FOSTERING GROWTH IN ENERGY EFFICIENCY
AND RENEWABLE ENERGY

USAID
FROM THE AMERICAN PEOPLE

Caribbean Clean Energy Program

CDB/OUR/USAID-CARCEP
EMERGING REGULATORY ISSUES
WORKSHOP
Use of Productivity Information in Rate Setting

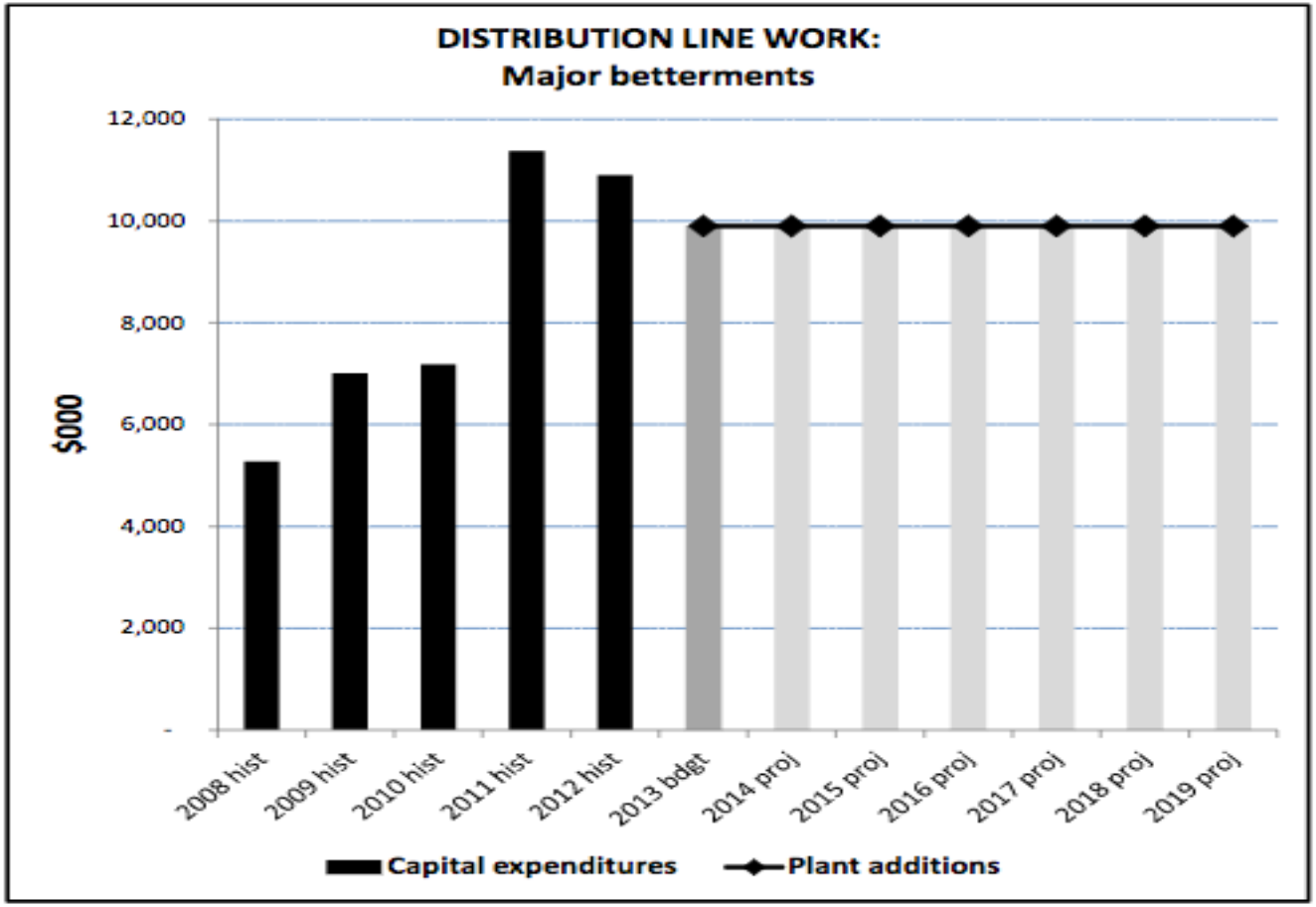
Thomas L Welch

2018 February 6 -7

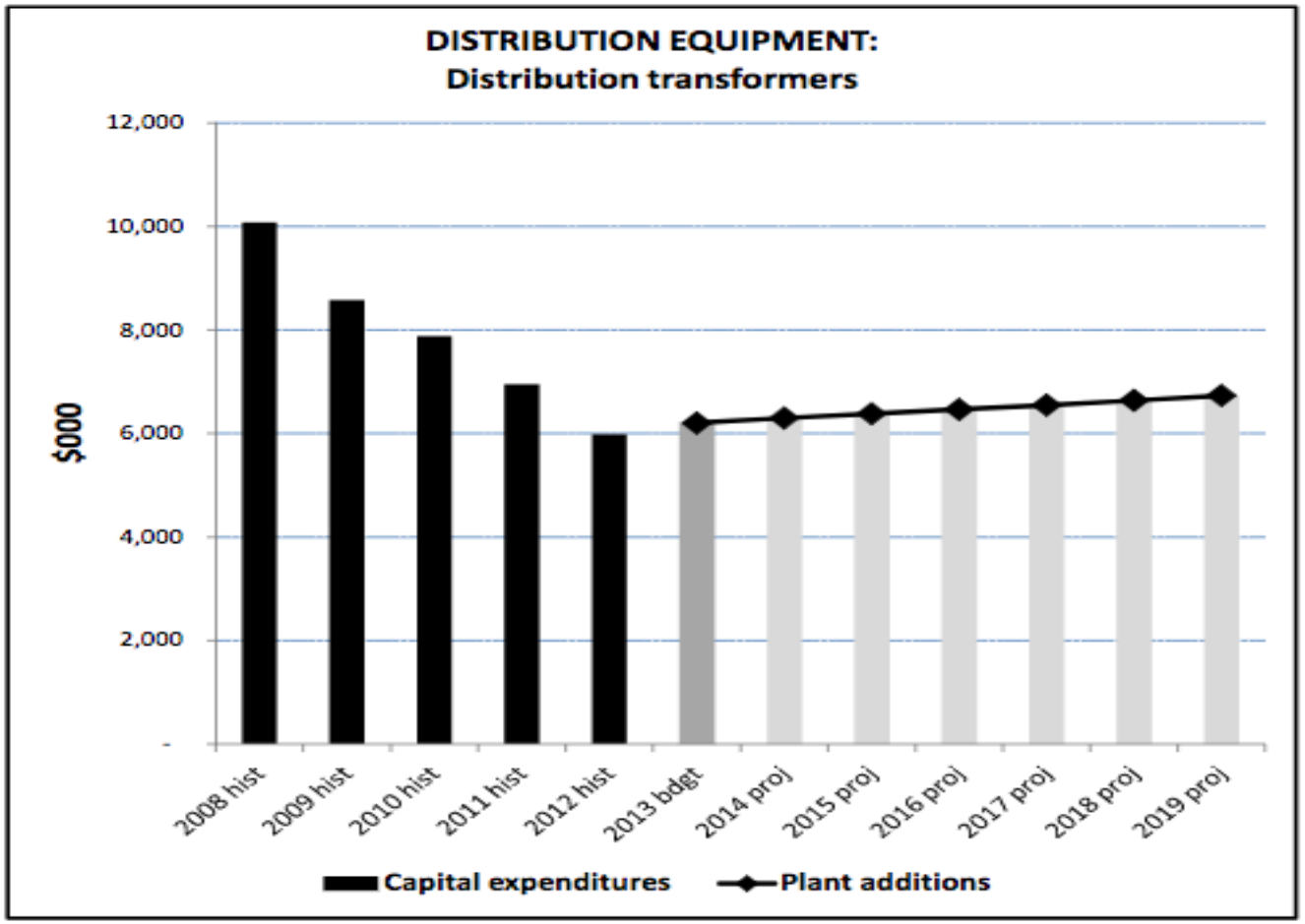
Case Study: "Regulatory Evaluation of Request for Multi-year Funding for Distribution Improvements

- Central Maine Power Request
  - Part of request to renew multi-year rate plan
  - CMP asked for "stepped" increase in T&D rates to pay for projected "betterments"
  - Basic theory was that these expenditures would enhance service and strengthen system

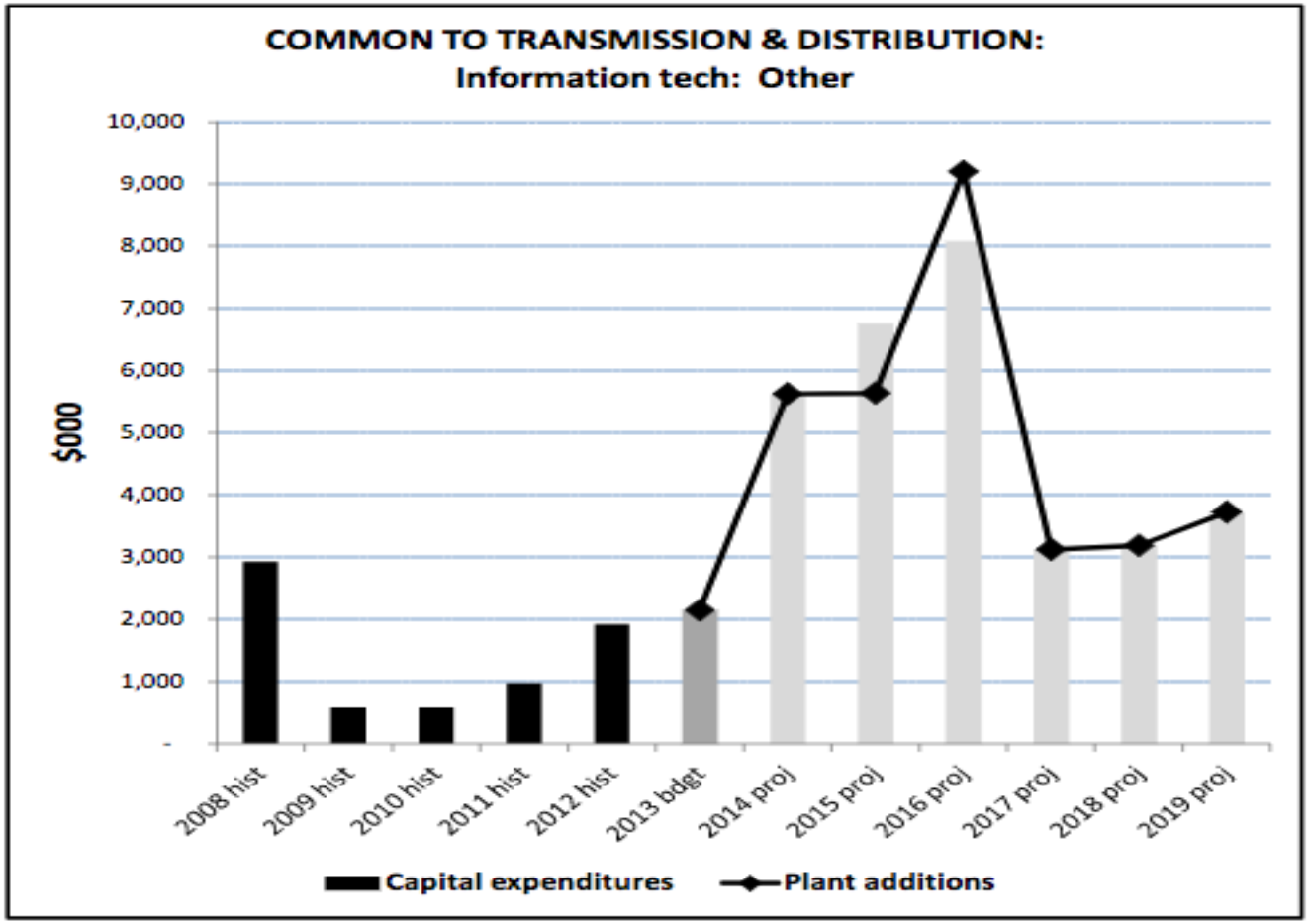
CMP Evidence



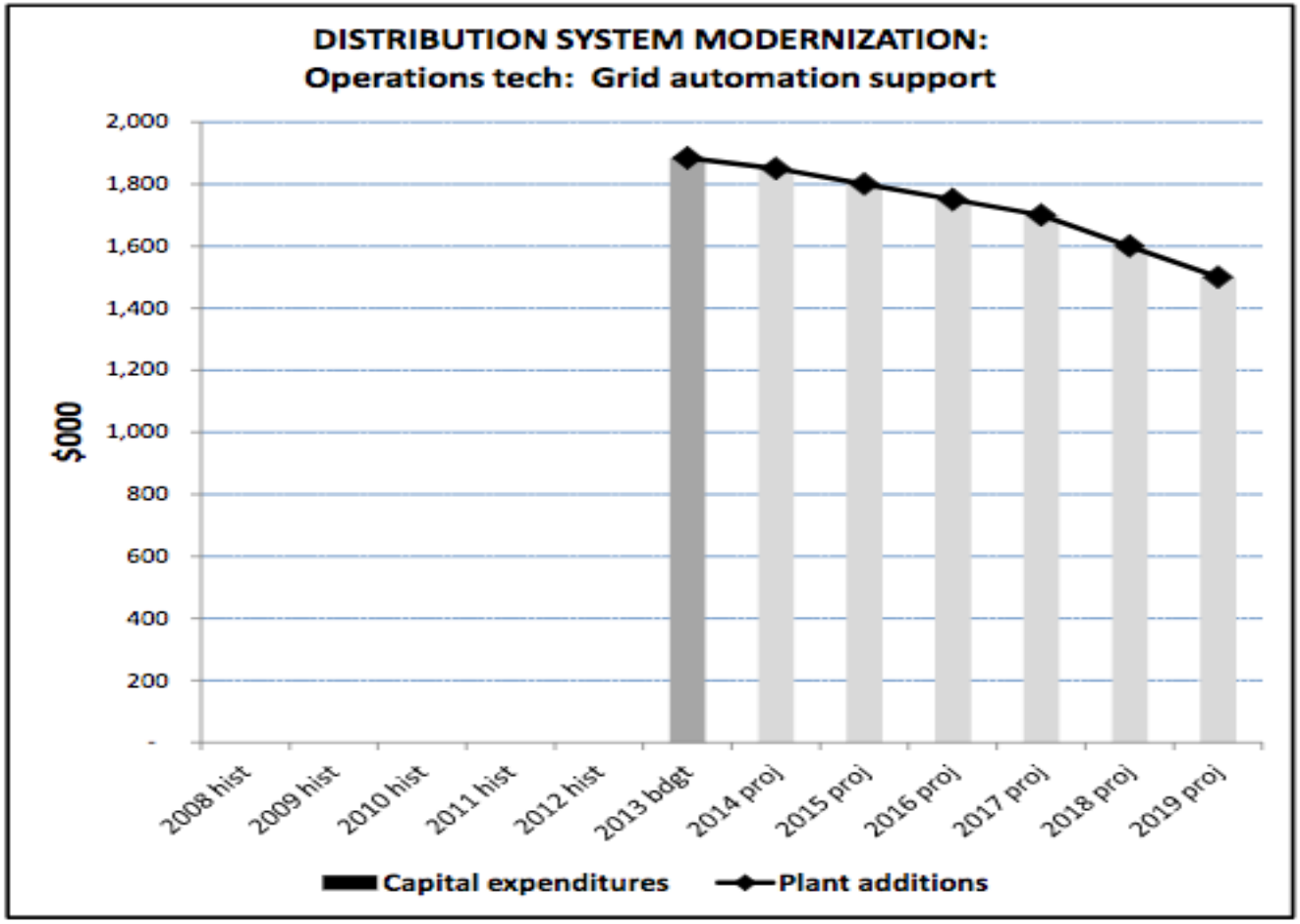
CMP Evidence



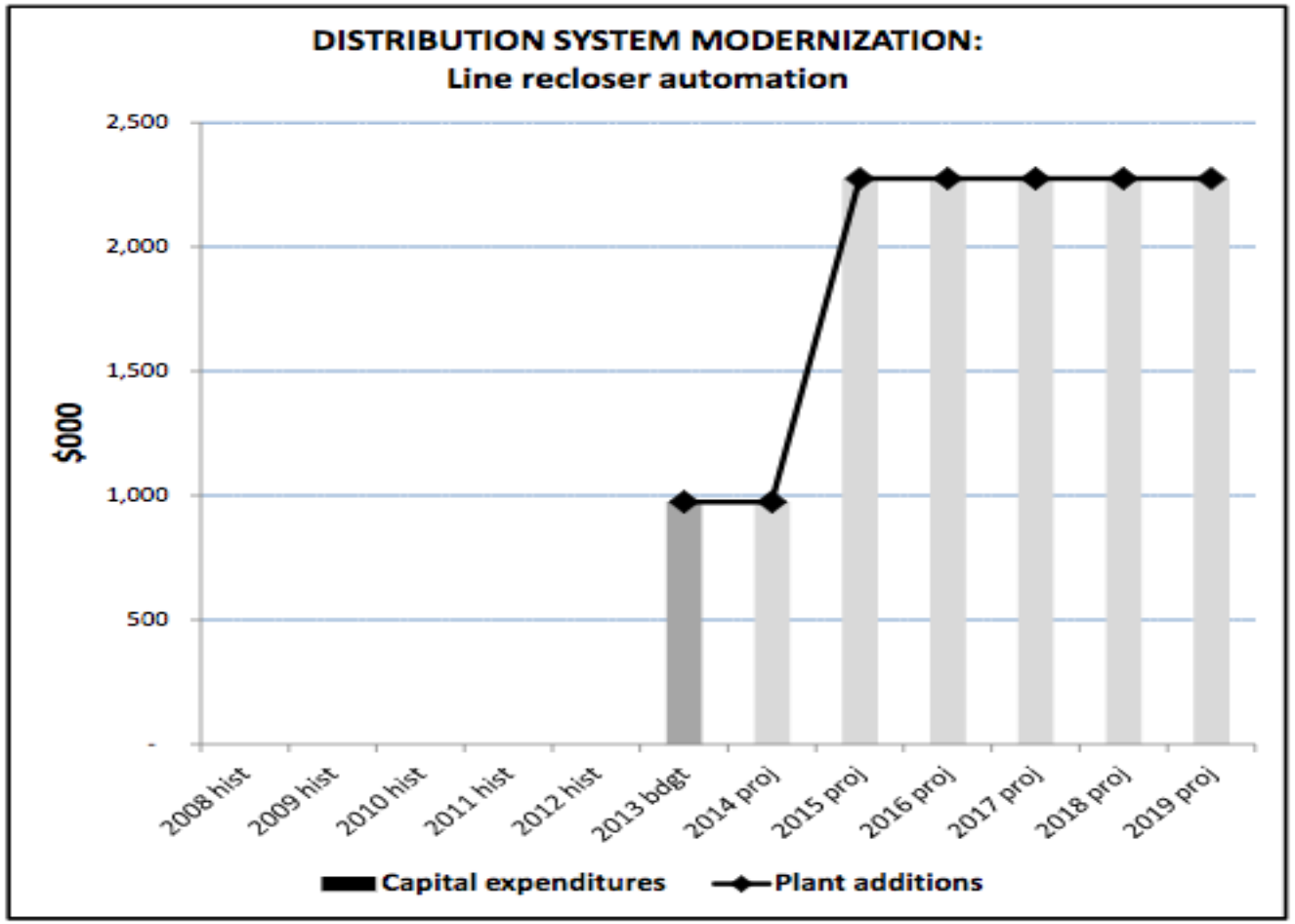
CMP Evidence



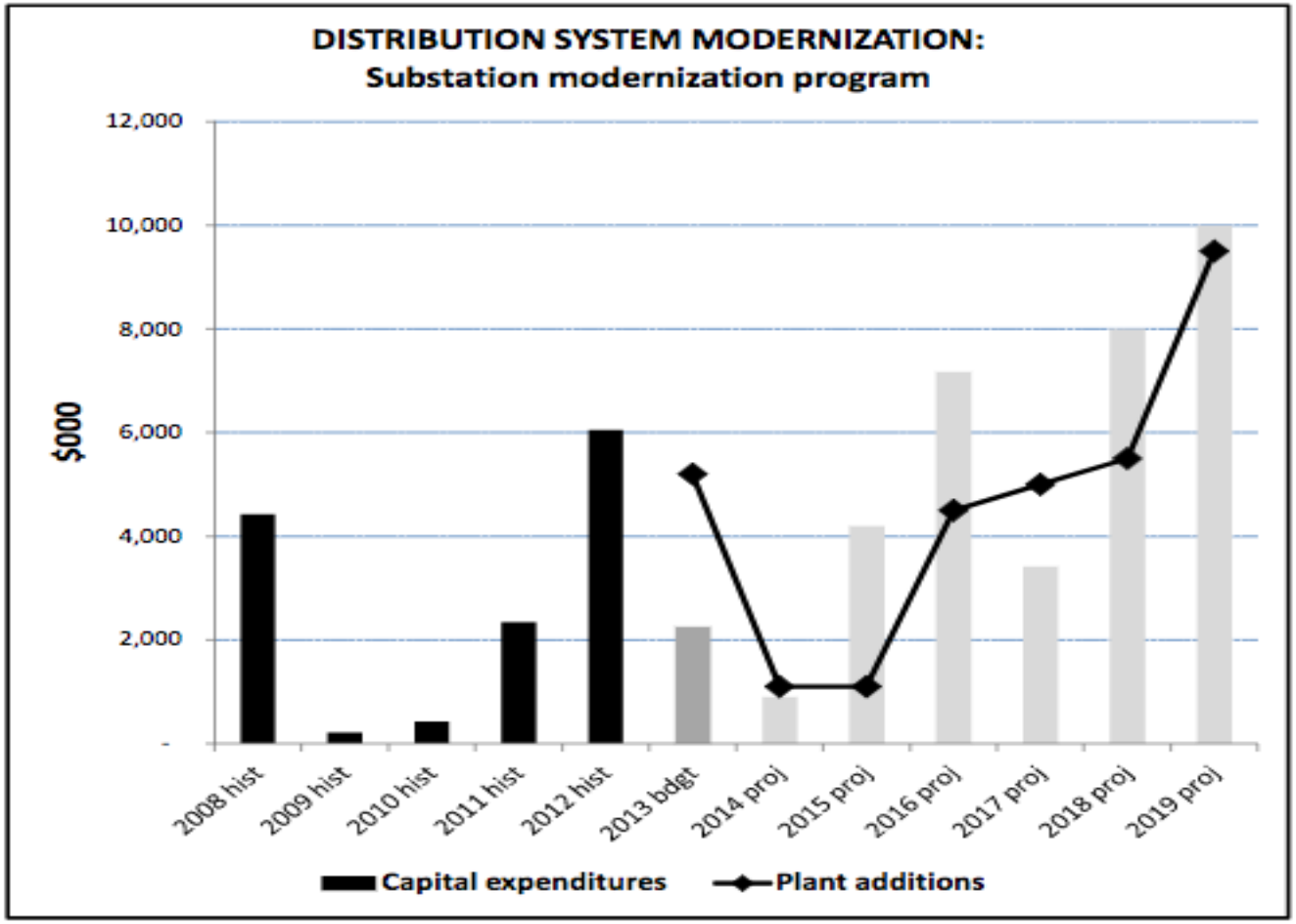
CMP Evidence



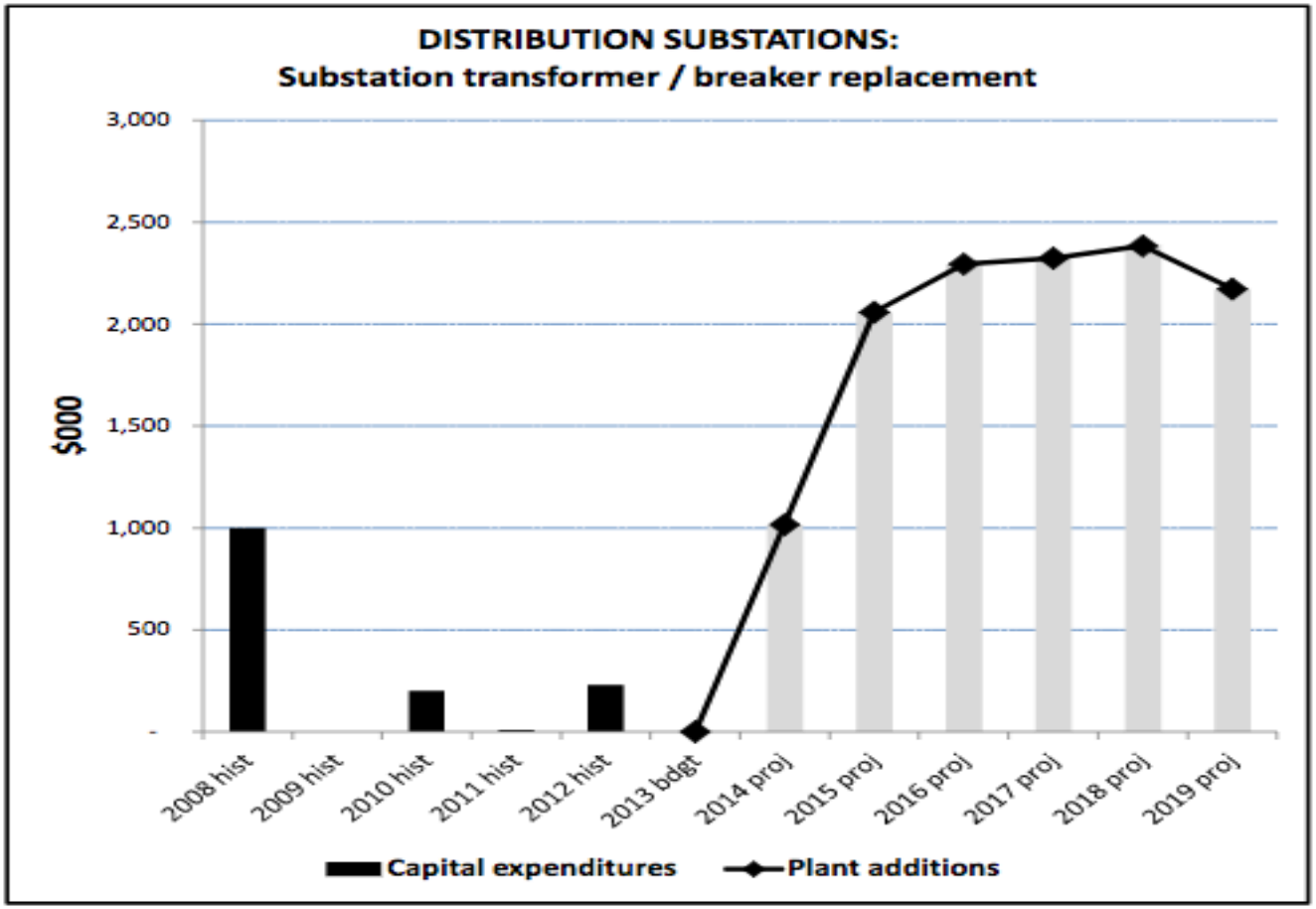
CMP Evidence



CMP Evidence



CMP Evidence

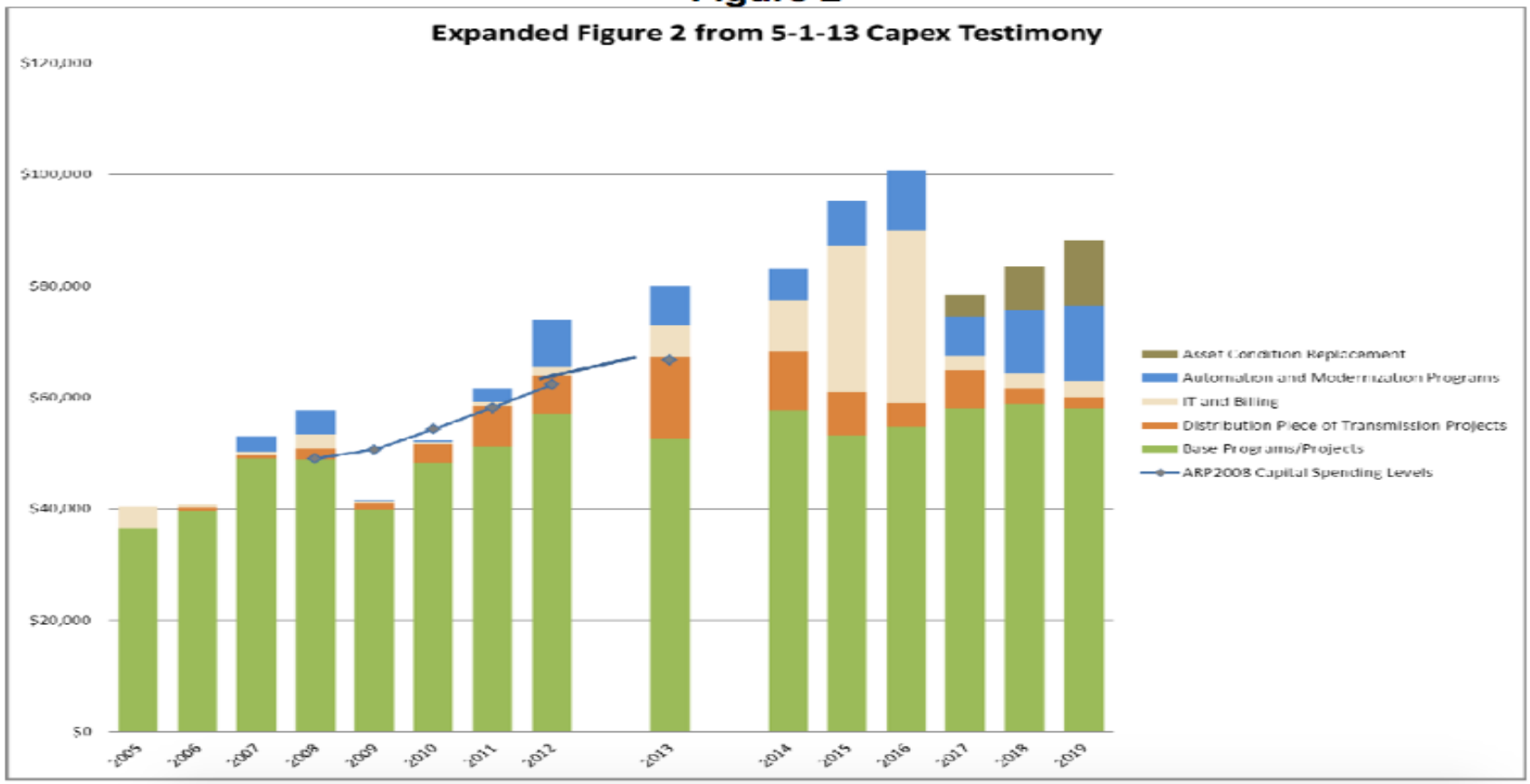


Staff Assessment

BENCH ANALYSIS 8 Docket No. 2013-00168

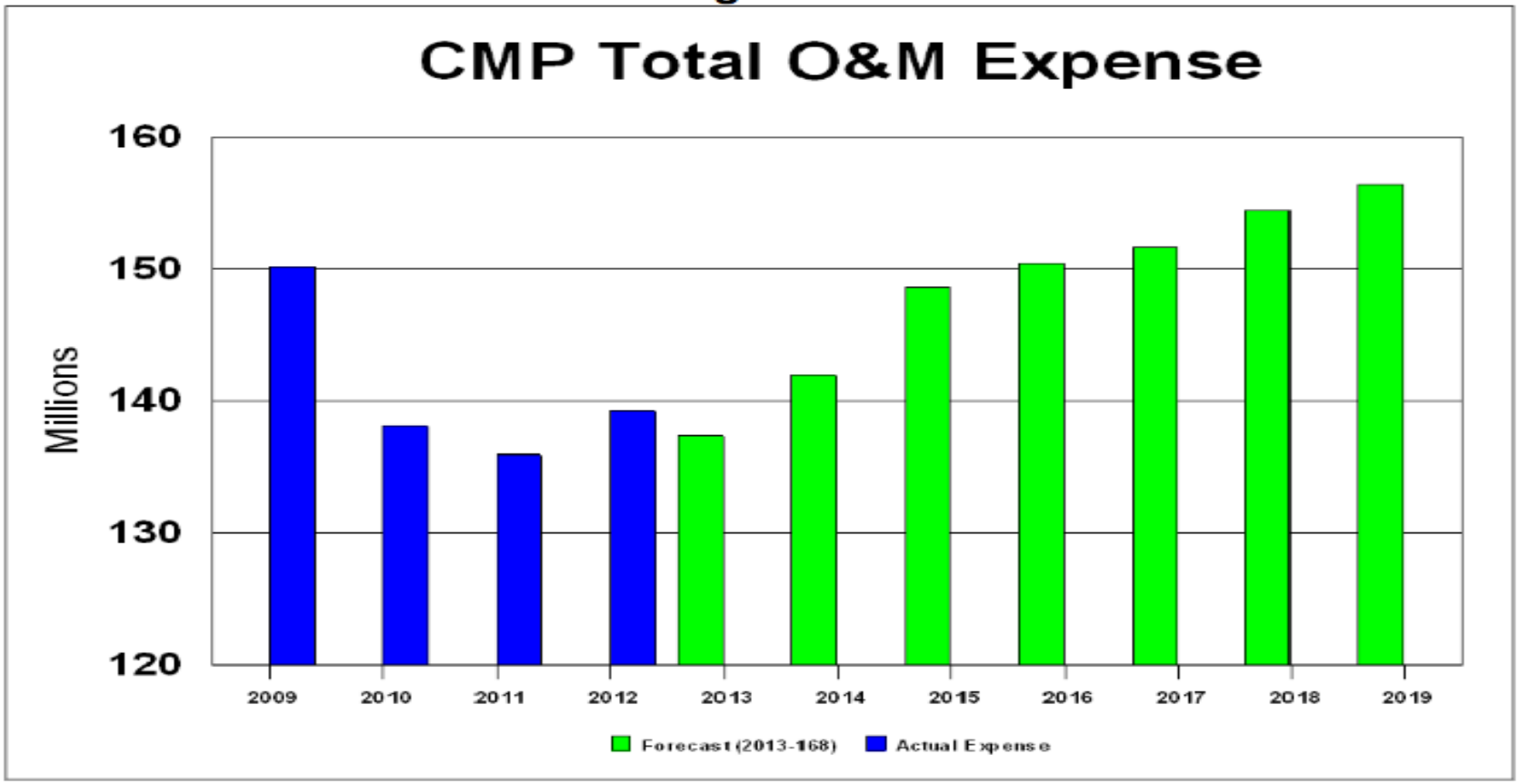
Figure 2

Expanded Figure 2 from 5-1-13 Capex Testimony



Staff Assessment

Figure 1



Commission Decision

We are also not persuaded by CMP's arguments that its 6-year capital distribution plan should be fully vetted and blessed by the Commission in this proceeding. Detailed long-term capital planning is an activity that, at least in detail, should be left to management subject to prudency review. In addition, as a practical matter, by requiring that the parties and the Commission pre-approved specific capital programs years in advance, whenever CMP acknowledges that there is uncertainty relating to the timing, cost and even the ultimate need for the projects, the CRM introduces a level of predictive uncertainty into the ratemaking process that we find to be unacceptable.

Commission Decision

We do not posit on any particular mechanism that would be suitable in this case or suggest an approach that should be sought by CMP. Such a decision should be left to Company management, subject to review by the Commission for general standards of prudence and reasonableness in accordance with Commission precedent and Sections 301 and/or 3195. However, to the extent that CMP continues to believe that a significant increase in capital spending is necessary in order to ensure safe, reliable and adequate service as part of any revised proposal, we would observe that CMP's CRM proposal has highlighted an interesting problem, namely how to deal with under-investment during one ARP when moving to the next. For example, an ARP without specific capital commitments could provide the utility with an opportunity to allow its system to degrade in order to keep profits high. If the next ARP does contain such commitments (and recovery) the utility might have the opportunity to recover the cost of capital that arguably should have been spent in prior years. Put another way, moving from an RPI-X regulatory system as a discipline on management behavior to a capital program of the kind proposed by CMP is especially problematic because it could reward underinvestment by a utility. The issue of whether CMP has allowed its system to degrade is, of course, an issue that may need to be addressed in this case notwithstanding the elimination of the CRM proposal, as such degradation could be relevant to a determination of just and reasonable rate levels.[6]

Use of Productivity in Price Cap Plans

- Regulator will always see conflicting evidence
  - Analogous to ROE evidence
  - Exercise of informed commission judgment is unavoidable
- Typical issues
  - National TFP or Industry TFP
  - Regional differentiation
  - Stretch Factor ("consumer dividend")
  - Relationship between strength of incentives and "re-basing" period

Other Contexts

- All ratemaking is forward-looking
  - Requires estimate of future performance
    - Time period will vary
  - Identifying trends
  - Identifying external drivers
- CMP management audit results, CMP response, PUC finding, and result
  - A lesson in the power of incentives and the lack of available precision

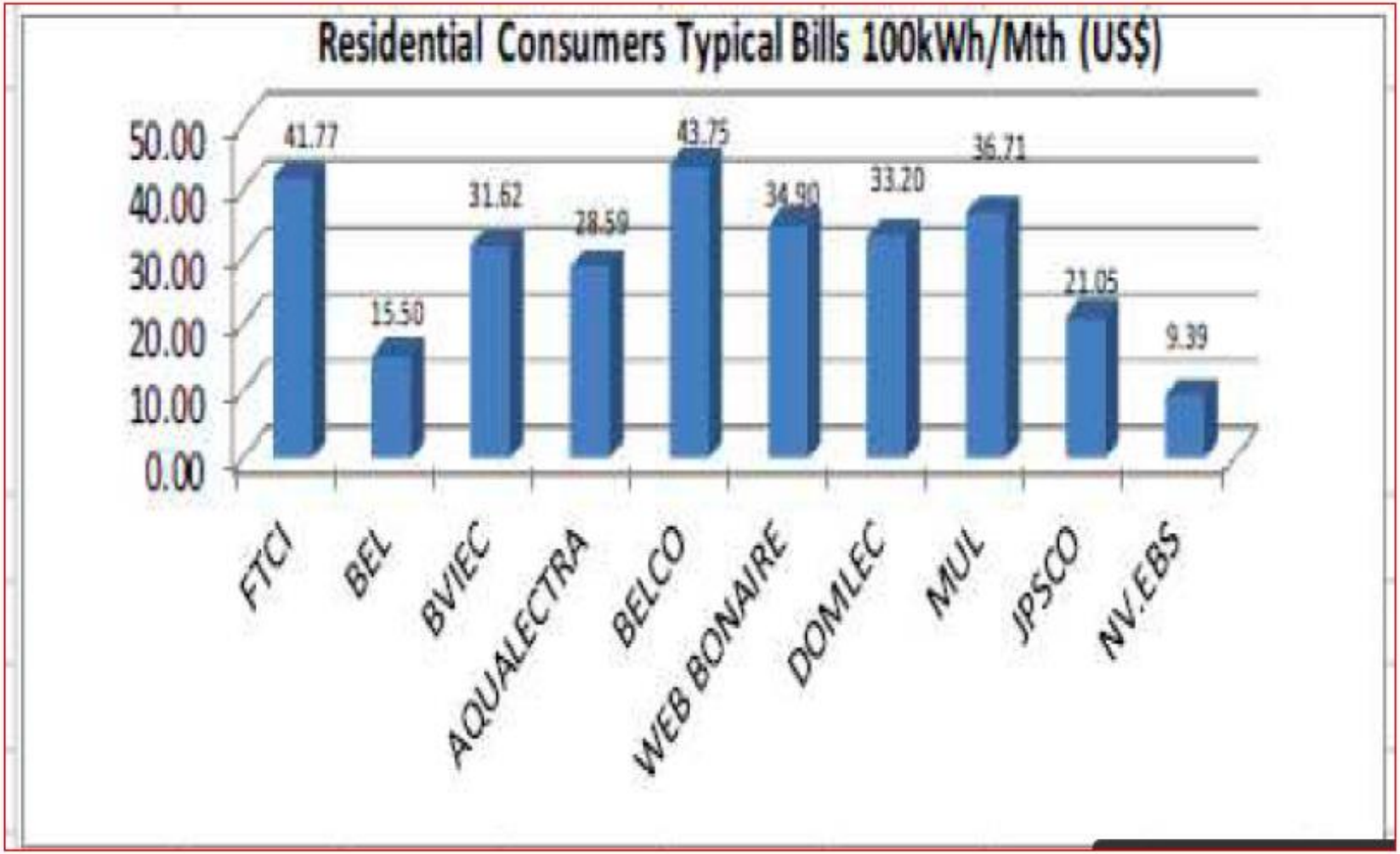
Some Caribbean Data

TABLE OF ELECTRICITY RATES IN CARCEP NATIONS

Drawn from NREL Snapshot Reports

CARCEP NATION	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	STREET LIGHTING
Antigua & Barbuda	.37	.39		
Barbados	.28	.30	.27	
Dominica	.384	.381-.411	.375	
Grenada	.425	.442	.383	
Jamaica[1]	.32	.39	.29	.40
St Kitts & Nevis	.234	.262	.279	
St. Lucia	.341	.470	.470	
St Vincent & The Grenadines	.22-.29	.29-.31	.26-.25	.32

Some Caribbean Data



Discussion Topics

- Do these price and average bill data say anything useful about relative productivity?
- What data are available to make useful productivity assessments?
  - Internal
  - Regional
- What are external factors that are likely to impact productivity performance?
- What are available regulatory mechanisms to address productivity?

FOSTERING GROWTH IN ENERGY EFFICIENCY
AND RENEWABLE ENERGY

Thank You!