntary auction for multi-year RA





Discussion: Capacity Allocation Mechanism

- 20% of resources are going thru CAM
- Non-IOUs are contributing to reliability via CAM
- If there will be CAM for years 2-3 perhaps multi year RA requirements are not necessary for non-IOUs?
- Questions from parties at 1st Workshop:
  - Uncertainty re: CAM amounts in relation to the forward obligation
  - Who bears the risk if there is more (or less) CAM than forecasted?
  - if ESPs are meeting their RA obligations, why should there be CAM at all?
  - Vice versa, if ESPs are subject to CAM, do they also need to comply w/ RA?



Thank you!

Further Comments on workshops, please contact:

Meredith Leigh Younghein

mly@cpuc.ca.gov

(415) 703-5953

(Before June 15th)