



PCIA Problems & Solutions

CPUC Power Charge Indifference Adjustment Workshop

January 16-17, 2018

R.17-06-026 Discovery Update

- ✓ Scoping Memo contemplated:
 - “Data driven” workshop by November 17
 - Testimony March 12
- ✓ IOUs began loading confidential data in mid- to late December
- ✓ Issues arose in December regarding utility GHG addendum of confidential data
- ✓ CalCCA obtained initial access to confidential data in early January
- ✓ Not all agreed-upon confidential data has yet been provided
- ✓ Parties working cooperatively to minimize unnecessary data production

- ✓ Establish long-term leadership in the local community
- ✓ Provide a holistic approach to meeting community economic and service needs, advancing sustainability and achieving environmental goals
- ✓ Deliver reliable, reasonably priced electric services with reinvestment of all “profits” for local community benefit
- ✓ Identify and serve the unique needs of all community residents and businesses, including the most vulnerable
- ✓ Innovate and provide leadership in advancing California’s environmental goals
- ✓ Partner with California’s LSEs and regulators to ensure statewide reliability

CCAs Enhance the Ability
to Meet California’s Policy Goals

"Prevent
Shifting of Costs"
(\$366.2(c)(5))

Limit Recovery to
"Net Unavoidable
Costs"
"Attributable" to
CCA Customers
(\$366.2(f)(2))

Prevent
"Cost Increase"
for Bundled and
Departing Load
Customers
(\$366.3)

Ensure CCA
Authority to be
"Solely
Responsible for All
Generation
Procurement
Activities"
(366.2(a)(5))

Key Statutory Directives

Objectives

1. Prevent Cost Shifts Between Bundled and Departing Load Customers

2. Reduce Total Utility Portfolio Costs

3. Require Departing Load Cost Mitigation

4. Optimize IOU Portfolio to Reduce Costs & Reallocate Supply Resources

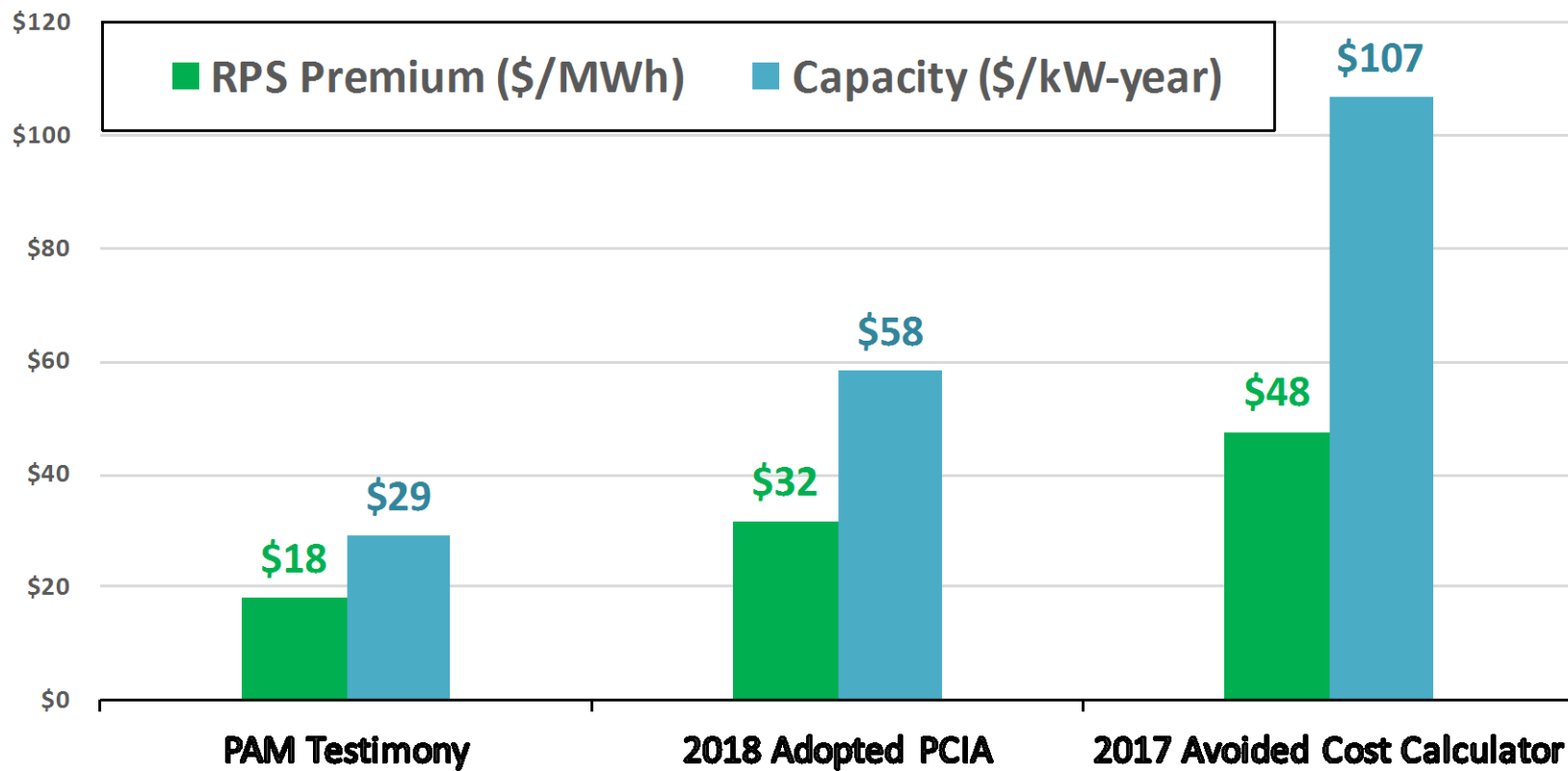
5. Achieve Transparent, Predictable and Reasonable Departing Load Cost

1

Prevent Cost Shifts

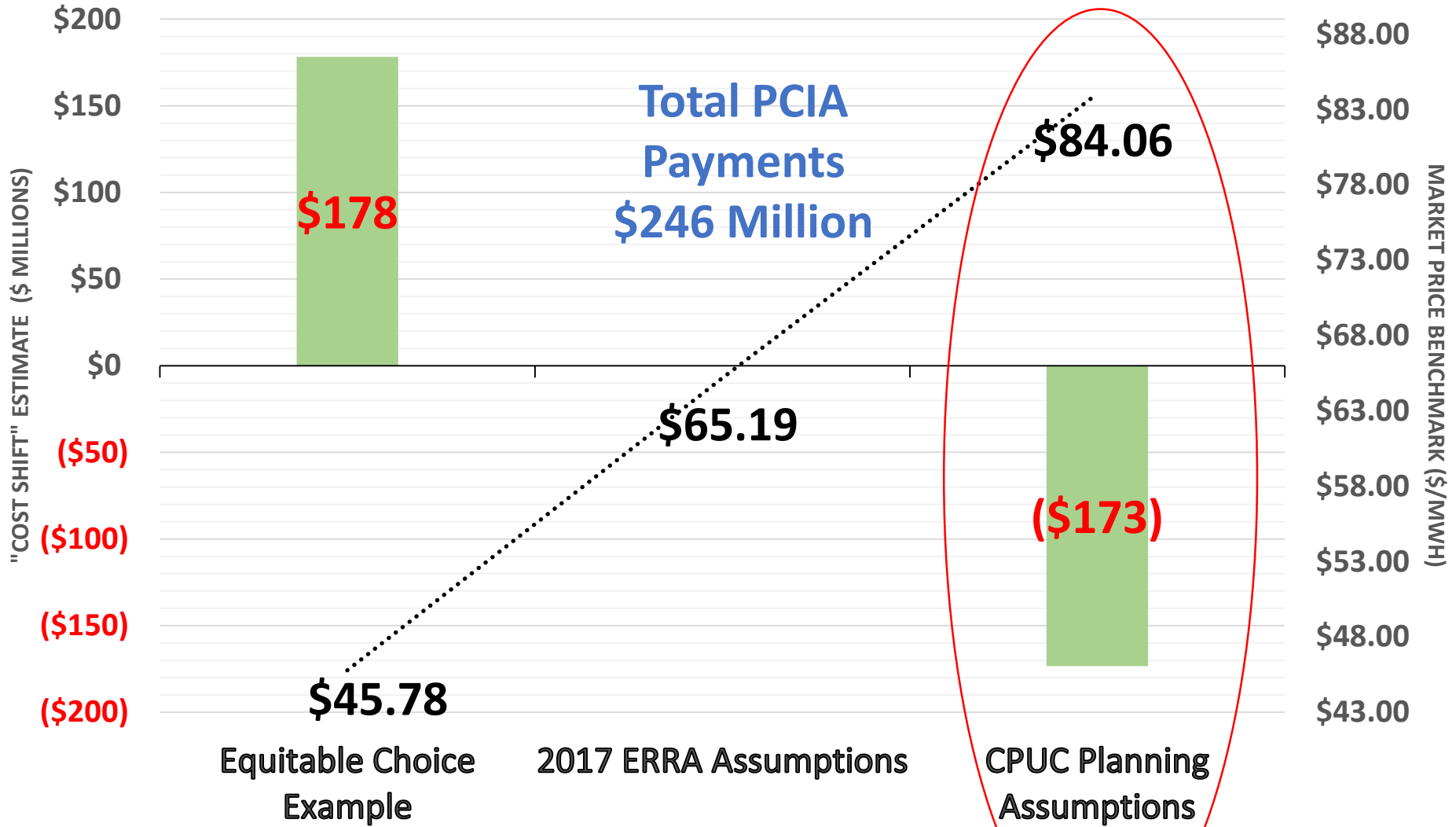
- Claim: \$178 million annual Costs Shift from CCA to bundled customers (PG&E-only estimate)
- Premised on a Market-Price Benchmark (MPB) for 3 products liquidated in short-term markets via the PAM: (1) brown power; (2) capacity (estimated as the one-year forward RA value) and (3) RPS premium
- Use of alternative market values for these 3 products produces a dramatically different picture of the alleged Cost Shift

Critically Examine Utility Cost Shift Claims



Market Price Benchmark
Value Metrics Vary Significantly

"Cost-Shift" Claims Vary Widely with MPB Value Metrics

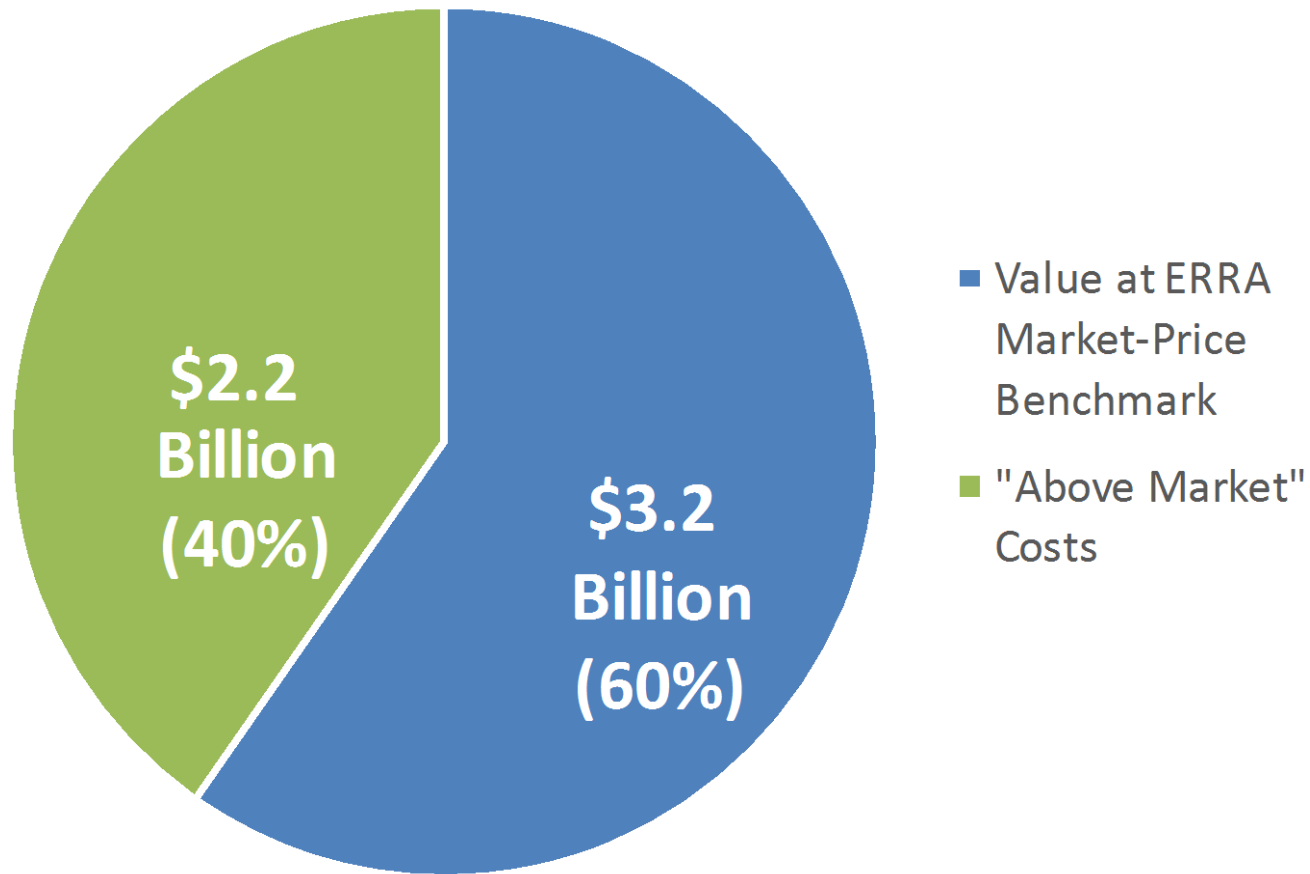


- The \$178 million Costs Shift claim is premised on liquidating supply at the lowest plausible value obtainable in short-term markets via PAM
- An alternative MPB based on Commission-approved planning values produces an inverse Cost Shift of \$173 million (from bundled to CCA customers)
- The portfolio should be actively managed to achieve superior long-term value for all portfolio elements; this may be above the Commission-approved benchmark
- **The wide range of credible Cost Shift estimates underlines the importance of avoiding premature conclusions and actions**

Recap: Prevent Cost Shifts

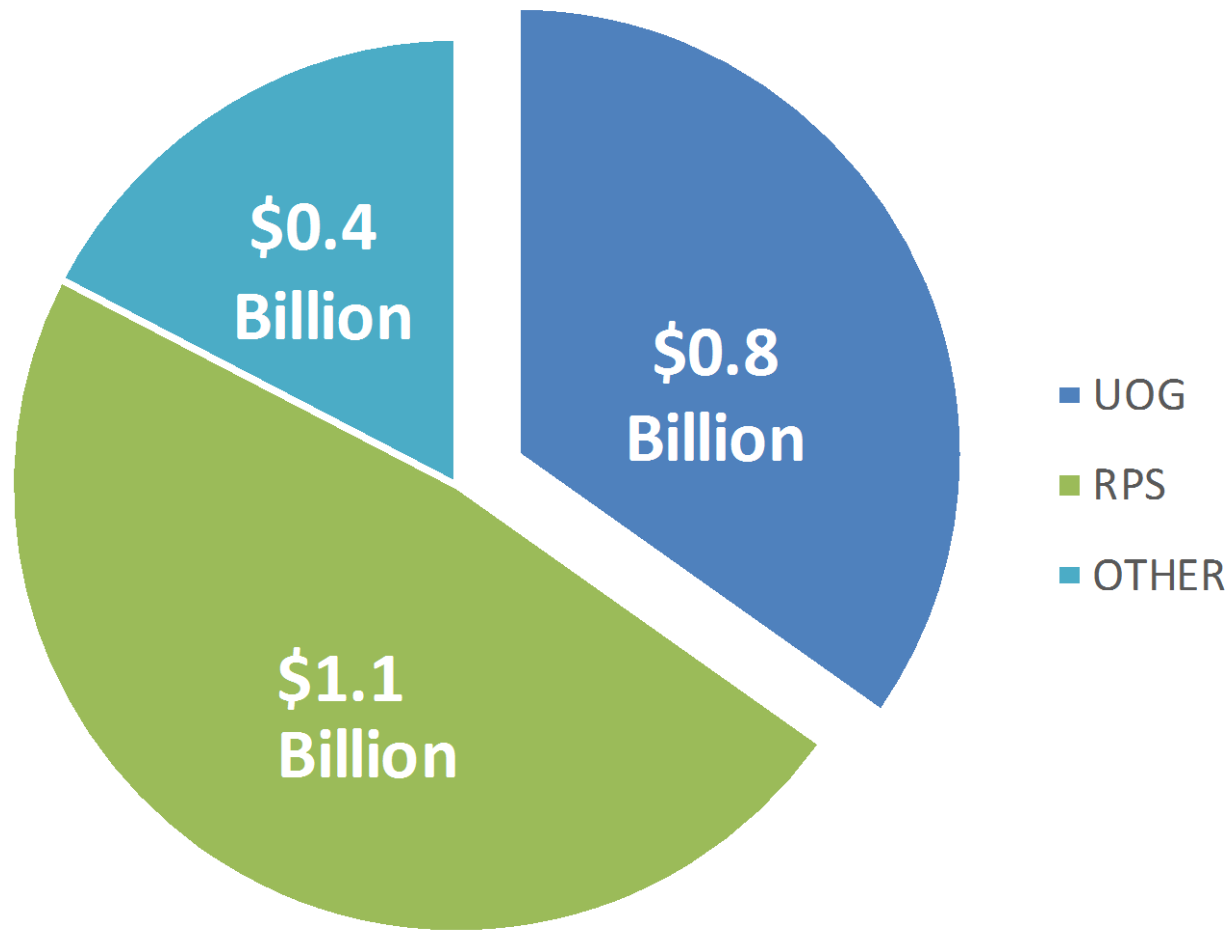
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Reduce Portfolio Costs
through UOG Rate Base
Securitization



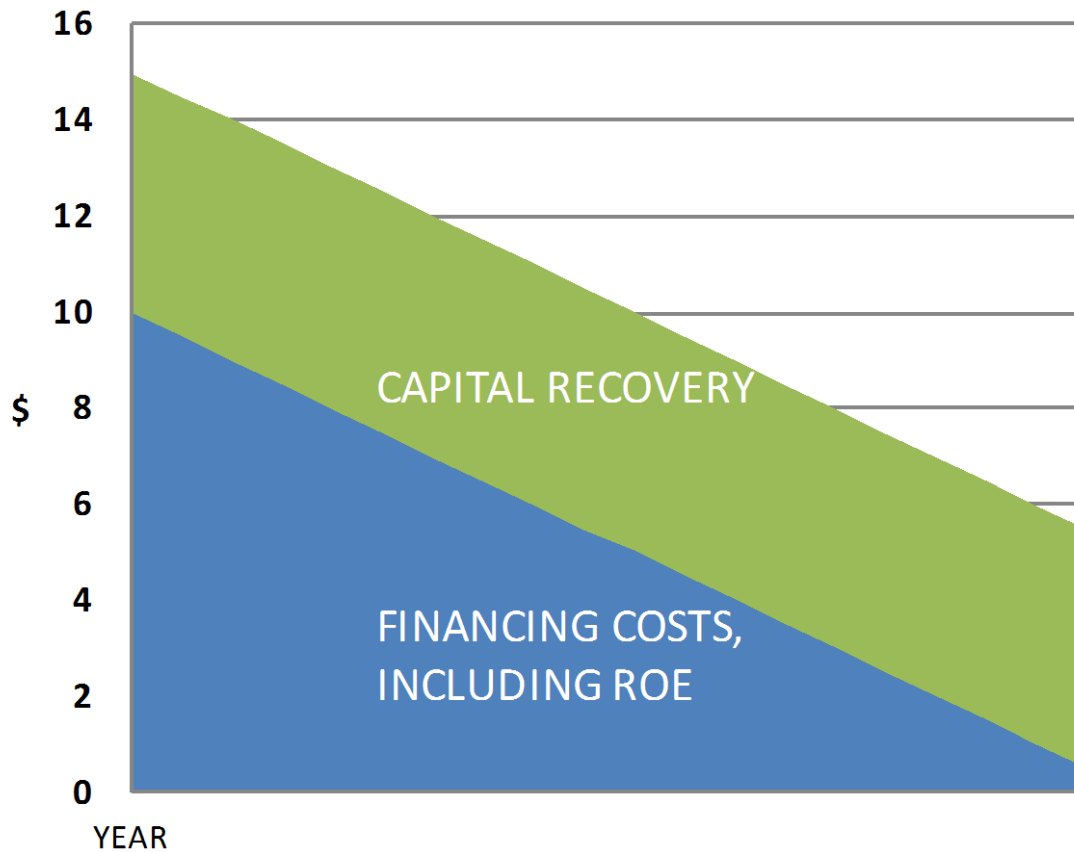
The High Cost Supply Problem

(PG&E 2018 ERRA Total Cost Forecast)

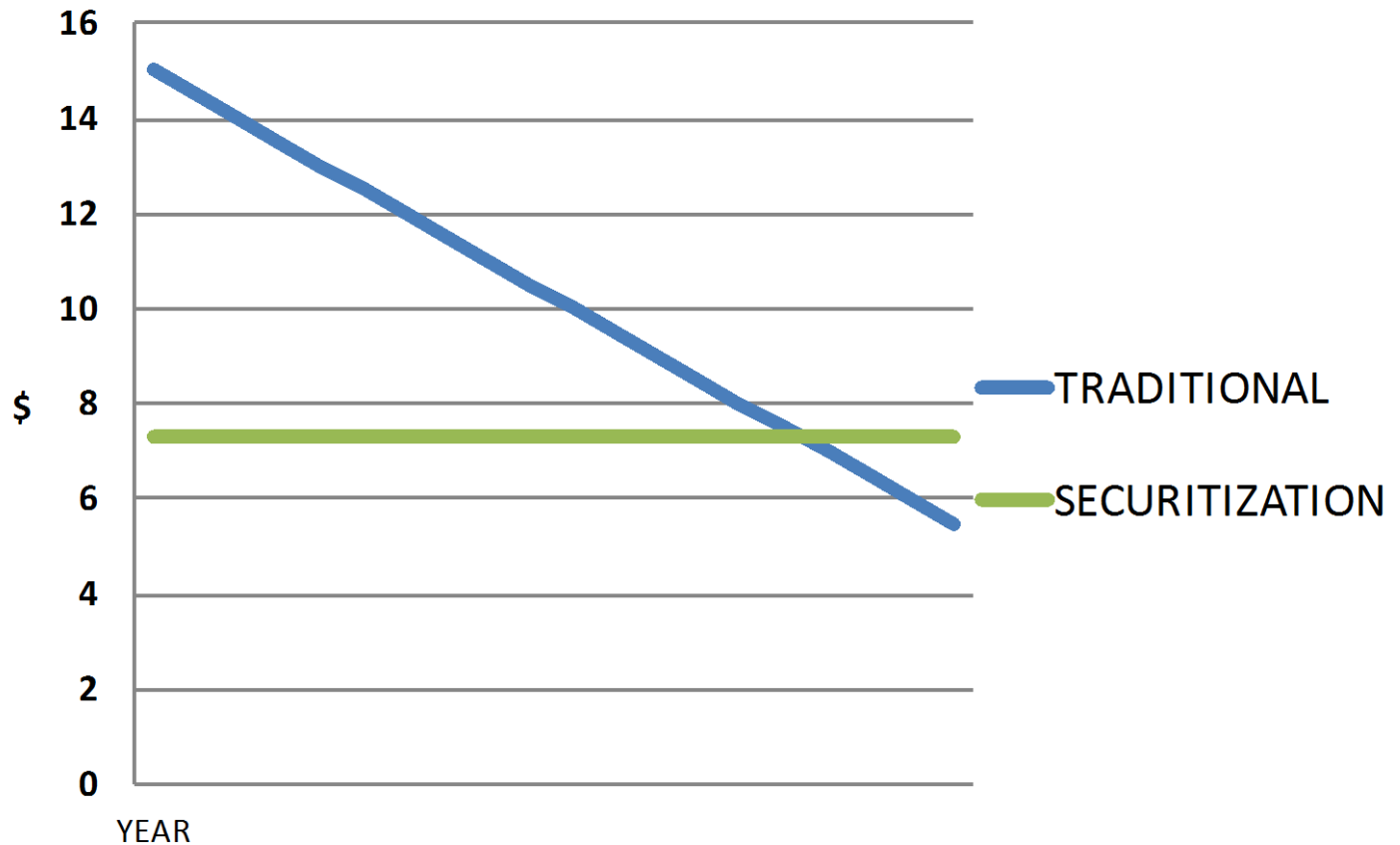


Reducing Portfolio Costs: Securitization of UOG

(PG&E 2018 ERRA Uneconomic Cost Forecast)



Traditional Capital Cost Recover Front-End
 Loads Utility Return and Financing Costs¹⁴



Replace Traditional Cost Recovery
with Securitization for UOG

- Bond issuance fully reimburses the utility for its capital investment in the UOG
- Dedicated Rate Component is placed on customers' bills to secure pay off the bonds
- This process has been used extensively before:
 - Restructuring rate reduction bonds for all three IOUs
 - PG&E bankruptcy regulatory asset
 - CDWR energy crisis debt
 - 16 other states

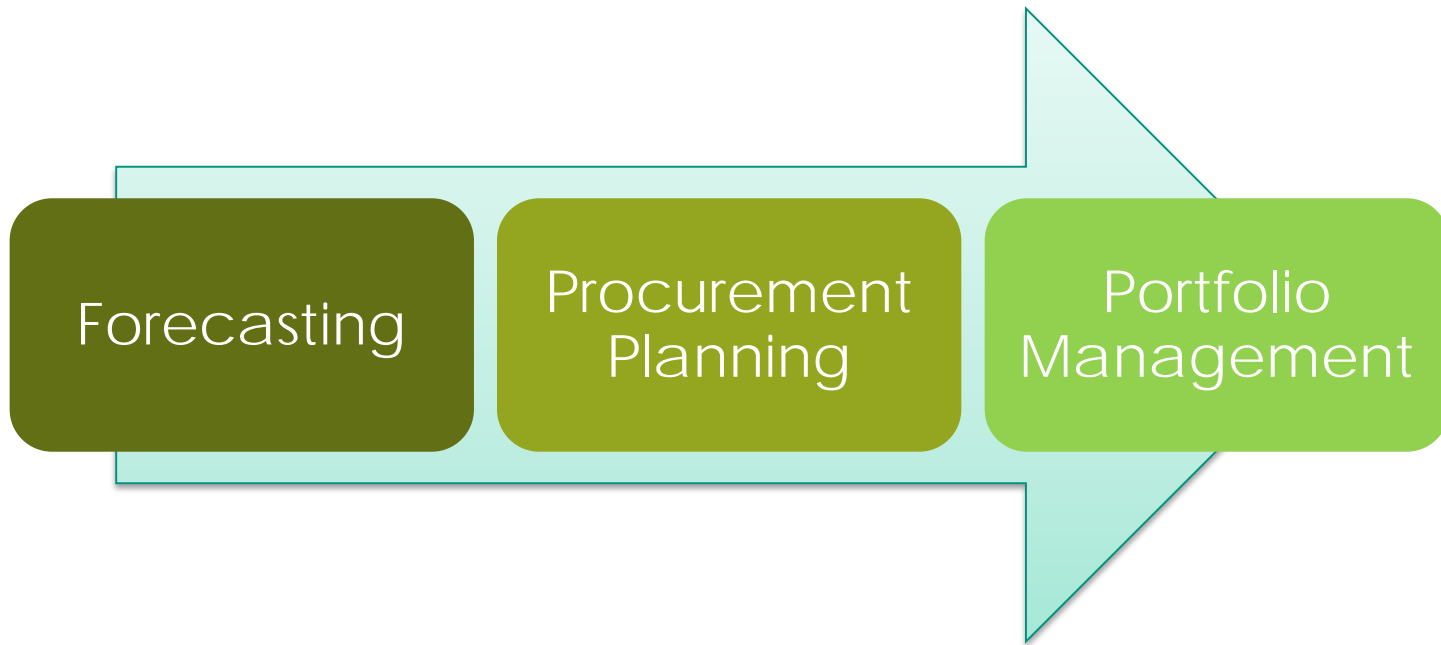
How Securitization Works

- Securitizing PG&E's investment in Diablo Canyon would:
 - Reduce the 2018 forecasted uneconomic costs by approximately \$300 million; and,
 - Reduce bundled customer costs for Diablo Canyon by approximately \$700 million over the life of the bonds on a present value basis.
- Securitizing PG&E's investment in its solar projects would reduce the current cost of those projects by approximately 50% from 30 cents/kwh to 15 cents/kwh
- Cost reduction approaches like securitization reduces costs for all customers, benefiting both CCA & bundled customers

Recap: Reduce Portfolio Costs
through Securitization

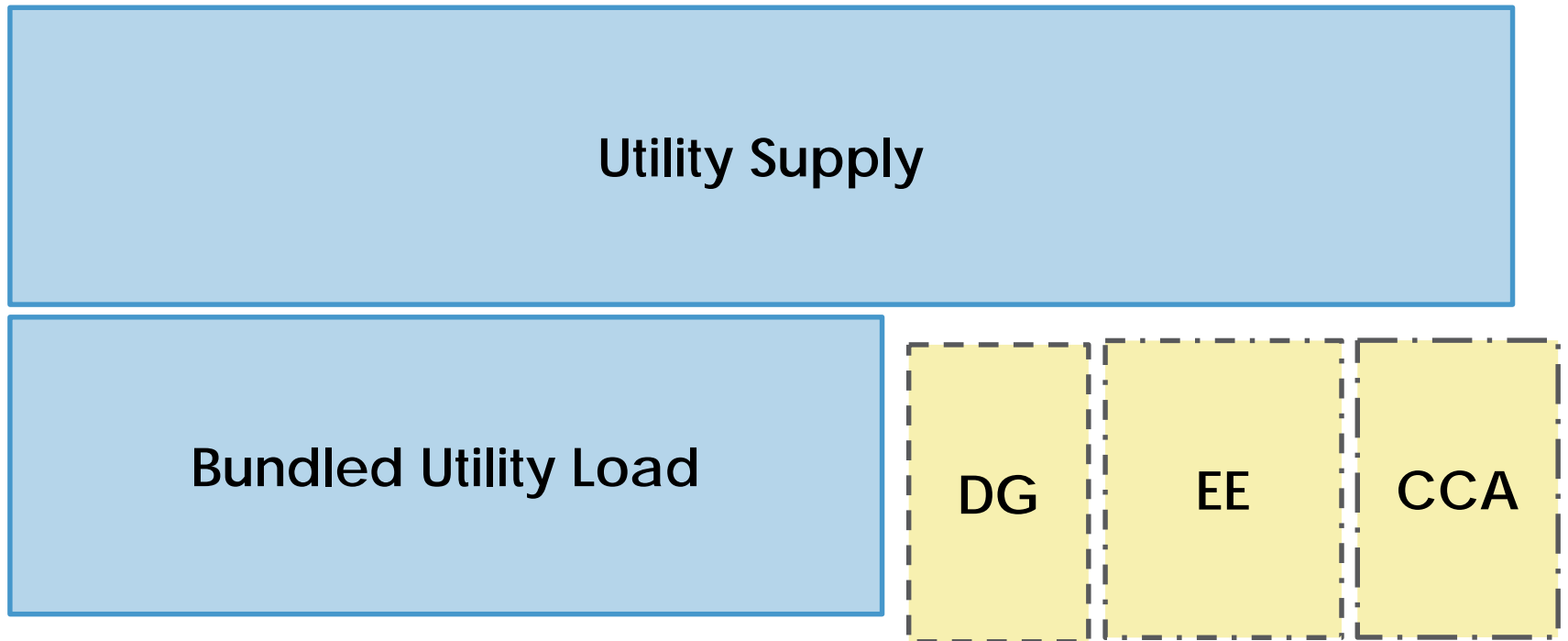
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Require Departing Load Cost Mitigation



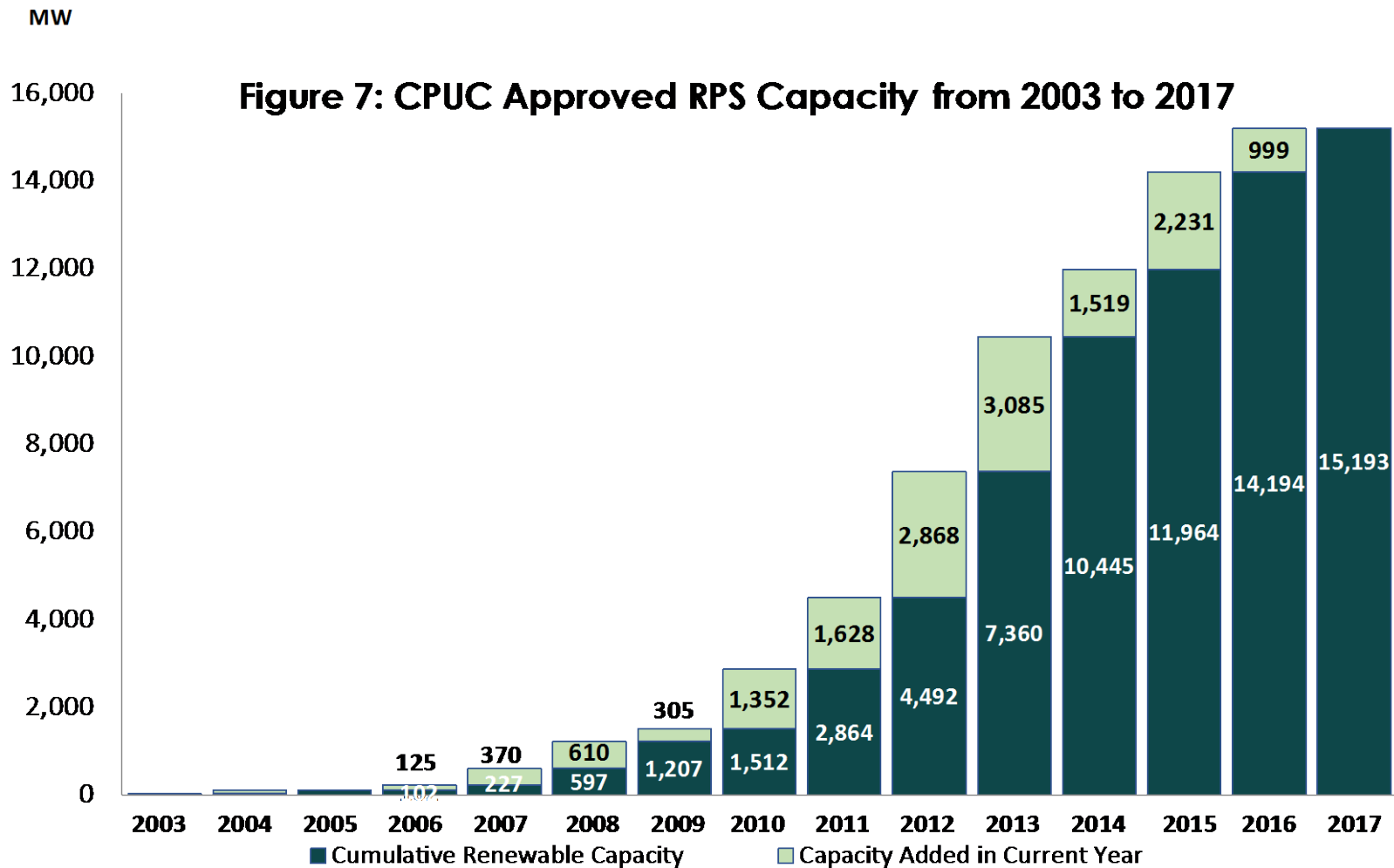
- Growth in EE and DG are significant contributors to IOU Load Loss—all three need to be considered when forecasting departing load
- As total IOU Load declines from non-CCA sources, CCA costs may increase. Such costs are not truly attributable to CCAs.
- IOUs continue to build new resources despite actual and planned CCA load departures that have been taking place since the beginning of the decade
- Active mitigation of the IOU portfolio limits costs and market price risk to all customers in a declining and/or volatile price market

Mitigation is Required for Cost Avoidance



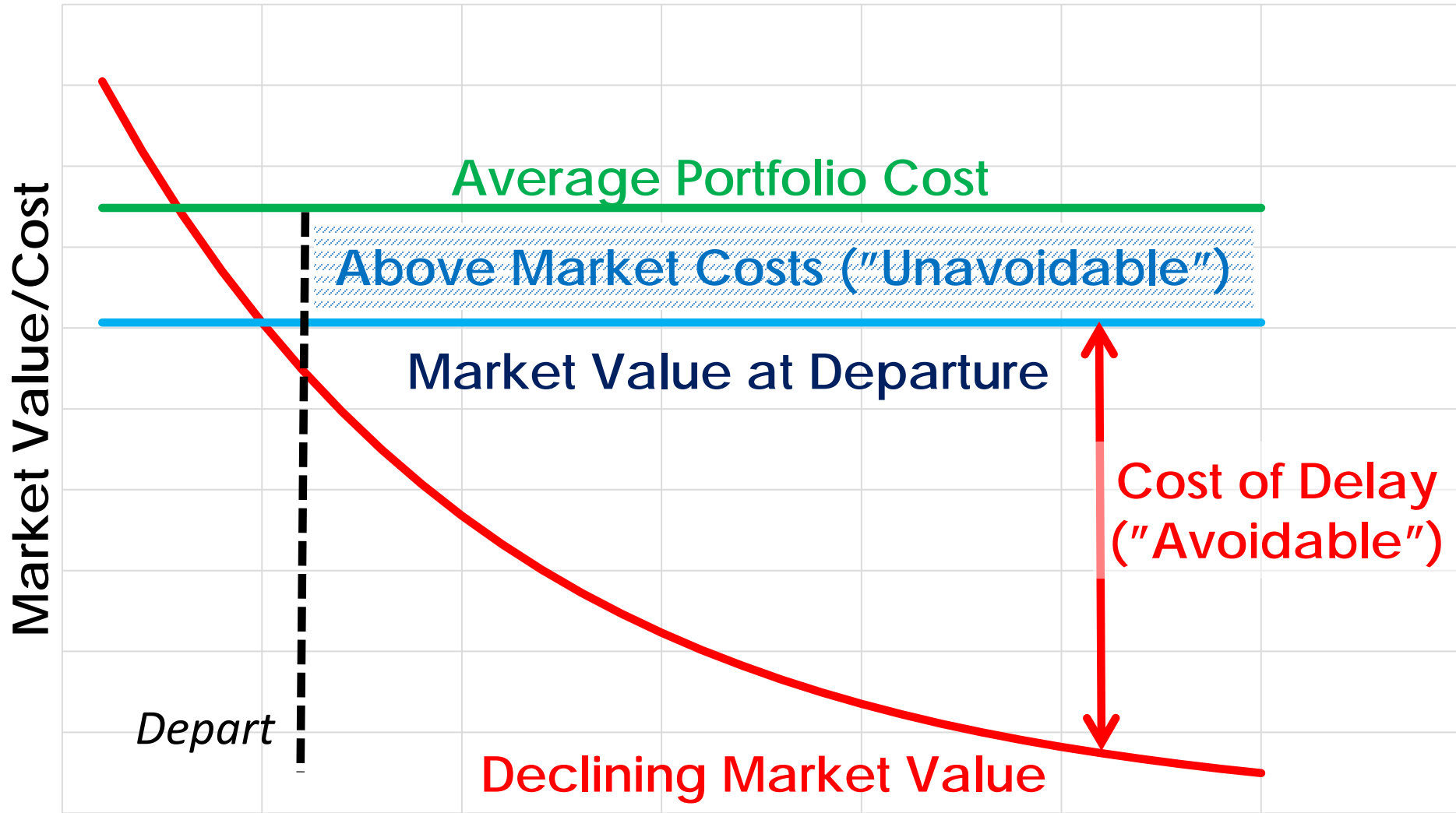
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Forecasting and Active Portfolio Management
Must Consider All Changes in Load



Data source: IOU Project Update Submissions to the CPUC's RPS Contract Database (October 2017)

Continued Ramp Up in RPS Procurement



Portfolio Management Delay
 In Declining Price Market Increases PCIA

- Growth in Efficiency and Distributed Generation are significant contributors to IOU Load Loss—not just CCAs
- IOUs continue to build new resources and it is unclear how they are accounting for this departing load in load forecasting and procurement decisions
- Active management of the IOU portfolios is crucial to mitigate costs for all customers, including charges to be paid by departing load
- This is particularly true in a declining price market, where the cost of delay compounds rapidly

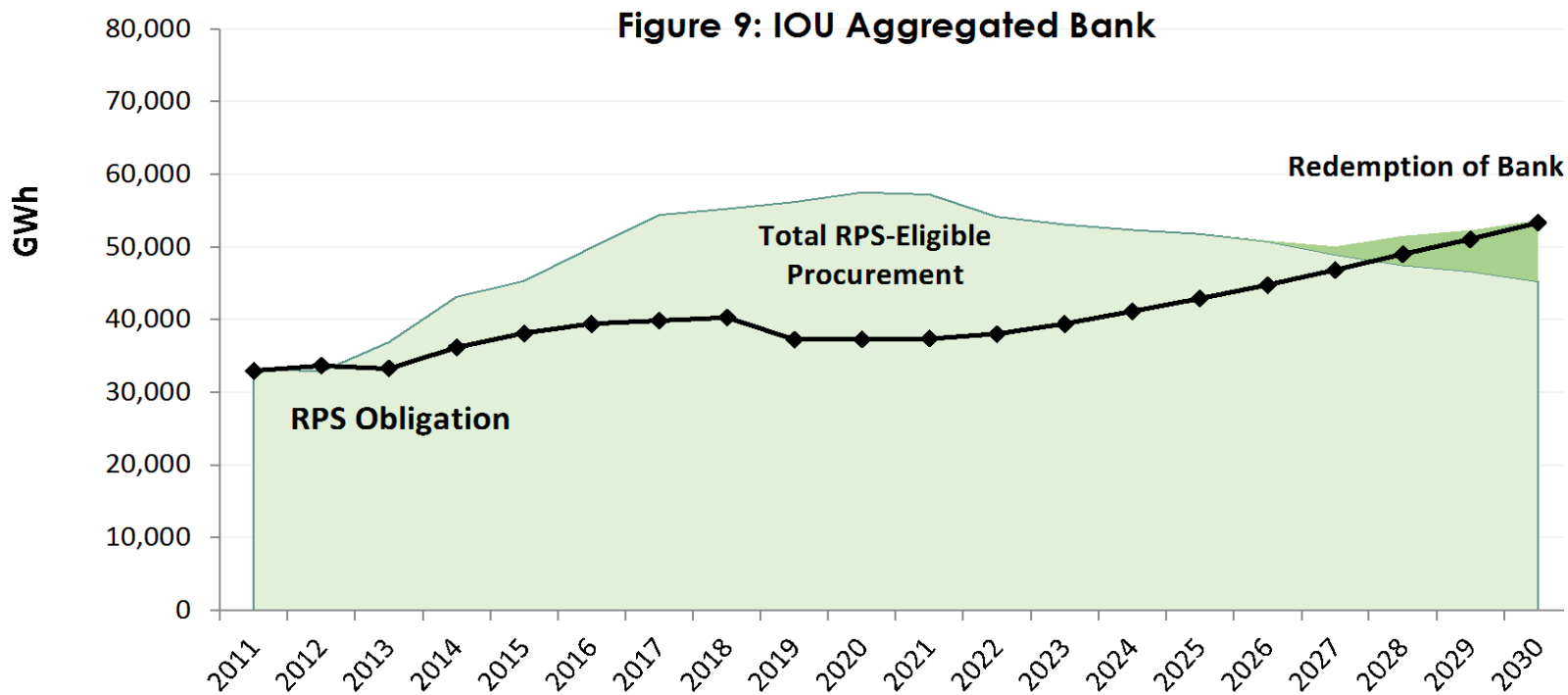
Recap: Departing Load Cost Mitigation

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Optimize IOU Portfolio:
Reduce Costs &
Reallocate Supply

- IOUs appear to have procured adequate RPS resources to meet requirements through 2030 even with contract expirations and without departing load beyond what was forecast in November 2017 forecast
- Long-term procurement by CCAs is required to comply with state law is exacerbating this over-procurement of resources and raising customer costs
- IOUs are sitting on large banks of RPS energy that will decline significantly in value if the system continues to be over built
- The lower cost solution to this mismatch in load obligations and resource control is to rebalance generation portfolio

The Need to Rebalance the IOU Portfolio



Data source: CPUC's Integrated Resource Planning Modeling Results, E3 Modeling, 2017

Excess RPS Resources in IOU Portfolios

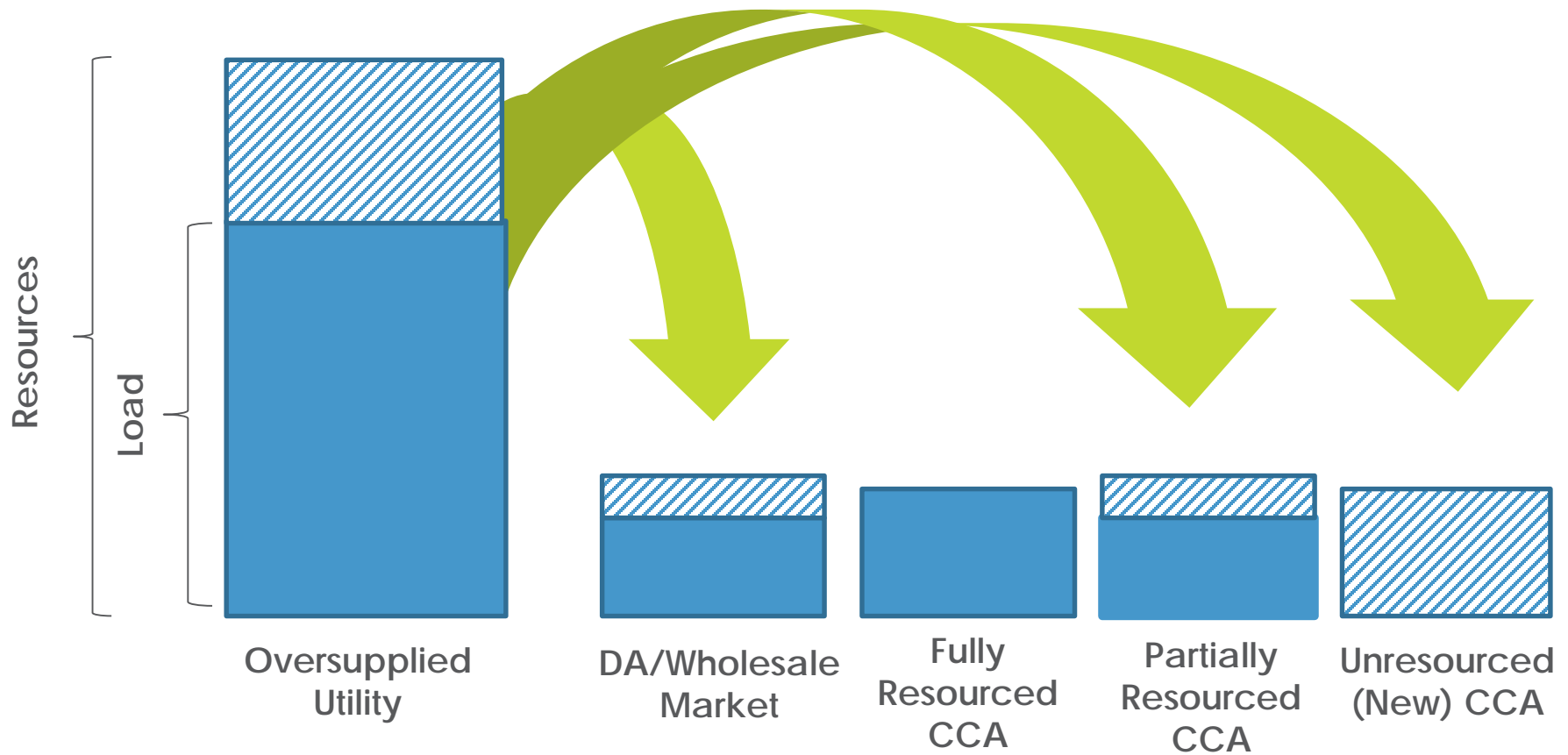
New Renewable Projects with CCA Long-Term Contracts

Online Date: 2012 - 2020

Technology	# of Projects	MW
Solar PPA	25	793
Wind PPA	3	213
Bio-Energy	4	12
Total	32	1,017

Source: CalCCA Members

CCAs Legally Required to Procure
Long-Term RPS Resources for Customers



Aligning Portfolio Control and Supply Reallocation

- **Voluntary Transactions:** Generators may find benefit in the termination of existing utility RPS contracts since tax benefits often push the majority of their profits to early in the contract life
- **Ongoing Process:** Utilities would invite proposals on a periodic basis from generators for amending the terms of existing RPS contracts (e.g., buy-out, buy-down, renegotiation, blend-and-extend, etc.); transactions would permit generators to re-offer supply to other market participants
- **Costs:** PPA payment reductions and the costs of buyout/buydown transactions would be incorporated into calculation of “above market” calculations

Buyout/Buydown of RPS Commitments

- **Voluntary Transactions:** Load-Serving Entities (LSEs, including CCAs) may find benefit in procuring supply products out of the Utility portfolio
- **Ongoing Process:** Utility identifies surplus in portfolio and conducts a periodic sale or auction process to make long-term products available to market participants
- **Revenue:** Revenues from sales would be credited against total portfolio cost

Sale/Auction of Portfolio Products

- **Voluntary Allocations:** LSEs may find benefit in receiving a proportional allocation of Utility RPS portfolio contract attributes (energy, capacity, bundled RECs) to directly use, hold, or re-sell into forward markets
- **Ongoing Process:** Initial allocation would be determined based on departed load vintage and size; as customers migrate between LSE and Utility over time, proportionate size of the allocation is trued-up; allocation would end when RPS contracts terminate
- **Costs and Value:** LSEs pay their allocation share of Utility portfolio costs; LSEs control/maximize value through optimization of their allocated attributes; LSE would have no further “above market” cost obligation to utility portfolio

“Slice” Allocation and Resale

- No more IOU RPS energy is required to meet 2030 goals
- CCAs by law are required to procure long-term supplies for their customers
- Failure to rebalance and reallocate the IOU supply portfolio continues to exacerbate the over-procurement problem
- Significant potential exists to benefit both bundled and departing customers exists via optimizing and rebalancing the portfolio through voluntary transactions

Recap: Portfolio Optimization and Rebalancing

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Achieve Transparent,
Predictable and
Reasonable Departing
Load Fees

- Residual total portfolio cost determined after cost reduction and portfolio management actions
- Market benchmark reformed to account for full value and range of products embedded in the utility portfolio
- Annual determination of portfolio above-market costs to determine departing load charge
- Ongoing above-market charge paid by LSEs that do not procure “slice” of resources from the IOU20

Payment of Residual Departing Load Obligation

PCIA “Market” Elements

- Energy
- Green Adder
- System Resource Adequacy

Examples of Attributes Missing or Misvalued

- Energy
- Green Adder
- System Resource Adequacy
- Renewable Energy Credits
- Greenhouse Gas Costs
- Local Resource Adequacy
- Flexible Resource Adequacy
- Ancillary Services/Uplift
- Congestion Revenue Rights
- Renewable Integration
- Hedge Value
- Diversity Value (LCBF)

Recalibrate Market Price Benchmark

- GHG-free nuclear and large hydro generation should include the value of non-RPS GHG-free generation
- Market price benchmark should reflect the value of ancillary services and additional RA value
- Market price benchmark should reflect hedge value added through long-term procurement
- Collectively, consideration of these value components and others would significantly increase the Market Price Benchmark

Illustrations of Benchmark Recalibration

Various Adopted & Proposed Capacity and Energy Values

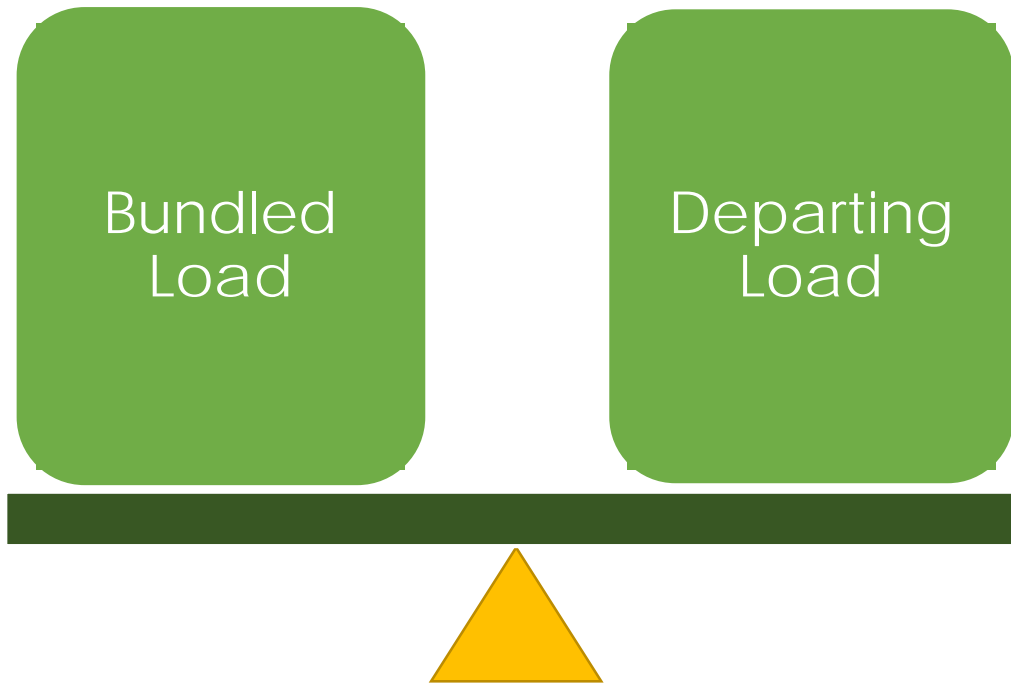
Comparison to Marginal Cost Values Across CPUC/CEC Proceedings

Proceeding	Utility / Region	Model / Source	Capacity \$ per kW/Year	Energy \$ per MWH
PG&E 2017 GRC	PG&E	MC/RA Workpapers	\$28.64	\$28.30
SCE 2018 GRC	SCE	MC/RA Workpapers	\$146.85	\$36.81
EE / DRP / LIEE / NEM / DG	PG&E	E3 Avoided Cost Calculator	\$116.54	\$28.03
	SCE		\$147.72	\$28.06
Title 24	SF CZ 3	CEC Title 24 TDV	\$145.75	\$37.75
	Fresno CZ 12		\$130.54	\$37.75
	LA/SD--CZ 7		\$105.70	\$38.01
	LA/SD--CZ 10		\$145.58	\$38.01
CAISO CPM	CAISO	2017 MMC	\$72.43	\$32.45

Conclusion

- The Commission should not rush to judgment in response to the IOUs' Cost-Shift claims, which are based on flawed and uncertain assumptions
- Departing load cost recovery is limited by statute to costs that are **both Unavoidable and Attributable** to CCA departure
- CalCCA advocates solutions that help reduce costs for both CCA and IOU bundled customers
- CalCCA supports portfolio optimization and rebalancing to increase the realized value of IOU supply
- Payment of residual "above market" costs should be based on a recalibrated market price benchmark

Recap



Balancing the Interests of All Customers

- Working together will reduce the cost of electricity to all customers
- CalCCA's customers will continue to be customers of the California IOUs for distribution and transmission services
- CCAs are natural partners to California's IOUs and regulators, and have unique ability to enhance achievement of California's policy goals



Moving Forward Together