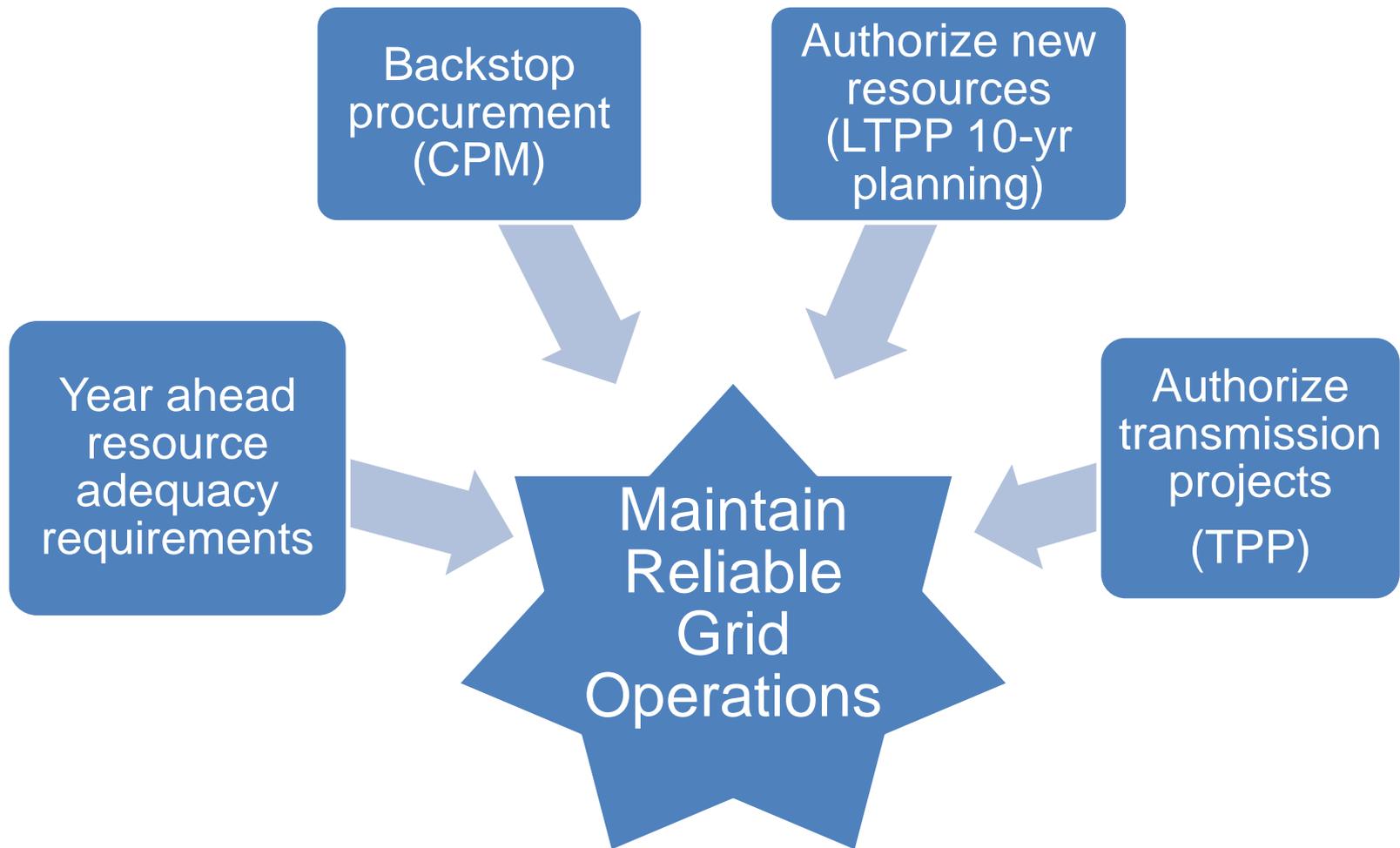


FERC Technical Conference

ISO and CPUC Presentation of the Joint Reliability Framework

July 31, 2013

The current procurement framework combines several elements that support grid reliability.

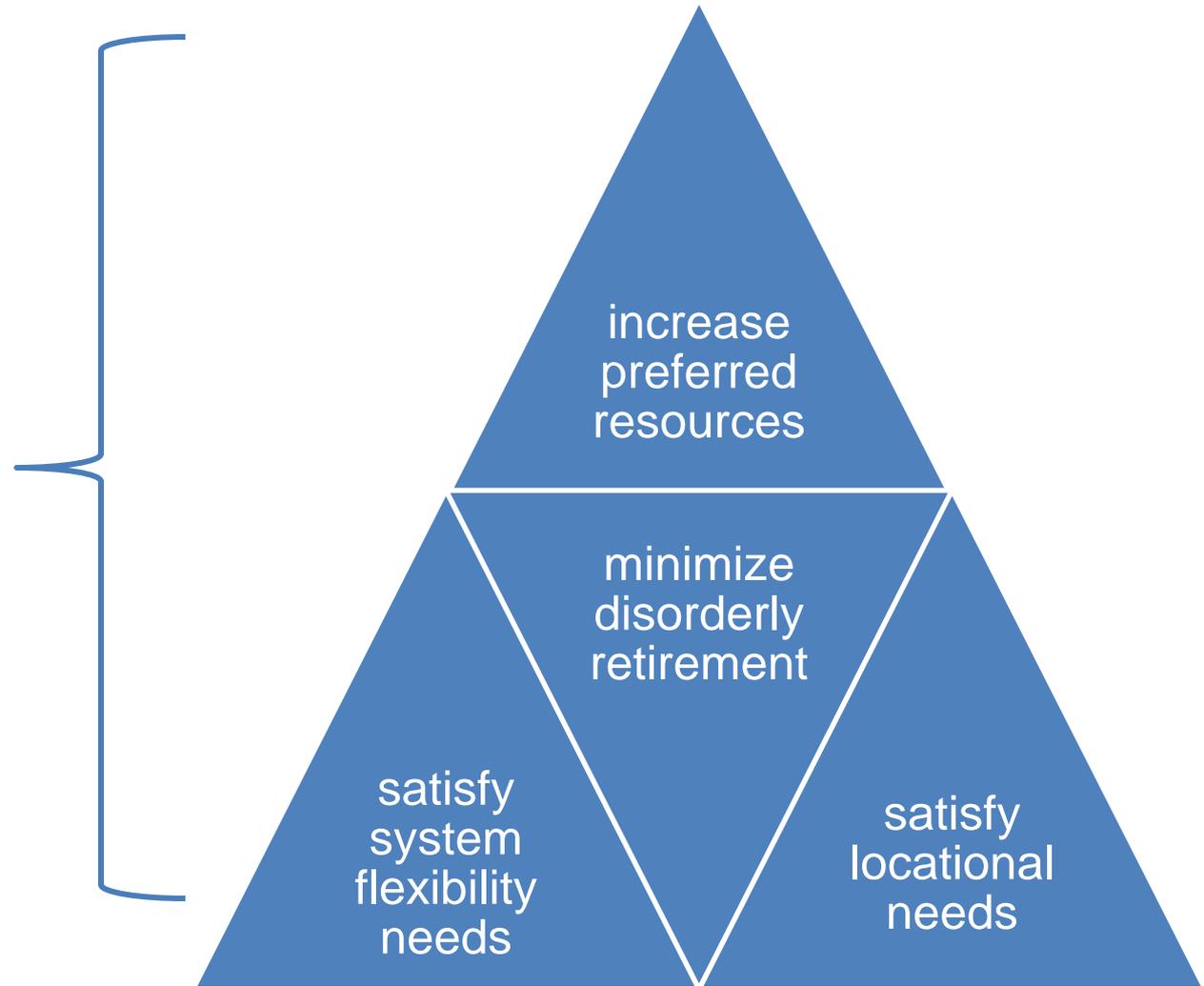


Several issues facing the balancing area may cause reliability concerns if not timely resolved.

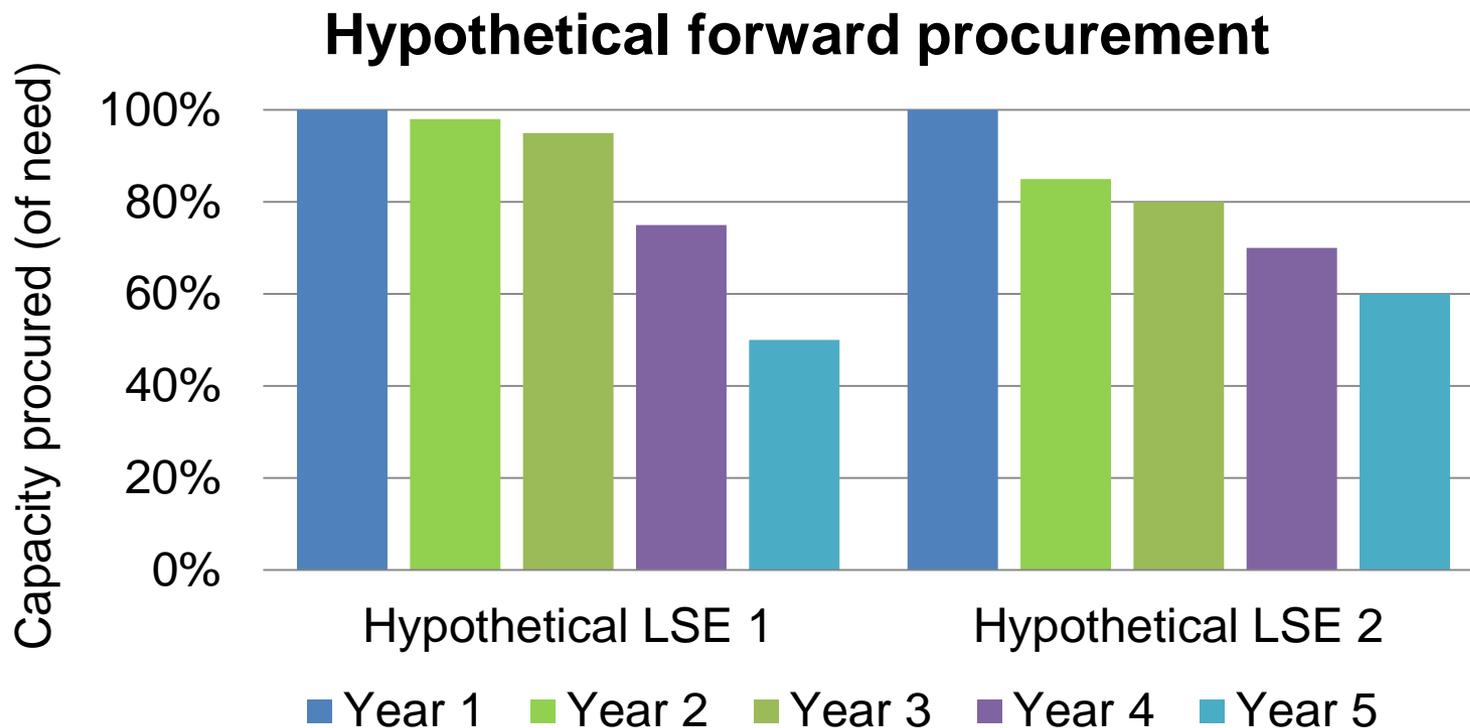
- Uncertainty whether one-year ahead procurement of generic capacity can ensure on-going reliable system operations
- No transparency of “intermediate-term” procurement
- No RA requirement beyond one-year to entice or support preferred resources, repowers, and other short development lead time resources
- Growing need for resource “capabilities” versus resource capacity
- Concern over sufficient “revenue adequacy”

The ISO and CPUC are collaborating to resolve these challenges and balance several important objectives.

Procurement
framework
must
address
these
objectives



Forward capacity procurement occurs today, which is not transparent to ISO or enforceable as a reliability requirement on all LSEs.



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

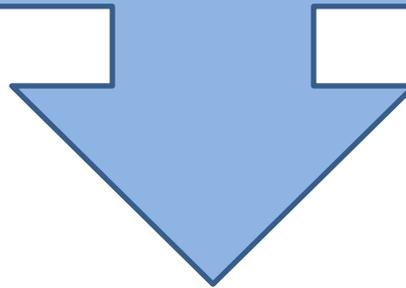
We also identified three specific goals for improving the existing procurement framework

- 1** Increase transparency to ISO of forward procurement
 - Provide information to guide planning/procurement decisions
 - Provide market signal of the value of marginal capacity
 - Minimize risk of disorderly retirements
- 2** Replace the expiring CPM with a market mechanism
 - Transition from administrative to market based backstop capacity procurement mechanism
- 3** Provide new procurement mechanism and competitive opportunities for preferred resources
 - Enhance participation in demand response, storage, in near-term capacity markets
 - Increase competition between conventional and preferred resources

Joint Reliability Framework Overview

Current procurement framework

- 1-yr ahead resource adequacy obligations
- ISO's backstop capacity procurement mechanism (CPM)
- 10-yr resource planning and procurement (e.g., LTPP)
- ISO's transmission planning process



Institute three changes to existing procurement and planning processes

Three Proposed Enhancements

1. Establish 2-3 years forward resource adequacy obligations

Minimize risk of unplanned resource retirements, ensures sufficient capacity available

2. Establish ISO-run capacity auction (Reliability Services Auction)

Replaces administrative CPM procurement with market-based procurement mechanism and provides LSEs with voluntary option for forward procurement

3. Publish annual 4-10 years joint reliability planning assessment

Provides market with unified and transparent needs assessment

1) Multi-Year Forward Resource Adequacy

“Feathered”
procurement obligations for
2, 3 years before delivery
year (system, local, & flexible
capacity)

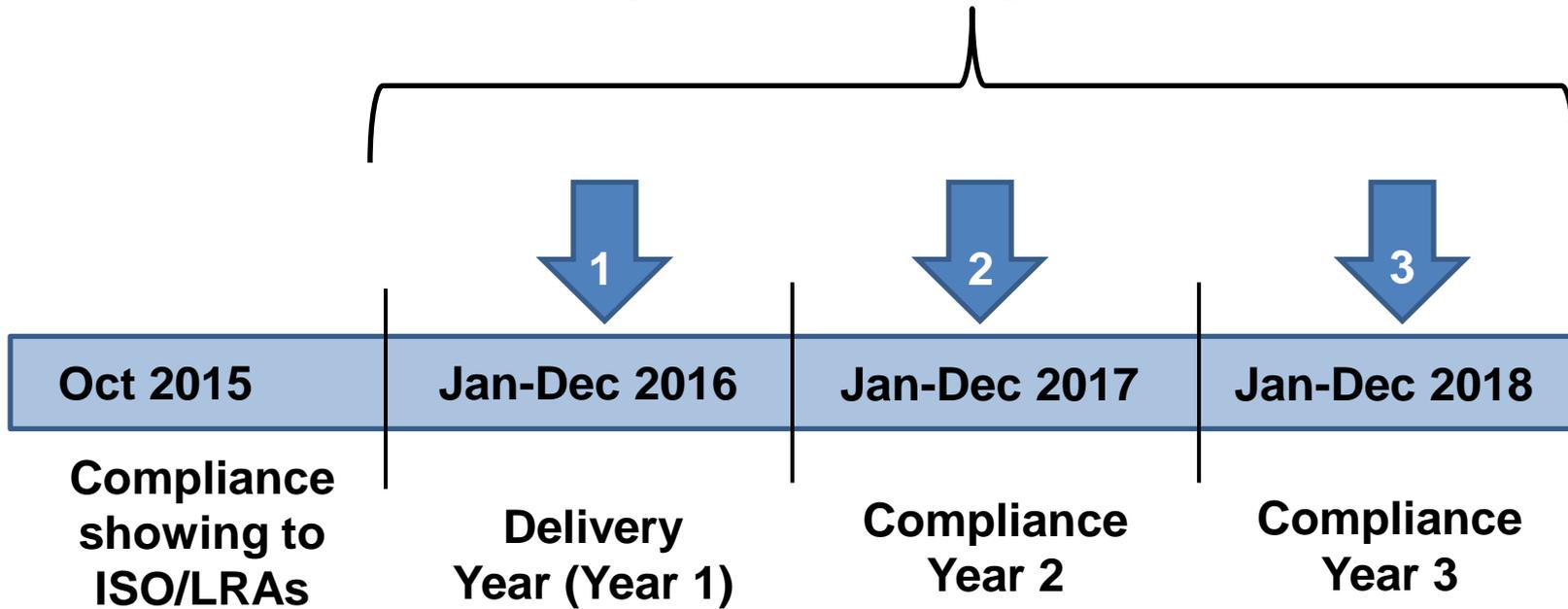
Requirements set by CPUC
for its jurisdictional LSEs;
ISO tariff for other LSEs

Key Elements

Deficiencies cured via ISO-
run backstop capacity
auction (RSA)

LSEs can further show ISO
all resources procured
(required for CPUC
jurisdictional LSEs)

Exemplar RA Compliance Timeline



Capacity Type:	RA Compliance Showing - Procurement Requirements as a % of Forecast Needs		
<i>System</i>	90% (May-Oct)	TBD	TBD
<i>Local</i>	100%	TBD	TBD
<i>Flexible</i>	90%	TBD	TBD

2) Reliability Services Auction

1

Mandatory backstop procurement

- ISO procures capacity through ISO-run auction subject to market mitigation rules.
- Cure individual LSE deficiencies in year 1, 2, or 3.
- Cure collective deficiencies in year 1, years 2-3 to be determined.

2

Voluntary forward procurement

- ISO matches buy/sell bids for capacity to meet or exceed minimum compliance requirements.

*** May still need an appropriate backstop mechanism for sudden onset significant events and exceptional dispatches.**

The Reliability Services Auction would add an important and beneficial element to the market.

A Reliability Services Auction would:

- Produce a transparent and benchmark forward capacity price;
- Provide a LSEs an option for full or partial forward capacity procurement;
- Deliver a platform for preferred resources to develop and sell forward capacity; and
- Allow sale of excess capacity.

3) Reliability Planning Assessment

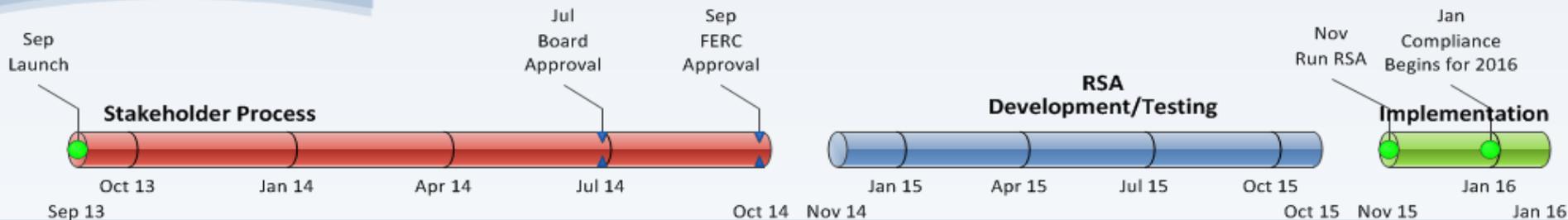
- CPUC and ISO jointly publish 4-10 projection years of resource needs (system, local, flexible)
- Gives view of projected resource needs against both installed and procured fleet
 - CPUC-jurisdictional LSEs to give ISO data showing all resources procured through 10 yrs (owned/contracted)
 - Non-CPUC jurisdictional LSEs can provide same data
- For information purposes only, does not create procurement obligations or ISO backstop authority

CPUC Processes

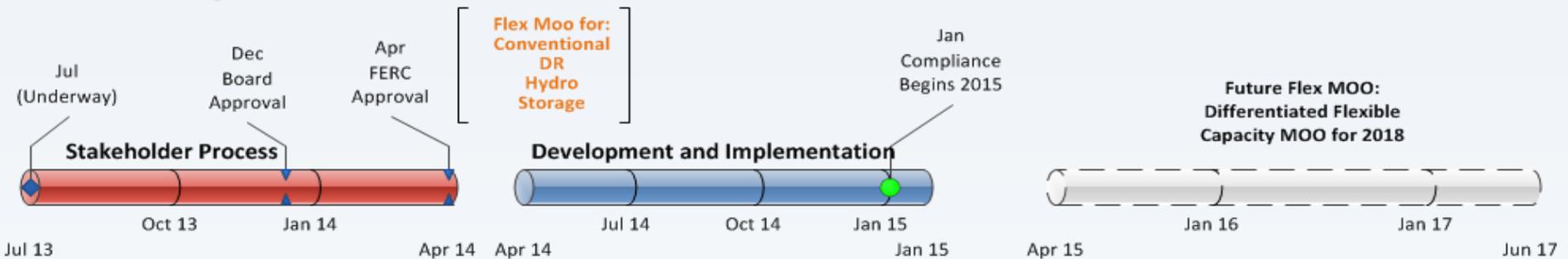
Task	Proceeding	Est. Time
Staff to seek Commission input on framework	Commission meeting - Input to guide development of proceeding(s)	Fall 2013
Part 1: Develop multi-year RA obligations for CPUC jurisdictional LSEs	New track of existing proceeding or new proceeding	Q4 2013 – Q4 2014
Part 2: ISO develops RSA through stakeholder initiative(s)	See ISO Slides	See ISO Slides
Part 3: Implement joint annual reliability assessment with ISO	New track of existing proceeding or new proceeding	2014-2015

Reliability Services Auction Initiative

ISO Stakeholder Initiatives and Proposed Timelines



FRAC MOO Initiative



Use Limited Resources MOO Initiative

