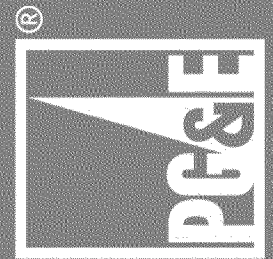


# Attachment I

# 2014 GRCWorkshop





# Overall Forecast and Key Drivers

| 2014 GRC Revenue Requirement (Millions) |         |
|---|---------|
| 2014 GRC Application Forecast           | \$8,111 |
| 2014 GRC Authorized and Pending         | 6,829   |
| Proposed Increase                       | \$1,282 |

## Key drivers of Increase

- Investment toward achieving industry “best practices” for gas distribution, consistent with Senate Bill 705
- Continued investment in electric distribution infrastructure to improve the safety and reliability of the system and address identified risks
- Cost to comply with governmental regulations to address nuclear operations, hydroelectric relicensing conditions and potential risks to public safety
- Need for new customer connections and capacity-driven additions
- Improvements to customer service and education
- Recovery of costs for depreciation associated with PG&E’s plant investments



## Additional Case Highlights

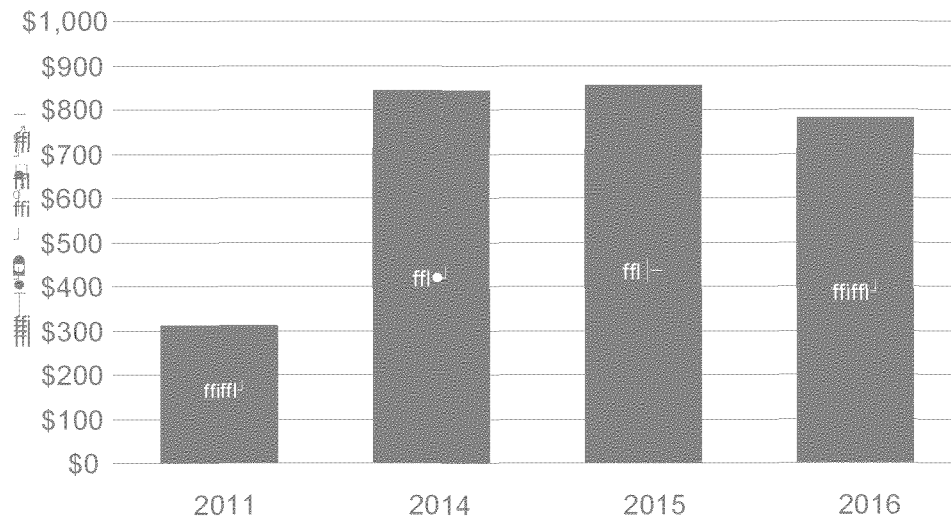
3

- NewTwo-WayBalancing Accounts :
  - Gas Leak Survey and Repair (\$147MRRQ)
  - Major Emergencies (\$56MRRQ)
  - FERCRelicensing for Hydro Facilities (\$20MRRQ)
  - Nuclear Regulatory CommissionMandatedMeasures on Nuclear Safety (\$19MRRQ)
- SmartMeter Program : Deployment is forecasted to be completed in 2013; SmartMeter benefits are included in 2014 forecast
- Short-Term Incentive Program(STIP): Ratepayer recovery sought only for non-officer employees; officer STIP will be covered by shareholders
- Depreciation: Updated study; \$495Mincrease in depreciation expense due to change in depreciation rates

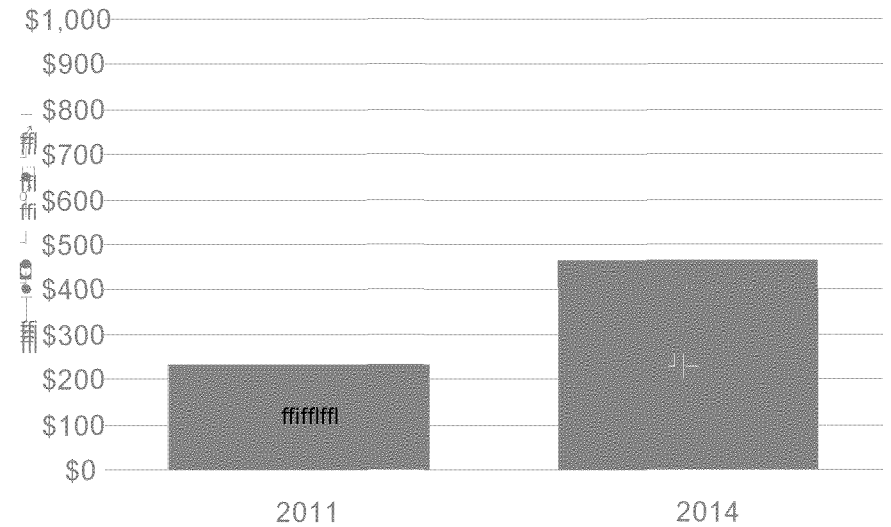


# Gas Operations Summary of Forecast Capital Expenditures and Expenses

### 2014-2016 GRO Capital



### 2014 GRO Expense





# Gas Operations Key Cost Changes from 2011 Expenses

5

2011 Recorded – \$233M; 2014 Forecast – \$465M; Increase = \$232M

## Leak Survey and Repair (\$78.9M)

- Transition from a 5-year to a 3-year leak survey
- Perform annual leak survey on highest risk pipe
- Deploy new technology (Picarro Survey™) to quickly identify and repair more leaks
- Repair above-ground Grade 3 leaks in 15 months rather than resurveying within 5 years

## Gas Ops Technology (\$18.7M)

- Pathfinder Project (Gas Distribution Asset Management)
- Integrity Management Program enhancements
- Mobile technology for field employees

## Mapping and Records (\$15.2M)

- Improved centralized accessibility of records

## Gas Odor Response/Customer Service (\$36.8M)

- Respond to 75% of calls within 30 minutes, 99% within 60 minutes
- Treat all gas odor calls as “immediate response”

## Training and R&D (\$15.2M)

- Development of technical training curriculum and programs

## Preventative Maintenance (\$24.5M)

- Increased Locate and Mark services due to economic growth
- Proactive projects: dedicated painting crew, low pressure vent elevation for vaults

## Distribution Control Center (\$13M)

- Staffing for control center and equipment maintenance

## Distribution Integrity Management Program (\$22.6M)

- Cross Bored Sewer Program
- Program Management



# Gas Operations Key Cost Changes from 2011 Capital Expenditures

2011 Recorded – \$308M; 2014 Forecast – \$842M; Increase = \$534M

Pipeline Replacement, Capacity, Reliability and other Customer Connections and Requested Work (\$45.1M)  
Capital (\$310.9M)

- Gas Pipeline Replacement Program (GPRP) (\$204.2M)

- Transition from replacing 30 miles to 180 miles of distribution main and associated services

- 60 miles of pre-1940 steel pipe per year
    - 100 miles of Aldyl-A plastic pipe per year
    - 20 miles of post-1940 steel pipe per year

- Low pressure to high pressure main replacement (\$10.8M)

- Installation of additional emergency valves (\$27.8M)

- Replacement of High Pressure Regulators (\$31.5M)

Distribution Control Center Electronic Instrumentation (\$62.2M)

- Field installation of 60 Remote Terminal Units and 128 pressure recorders and the custom software to enable it

Gas Buildings (\$61.0M)

- Gas Training Center (\$40.9M)

- Antioch Service Center (\$7.7M)

- San Carlos Service Center (\$4.5M)

- Construction of Gas Control Center "Hot" back (\$0.3M)

- New customer growth projections: backbone construction (main), customer connections (services), regulators and facility alterations

Gas Ops Technology (\$40.7M)

- Pathfinder Project (Gas Distribution Asset Management) (\$15.7M)

- Mobile technology for field employees (\$8.2M)

- Back up radio system (\$8.0M)

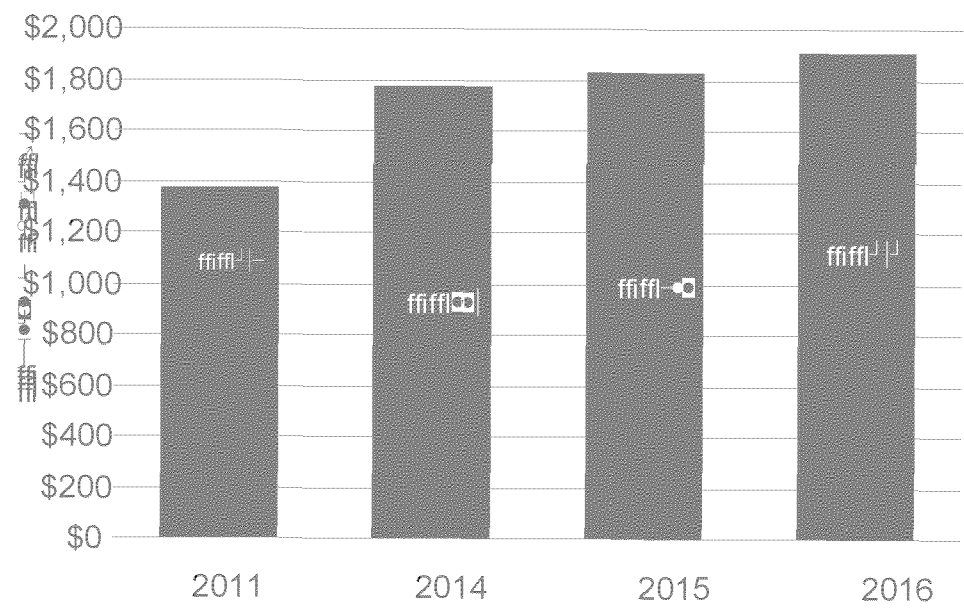
Regulator Replacements (\$14.1M)

- Labor costs of replacing non-internal relief valve (IRV) regulators with an IRV regulator

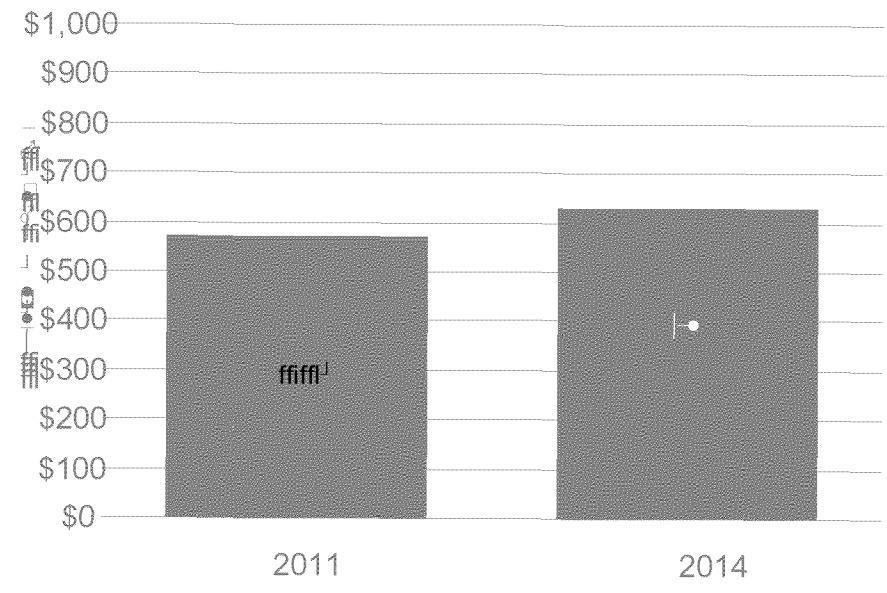


# Electric Operations Summary of Forecast: Capital Expenditures and Expenses

### 2014-2016 GRO Capital



### 2014 GRO Expense







# Electric Operations

## Key Cost Changes from 2011 Expenses

2011 Recorded – \$570M; 2014 Forecast – \$631M; Increase = \$61M

### Safety, Maintenance and Compliance (\$56.3M)

- Vegetation Management: 1) Expansion of fire risk program 2) Expenditures for biological oversight as a result of increasing focus on vegetation management work
- Electric Distribution Maintenance: 1) Comprehensive infrastructure and splice inventory program for the overhead system; 2) UG Barcoding project; 3) Underground switch replacement program (not the same as switch replacement program in Ch16)
- Pole Test & Treat: Forecast reflects results of 2010 review completing current 10-year cycle on schedule; and working an increased number of poles as a result of working fewer poles in 2009-2011
- Substation Maintenance: Increase for substation support activities and for corrective maintenance to complete higher priority maintenance work

### Customer Connection, Demand Growth and Franchise Obligations (\$6.0M)

New business: Increasing number of new customer connections and Plug-In Electric Vehicles service requests

### Emergency Response (\$-39.0M)

- Routine Emergency: Forecast uses 3-year average with adjustment associated with implementing MobileConnect technology
- Major Emergency: Forecast uses 5-year average adjusted for CEMA-related cost recovery
- Reduction because 2011 recorded for Major Emergencies is higher than forecast (largest expenditure in 2007 to 2011)
- Two-Way Balancing Account Proposal (for major emergencies) same as 2011 GRC

### Operations, Automation and Support (\$48.3M)

- Electric Mapping: 1) Reviewing maps for GIS; 2) Field Asset Inventory; 3) Convert paper-based records to electronic format
- Electric Ops Technology: 17 projects in the following technology portfolios: 1) System Operations (6); 2) Asset and Records Management (3); 3) Work Design and Management (5); 4) Workforce Mobilization and Scheduling (3)

### Work Efficiency (\$-10.7M)

- Electric Operations Improvement plan calls for absorbing escalation from 2012 to 2015
- Escalation is included at a MW level (two exceptions, Ch. 2 and Ch. 8)
- A corresponding escalation credit, for the entire exhibit, is included in MWAB (expense)



# Electric Operations

## Key Cost Changes from 2011 Capital Expenditures

2011 Recorded – \$1,370M; 2014 Forecast – \$1,770M; Increase = \$400M

### Customer Connection, Demand Growth and Franchise Obligations (\$178.8M)

- New business: Forecast anticipates improving economic conditions based on data from Moody's Investor Service (Moody's)/Economy.com and HIS Global Insight
- WRO: Forecast indexed to new business work and CalTrans spending plus additions for specific projects (e.g., Transbay Terminal, Central Subway, High-Speed Rail)
- Rule 20A: Continue to reduce accumulated work credits

### Operations, Automation and Support (\$125.5M)

- PG&E's distribution automation strategy calls for the installation of substation SCADA automation at nearly all substations by 2017
- Distribution Control Center Consolidation: 1) Original plan was to construct 4 new facilities; 2) Now planning to construct one new facility and remodeling two additional facilities – significantly less cost

### Asset Management and Reliability (\$114.9M)

- Underground Assets: 1) Network Cable Replacement; 2) TGRAM/TGRS Switch Replacement
- Reliability: 1) Overhead conductor replacement to reduce instances of wire down; 2) Fault Locating, Isolating and Service Restoration Systems; 3) Used Value of Service (VOS) to estimate benefit-to-cost ratios

### Safety, Maintenance and Compliance (\$53.2M)

- Comprehensive infrared and splice inventory program for the overhead system
- Underground switch replacement program
- SF series street lights

### Emergency Response (\$-28.7M)

- Routine Emergency: Forecast uses 2009 to 2011 average with adjustment associated with implementing MobileConnect technology
- Major Emergency: Forecast uses 2007 to 2011 average Reduction because 2011 recorded for Major Emergency is the highest value in 2007 to 2011 time period
- Two-Way Balancing Account Proposal for major emergencies (same as 2011 GRC)

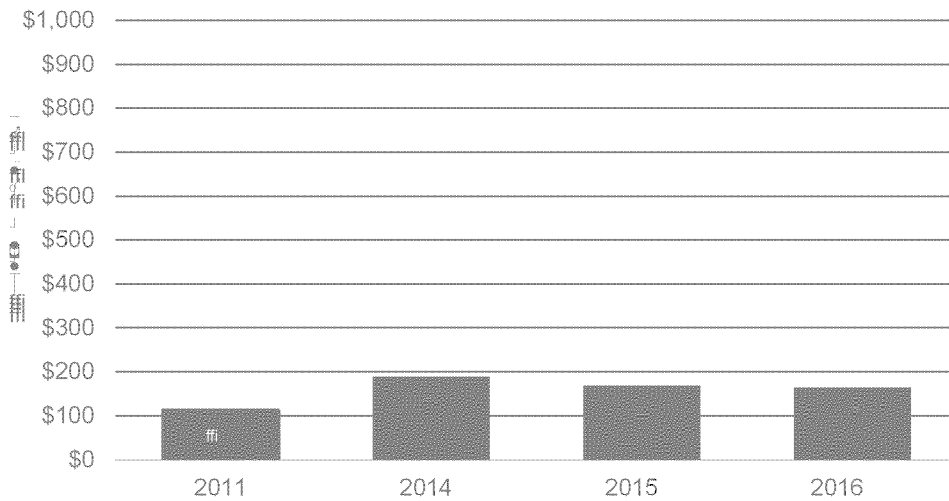
### Work Efficiency (\$-43.7M)

- Electric Operations Improvement Plan calls for absorbing escalation from 2012 to 2015
- Escalation is included at a MW level (exceptions Ch. 2 and Ch. 8)
- A corresponding escalation credit, for the entire exhibit, is included in MW05 (capital).



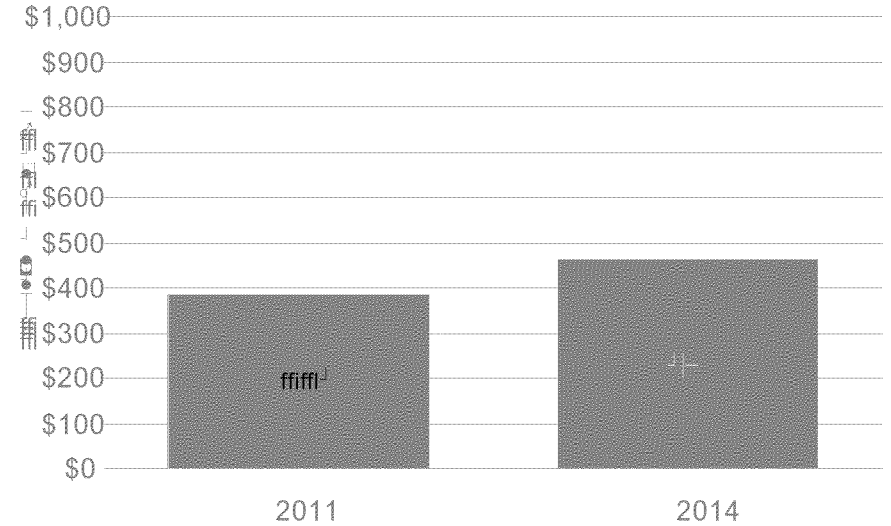
# Customer Care Summary of Forecast Capital Expenditures and Expenses

### 2014-2016 GROCapital



113

### 2014 GROExpense





# Key Cost Changes from 2011 Expenses

2011 Recorded <sup>1</sup> – \$384M; 2014 Forecast – \$462M; Increase = \$78M

### Account Services Staffing Increase (\$24.1M)

- Improve base account services work (i.e. administer rates, rules, contracts, address billing, collection issues, communication)
- Increase customer service provided to small and medium business customers
- Increase of approximately 146 full-time employees

### Validation and Processing of Interval Data (\$18.9M)

- Increase Billing Operations staff to handle increased volume of interval data for interval billing and web presentation: 137 employees to validate interval data to ensure accuracy for billing and customer web presentation

### Contact Center Enhancements (\$22.9M)

- Improve access to a representative, e.g., reduce average speed of answer (68 customer service representatives)
- Customer advocacy expansion (19 customer service employees)
- Expand and improve customer service representative training
- Manage increase in call durations (129 customer service representatives)

### Information Technology Programs (\$4.7M)

- Customer interaction and relationship management improvements
- Customer self-service and energy management improvements
- Interval data processing and exceptions management
- Improve billing capabilities for new rates and services
- Meter management

### Rate Education and Outreach (\$23.4M)

- Integrate rate and program education and outreach – consolidate rate education covering multiple rate programs rather than requesting separate funding for each program
- Provide outreach and communications to customers regarding major electric and gas safety and reliability work

### SmartMeter™ Benefits (\$28M)

- SmartMeter™-related savings included in forecast (2011 – 2014).

### Other (\$12M)

- Reinstitution of the R-test Program at full scale
- SmartMeter™ maintenance work
- Electric SmartMeter™ testing at GEMS
- Improve service and reduce wait times at local offices

1 – 2011 recorded spending includes \$73M in meter reading costs recorded in the Meter Reading Cost Balancing Account



# Customer Care Key Cost Changes from 2011 Capital Expenditures

12

2011 Recorded – \$114M; 2014 Forecast – \$190M; Increase = \$76M

## Information Technology Projects (\$25.6M)

- Customer interaction and relationship management
- Customer self-service and energy management improvements
- Interval data processing and exceptions management
- Improve billing capabilities for new rates and services
- Meter management

## Ongoing Metering Requirements and Miscellaneous Capital (\$26.9M)

- Ongoing gas and electric meter costs
- Computers, tools, equipment, miscellaneous capital infrastructure

## Corporate Real Estate Costs (\$20.1M)

- Build out of Fresno and Sacramento Contact Centers
- Relocation of Billing and Credit Center

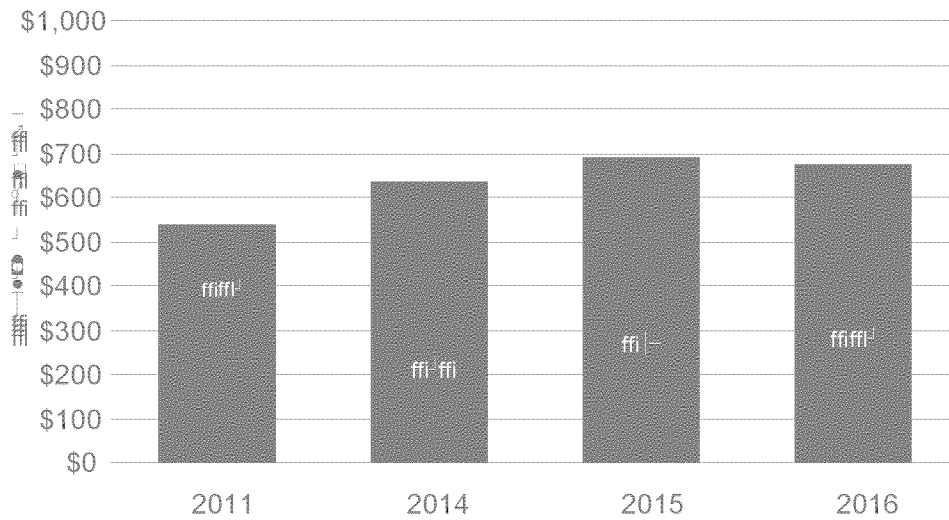
## Local Office Remodels (\$4M)

- Improved signage
- Improved customer access
- Installation of ergo equipment for employees

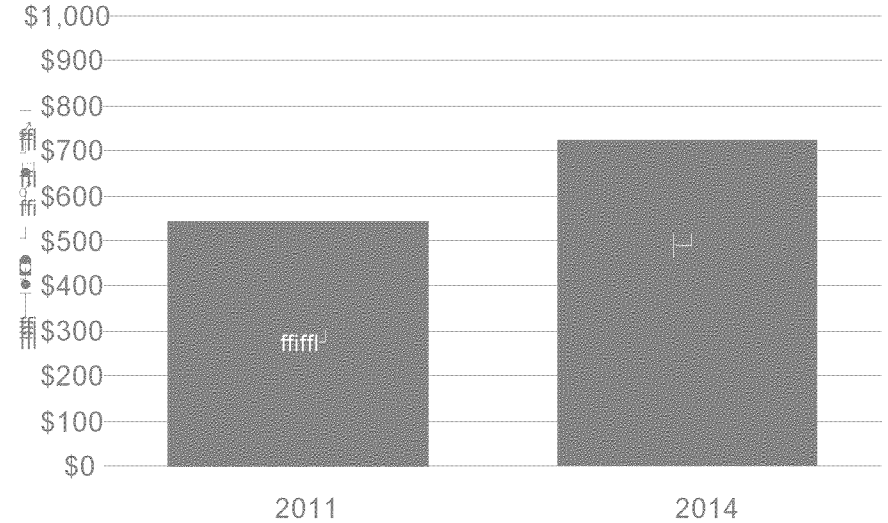


# Energy Supply Summary of Forecast Capital Expenditures and Expenses

### 2014-2016 GRO Capital



### 2014 GRO Expense





# Energy Supply Key Cost Changes from 2011 Expenses

14

2011 Recorded – \$543M; 2014 Forecast – \$723M; Increase = \$180M

## Hydro Operations (\$58.1M)

- Enterprise Risk Management efforts and associated Facility Safety, Water Conveyance, and Penstock Programs
- FER License Conditions as a result of licenses received and expected to be received
- Maintenance to continue the safe and reliable operations of powerhouses and water storage and conveyance systems

## Nuclear Operations (\$101.3M)

- Dual Refueling Outage
- Eddy current testing of Unit 2 Steam Generators
- O&M Projects (e.g., Cyber Security, Emergency Planning Rulemaking, Procedure Upgrade Project, and Water Storage Tank Concrete Repair)
- Fukushima related regulatory requirements

## Fossil and Other Generation Operations (\$8.8M)

- Piping integrity program; implementation of a machinery assessment program
- Humboldt Bay Generating Station major engine preventative maintenance work

## Energy Procurement Administration (\$11.7M)

- New Compliance Requirements (e.g., Renewable Portfolio Standard, GHG, QF/Combined Heat and Power Settlement, Dodd-Frank Act of 2010)



# Energy Supply Key Cost Changes from 2011 Capital Expenditures

15

2011 Recorded – \$539M; 2014 Forecast – \$636M; Increase = \$97M

## Hydro Operations (\$100.5M)

- Waterway Projects to enhance public and employee safety
- Reliability Projects and Programs (e.g., Helms rotor and stator replacements, generator rewinds, turbine and governor overhauls/replacements, large valve refurbishments)
- FERC license and license conditions work

## Nuclear Operations (\$15.1M)

- Regulatory Required Work (e.g., Fukushima review, Cyber Security, Emergency Plan modifications, and a new National Fire Protection standard)

## Fossil and Other Generation Operations (-\$26.2M)

- Completion of Large Construction Projects (Gateway Generating Station, Humboldt Bay Generating Station, and fuel cells)

## Energy Procurement Administration (\$8.1M)

- CAISO Market and Performance Initiatives





# Post-Test Year Ratemaking Proposal

|                                       |                       |
|---------------------------------------|-----------------------|
| 2014 GRC Revenue Requirement Forecast | \$8,111 million       |
| 2015 Attrition Increase               | <u>\$ 492 million</u> |
| 2015 GRC Revenue Requirement Forecast | \$8,603 million       |
| 2016 Attrition Increase               | <u>\$ 504 million</u> |
| 2016 GRC Revenue Requirement Forecast | \$9,107 million       |

## Mechanism

Post-test year revenue requirement increases are necessary to fund:

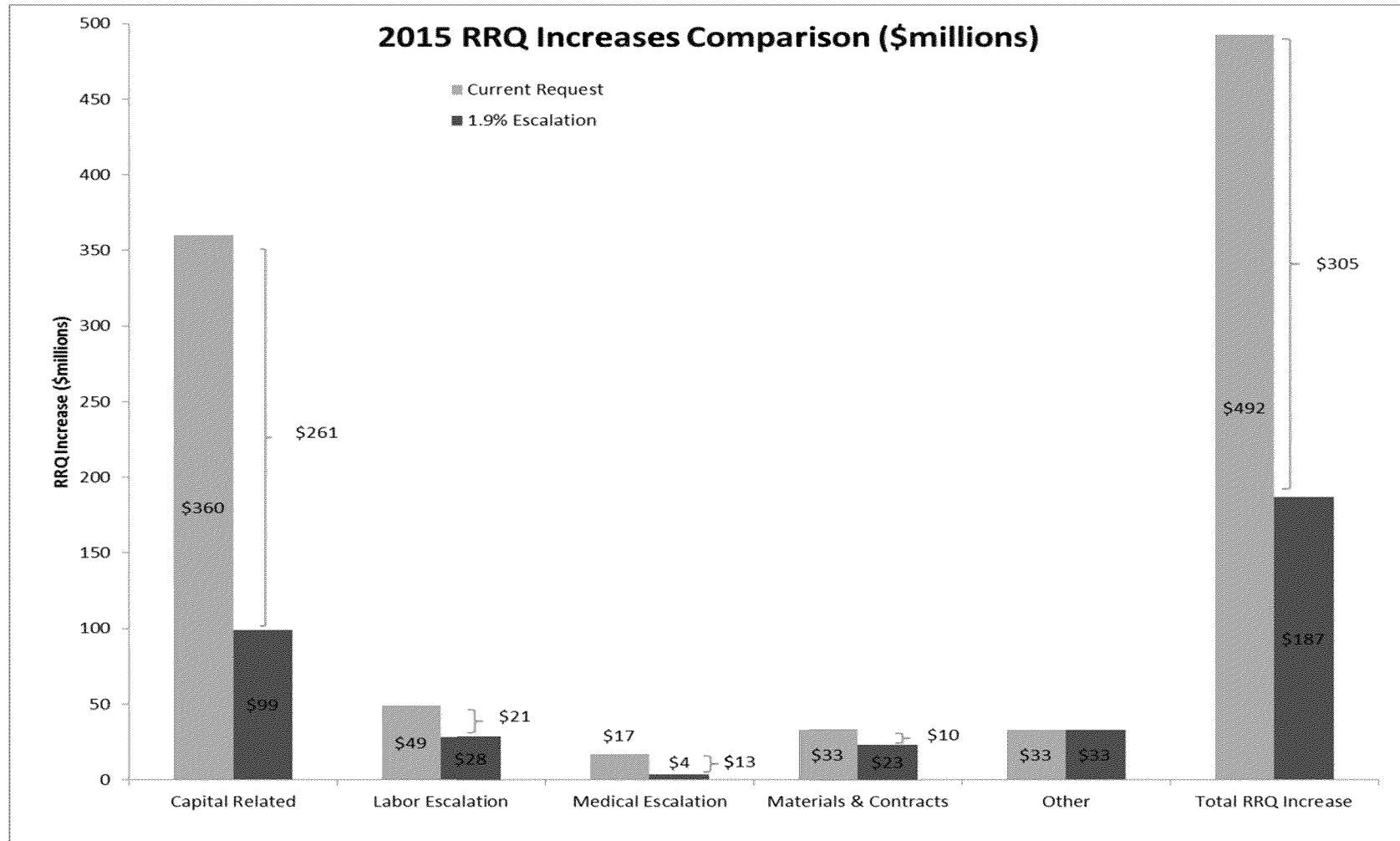
- Capital-related costs due to growth in rate base and depreciation expenses, irrespective of inflation
- Operating expense cost escalation for labor, medical, and materials and supplies
- Additional gas leak survey repair activity (subject to balancing account treatment; any unspent funds would be returned to customers)

PG&E proposes that revenue requirements for the attrition years be estimated using GRC-adopted expenses and capital additions for 2014; post-test year escalation rates would be set upon final Commission decision in the 2014 GRC proceeding.

Other Adjustments – Revenue requirement changes associated with approved “Z factor” events, defined as significant events that are beyond the Company’s ability to control and cause large changes in its cost structure. Z factor adjustments are subject to a one-time \$10 million deductible per event.



# 2015 Revenue Requirement Increase Comparison



# Attachment II



## Example (Capital)

|  |           | 2014  | 2015  | 2016  |
|--|-----------|-------|-------|-------|
| Beginning recorded balance (\$)  |           | 1000  | 1,120 | 1,240 |
| Additions (\$)   | January   | 10    | 10    | 10    |
|  | February  | 10    | 10    | 10    |
|  | March     | 10    | 10    | 10    |
|  | April     | 10    | 10    | 10    |
|  | May       | 10    | 10    | 10    |
|  | June      | 10    | 10    | 10    |
|  | July      | 10    | 10    | 10    |
|  | August    | 10    | 10    | 10    |
|  | September | 10    | 10    | 10    |
|  | October   | 10    | 10    | 10    |
|  | November  | 10    | 10    | 10    |
|  | December  | 10    | 10    | 10    |
| End of year recorded plant base (beginning + total additions made in the year) |           | 1,120 | 1,240 | 1,360 |
| Recorded rate base (weighted average)  |           | 1,060 | 1,180 | 1,300 |
| Revenue Requirement Factor   |           | 17%   | 17%   | 17%   |
| RRQ(\$)  |           | 180.2 | 200.6 | 221   |
| CPI  |           |       | 3%    | 3%    |
| CPI escalation RRQ(\$)   |           | 180.2 | 185.6 | 191.2 |



## Post Test Year Ratemaking (attrition) Proposal

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- Minimal link between CPI/general measure of inflation and capital revenue requirement changes
- Capital revenue requirement changes are determined almost entirely by the relationship between capital additions and depreciation
- When capital additions exceed depreciation, rate base and the related capital revenue requirement components increase. This happens irrespective of inflation