

QUARTERLY ELECTRIC AND FIBER ISSUES UPDATE
December 2006

I. Update on FERC, CAISO, CPUC, Transmission, and Other Related Activities

Electric Industry Market Design in California

Market Redesign & Technology Upgrade (MRTU): The California Independent System Operator (CAISO) filed the MRTU tariff with the Federal Energy Regulatory Commission (FERC) on February 9, 2006, requesting an implementation date of November 1, 2007. FERC issued its Order conditionally accepting the MRTU tariff on September 21, 2006. In its Order, FERC addressed virtually all contested aspects of the tariff and allowed the CAISO to proceed with the November 2, 2007 implementation date, albeit with some additional provisions in place.

Throughout the process of market design, and tariff development and filing, the City has been represented by the Bay Area Municipal Transmission Group (BAMx), the Northern California Power Agency (NCPA), and the California Municipal Utilities Association (CMUA). Following issuance of the FERC Order, staff worked with BAMx and NCPA to submit to FERC “Requests for Rehearing” on portions of the Order. Of key interest to the City’s electric utility, the requests for rehearing included: 1) FERC’s order that the CAISO increase the number of load aggregation points in Release 2 of MRTU; 2) FERC’s acceptance of the resource adequacy proposal, particularly the local requirements; 3) FERC’s acceptance of the transmission rights proposal; and 4) FERC’s acceptance of the use of marginal losses.

The Load Aggregation Points (or LAPs) have been a critical design issue for the City. Under the current design for Release 1 of MRTU, the City’s electric load will pay an average price based on the entire PG&E transmission area. The FERC’s Order could have the City paying a higher locational marginal price (LMP) based on the Greater Bay Area.

Another key issue for the City is the local reliability requirements. The CAISO is proposing to shift the responsibility of contracting with local generators for grid reliability, to load serving entities (LSEs). Currently, the CAISO is responsible for identifying and contracting with generation units that are required for grid reliability, referred to as Reliability Must Run (RMR) units. These RMR units are under cost-based contracts with the CAISO. Under MRTU, LSEs will be required to contract with local generation to provide capacity for grid reliability at market, not cost-based, rates.

This has the potential to increase costs if LSEs are exposed to local market power, and shift costs from the system to load served in load pockets. Potential exposure to the City is \$4.5 Million per year, which has been included in the budget. City staff will continue to participate with BAMx and NCPA in the CAISO and FERC proceedings concerned with local reliability requirements.

Finally, the City’s electric utility could face significant cost impacts depending on the design of the transmission rights and collection of losses.

Resource Adequacy Requirements (RAR) and the CAISO’s Interim Reliability Requirements Program (IRRP): RAR is a requirement for utilities to demonstrate ahead of time that they have

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adequate generation capacity to meet their load requirements plus a planning reserve margin. The lead agency for determining the requirements for the investor-owned utilities (IOUs) has been the California Public Utilities Commission (CPUC). CPUC-jurisdictional LSEs have to show that they have system capacity available for 115% of their forecasted peak demand in each month. On May 12, 2006, FERC accepted the CAISO's IRRP Amendment to the CAISO Tariff that imposes RAR on all LSEs. However, the IRRP makes an exemption for load following metered subsystems (MSS), which includes the City. This interim program will be in effect until implementation of the full MRTU tariff.

Under the current MSS Agreement, the City reports resource and load forecasts to the CAISO (via NCPA) by November 1st of each year. Prior to resolution of the load-following MSS exemption, the City Council (as the Local Regulatory Authority (LRA) for the City) formally adopted a resource adequacy program for the City's electric utility that includes a 15% planning reserve requirement. This program will eventually supplement the City's MSS Agreement to more closely match the IRRP reporting requirements and timelines, which will increase the City's reporting requirements to include monthly reporting of forecasted load and available resources.

IEP Settlement and Local Reliability Requirements: Related to the RAR and local reliability requirements is a complaint made to FERC by the Independent Energy Producers (IEP). Settlement of the complaint has resulted in a tariff-based Reliability Capacity Services Tariff (RCST), which sets the price for the CAISO's backstop authority for procuring generation capacity for local reliability needs at \$73/kW-yr. The cost of this backstop procurement will then be passed through to LSEs that have failed to procure sufficient local capacity. For 2007, the settlement allows each LRA to set the local requirement for its jurisdictional utility, and the CAISO will only make backstop procurement if the LSE fails to meet the requirements of its own LRA. There are no provisions in the RCST Settlement for 2008 and beyond, when provisions of the MRTU Tariff will prevail.

City staff is coordinating with NCPA to craft a position on local reliability requirements for 2007. The NCPA MSS Pool as a whole appears balanced. Discussions within the NCPA membership related to capacity exchanges are in process.

It is anticipated that the MRTU tariff will remove much of the flexibility for LRAs to set their own local requirements for 2008 and beyond. NCPA staff is also participating in a technical group to design the parameters for setting local requirements for 2008 that conform to regional planning and reliability standards.

Transmission and Other Related Activities

Exploratory efforts continue to assess the feasibility of having a second point of transmission interconnection to the City and to connect to the CAISO grid at 230 kV. Council approved a PG&E Facilities Study Plan to evaluate the feasibility of upgrading the present 115 kV transmission line from the PG&E Ravenswood substation to 230 kV. The study is expected in the coming months and is expected to cost \$200,000.

National Electric Transmission Congestion Study: In August the Department of Energy released its National Electric Transmission Congestion Study in which it identified the Greater Bay Area as a "congestion area of concern". BAMx submitted further comments on the final study stating that the

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Study appropriately classified the Greater Bay Area, and that transmission expansions for increasing the import capability into the Greater Bay Area “should continue to be the focus of Federal monitoring and attention” by DOE. BAMX further submitted comments regarding the Congestion Study, specifically regarding the issues of regional planning, granularity of congestion, and modeling improvements.

Congestion Revenue Rights (CRRs): A key element of MRTU is the use of CRRs as a hedge against congestion costs. The CAISO has failed to conduct a comprehensive study of the efficacy of CRRs and consequently is unable to quantify the economic impact of the proposal on market participants. NCPA has selected two consultants to provide software and consulting services to carry out comprehensive studies of market price scenarios and CRR strategy for members. Proposed schedule is for the consulting work to commence November 2006, and have the study completed by March 2007 when the first round of CRR nominations is due to the CAISO

Long-Term Transmission Rights (LTTRs): FERC has ordered the CAISO to implement LTTRs with a tariff filing due Jan 2007. The CAISO’s interpretation of the Order is that they do not have to implement LTTRs until start-up of MRTU. Initially thought of as a win, as the muni community as a whole has been a strong advocate of LTTRs, the CAISO’s interpretation of LTTRs is disappointing. Namely: 1) The CAISO intends to release financial rights based on the CRR model, not physical rights; 2) We consider obligation rights to carry significant financial risk and prefer option rights, but the CAISO is proposing that the LTTRs will be obligation rights; and 3) the CAISO has not interpreted the FERC ruling as to require a mechanism of LTTRs that allows LSEs to match the transmission rights to their long-term resources. Being in the financial hedge frame of mind, the CAISO is disassociating transmission rights and physical resources.

Impacts of EPAct 2005 on COTP: The Energy Policy Act of 2005 (EPAct) expanded FERC’s jurisdiction over transmission owned by public power. General Counsel for the Transmission Agency of Northern California (TANC), through which the City has rights to the California Oregon Transmission Project (COTP), has advised members that voluntary adherence to FERC Orders 888 and 889, which regulate access to transmission, is required to prevent more intrusive regulation. NCPA’s General Counsel has advised that NCPA post within-the-month capacity for sale on OASIS. NCPA and City staff is participating in a TANC working group to allocate revenues among TANC members from OASIS sales.

II. Western Area Power Administration (Western) Issues & LEAP Update

Western Operations

Staff from Palo Alto and NCPA continue to monitor reservoir and generator operations and make suggestions in unit loading and timing, and changes in reserve provision activities to maximize system value. Reclamation held reservoirs at relatively high levels in late October, above historic average levels but, not encroaching on flood control space.

Western Base Resource Forecasting Process

A history of forecasts of the rolling 12-month forward period, and the current fiscal year is shown in Figure 1 below.

Western Base Resource - FY06-07 & Rolling 12-month Forecasts

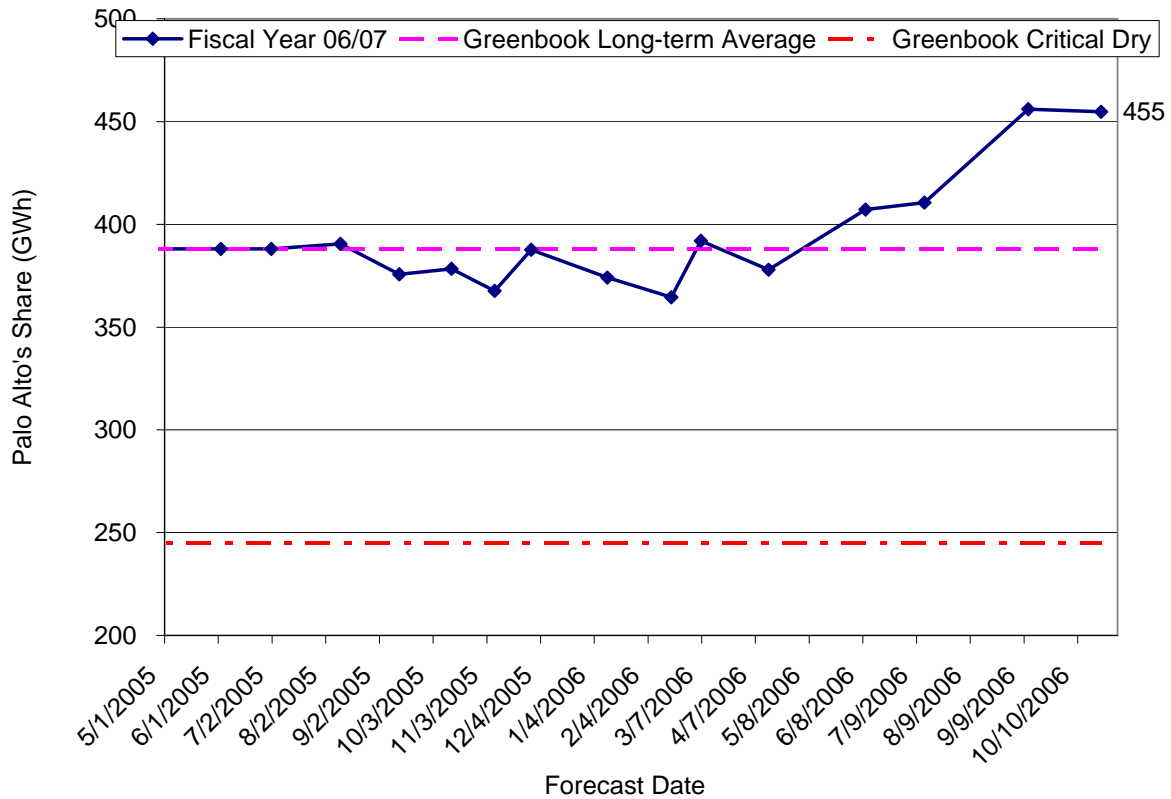


Figure 1

Calaveras Forecast

Generation from Calaveras is expected to be above average for FY 06-07 and for the prompt 12-months, given the greater than average storage levels along with projected median inflow conditions. Figure 2 illustrates historical and current Calaveras forecasts.

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Calaveras Generation FY 06-07 and 12-month Rolling Forecasts

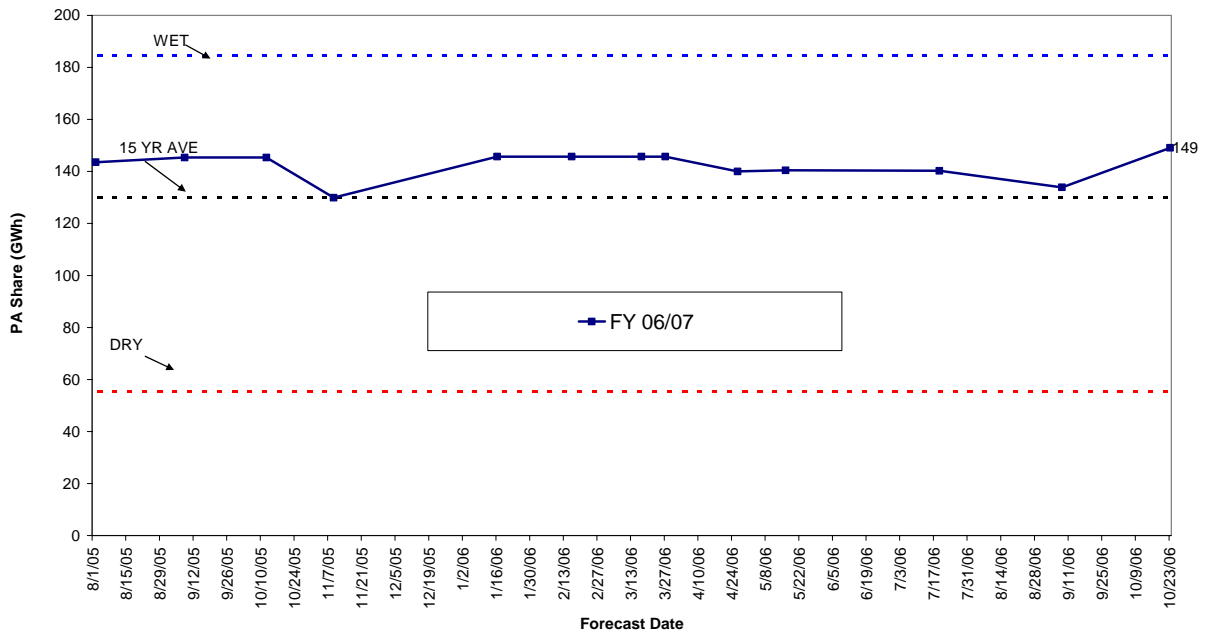


Figure 2

CVP Corporation Activities

No recent CVP Corporation activities related to Western Base Resource for the quarter.

Long Term Electric Acquisition Plan (LEAP) Implementation Update

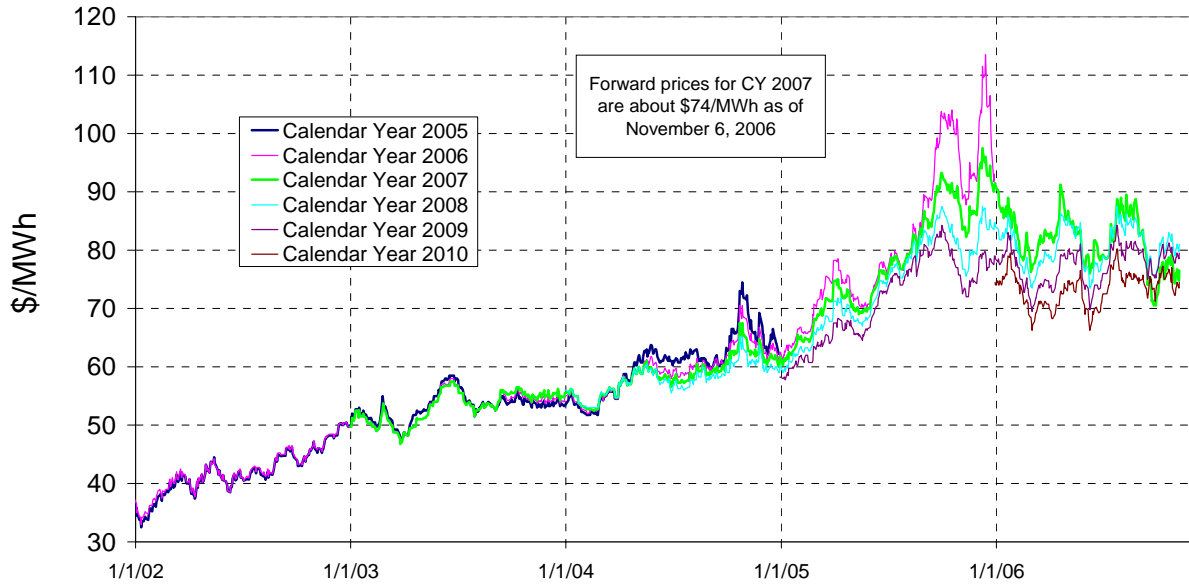
The Ameresco Half Moon Bay (2.8 to 6.7 MW to Palo Alto) and Keller Canyon (1.4 to 2.1 MW) landfill gas projects are in the air-permitting and interconnection study phases, expected to come on-line in July and November of 2007, respectively. On July 17, 2006 Council approved (CMR 296:06) the NCPA Green Power Pool Third Phase Agreement to pursue an additional 15 average MW of renewable energy resources, which would result in an additional 13% of eligible renewable sourced generation for Palo Alto. The total interest from participating NCPA members is 79 MW. NCPA's RFP closed on October 25. There were 20 responses which are now under review by NCPA and the participating NCPA members.

Council approved guidelines for a local ultra-clean distributed generation incentive program on November 6, 2006. Staff is aiming to develop and implement the program consistent with these guidelines with design to begin in FY 2007/08.

Market Prices

Wholesale forward power prices have dropped since the last quarter report. The Northern California on-peak strip price for calendar year (CY) 2007 is currently trading at close to \$74 per megawatt hour (MWh), down \$14 per MWh from the CY 2007 price reported in the last quarterly report. The current price for CY 2007 is ~55% more than the average strip price for CY 2003. Figure 3 shows 2005 to 2009 calendar year strip forward prices for Northern California. Figure 4 shows historical and projected monthly forward prices for Northern California.

Forward Prices for Northern California On-Peak Electricity*



*This “strip” product is for energy delivered on all on-peak hours for a calendar year

Figure 3

NP15 Peak Electric Prices: Trading History and Forward Price Quotes

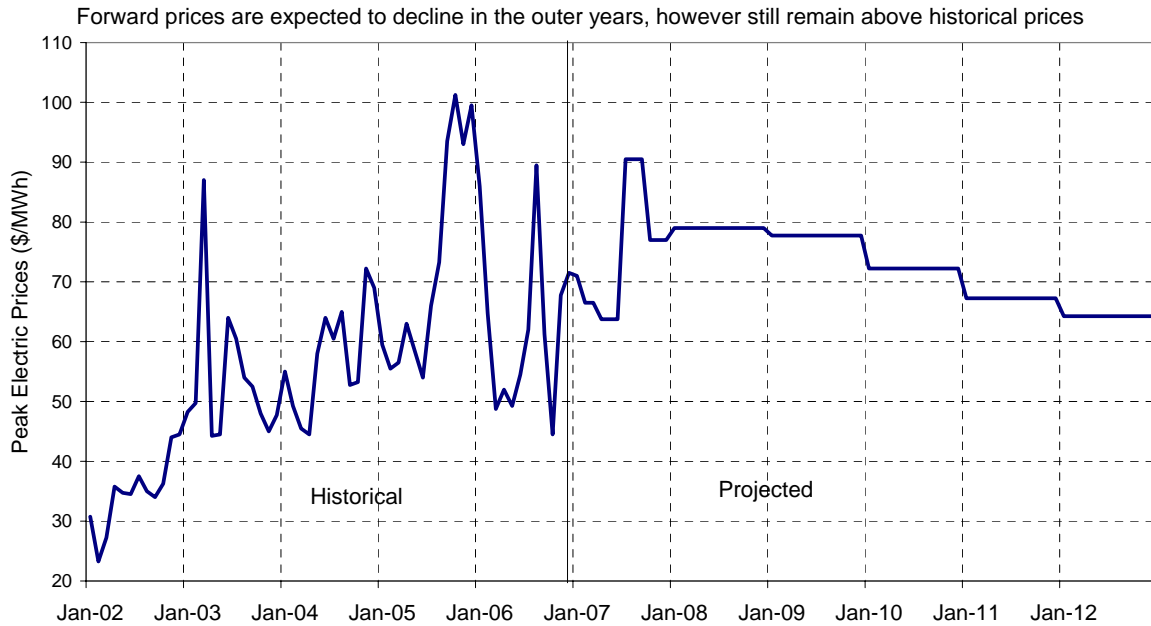


Figure 4

Load and Resource Balance

For FY 06/07, the electric supply portfolio is expected to be surplus 6% due to higher than expected hydro supply from Western and Calaveras. For CY 2006, the electric supply portfolio is expected to be 34% surplus. Figure 5 below shows the annual load-resource balance for the current and next two calendar years.

Staff continues to make fixed price energy purchases as part of the laddering strategy to manage price risk. For CYs 2006 through 2008, existing fixed price forward purchases from suppliers under the Electric Master Agreements (EMA) make up ~782 GWh, up 57 GWh from last quarter’s report. The Quarterly Energy Risk Manager’s report to Council provides the details of all forward transactions executed.

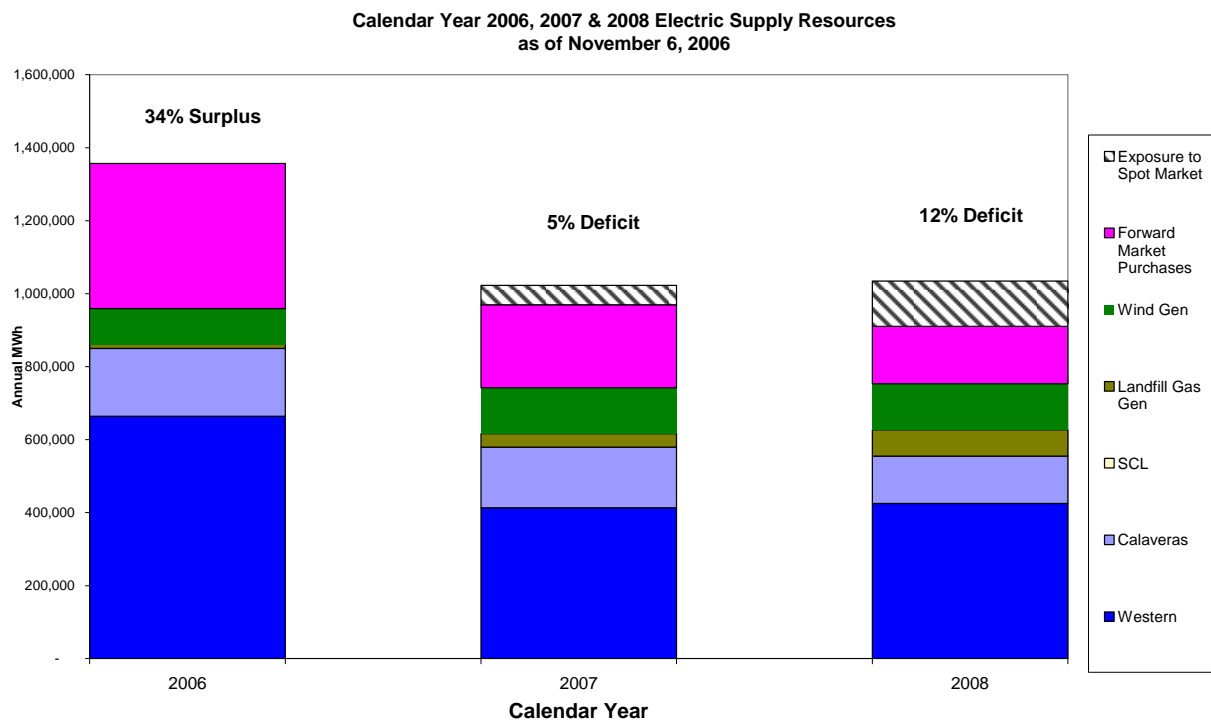


Figure 5

Capacity to Meet Local Area Reliability Needs (LARN)

As discussed in Section I of this report, if local reliability requirements are imposed, NCPA members should collectively have sufficient local capacity to meet the regulatory requirement. Palo Alto itself will not have sufficient local capacity and will likely transact with other members of NCPA based on a to-be-determined pool benefit sharing algorithm.

Request for Proposals (RFP) for New Electric Suppliers

An RFP for new electric suppliers was issued to expand the number of existing suppliers. Proposals were received in July and are being evaluated. An expanded set of master agreements with suppliers is expected to be presented to the Council for approval early next year.

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Revision of NCPA Pooling Agreement & Creation of Market Power Purchase Project

The NCPA pool has been operating under a 1993 pooling agreement. While the schedules to the agreements have been updated periodically and approved by the NCPA Commission, the agreement itself has not been revised since 1993. NCPA and pooling member staff expect to work in the coming months to modifying the agreement to reflect the new transmission operating paradigm under the CAISO and to effectively meet varying member needs for NCPA pooling related services.

The modified pooling agreement is expected to be brought to member City councils for approval early next year.

Along with this effort, NCPA is creating a new program named Market Power Purchase Project (MPP project). The objective of the MPP project is to expand NCPA's authority and flexibility to purchase market power for participating members for up to 5 years. While Palo Alto does not intend to participate in the project, the City supports NCPA's efforts to provide this service for interested members. The City's interest will be to ensure the project is appropriately structured with controls in place to ensure the risk and rewards associated with long term purchases remain with participating members and does not adversely impact other NCPA members.

III. Miscellaneous Legislative/Regulatory Issues Update

PG&E-Western Dispute Related to Pre-2004 Transmission Related Cost Pass-Through

An outstanding claim by PG&E related to Grid Management Charges (GMC) remains unresolved pending an appeal that may be resolved in 2008. The size of the liability depends first on the final resolution between Western and PG&E and then on Western's decisions about how to allocate any charges.

IOUs Make Another Claim for Refunds

In November 2005, the state's three investor-owned utilities and the California Electricity Oversight Board filed a claim for damages associated with sales that NCPA and other publicly owned utilities made in the wholesale energy market during the period from May 2000 to June 2001. The parties are seeking refunds through a contractual claim made in U.S. District Eastern California Court (Sacramento) since the 9th Circuit Court of Appeals rejected the ability of FERC to order such refunds. NCPA's legal staff is defending against this claim.

State Legislative Bills and related matters

The following bills were signed into law in 2006:

Assembly Bill 2021 (Levine): AB 2021 requires publicly-owned electric utilities to first acquire all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible, to treat efficiency investments as procurement investments, to report targets and progress to the CEC, and to provide for independent verification of program effectiveness. A revamped efficiency program to address the provisions of the new regulations will be forthcoming with the new budget cycle.

Senate Bill 1 (Murray): SB1, the solar energy bill, requires publicly-owned utilities to offer photovoltaic rebate incentives. The bill sets minimum incentives levels and targets meeting a load-based share of the statewide goal to install 3,000 MW. For Palo Alto that translates to approximately

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13 MW and \$13 million over the next ten years. Palo Alto rebates already meet or exceed the SB1 levels, with a total solar photovoltaics system capacity installed to date of 509 kW, expected to nearly double next year. A revamped solar program will be forthcoming with the new budget cycle.

AB 32 (Pavley): The California Global Warming Solutions Act of 2006 requires the State Air Resources Board to adopt regulations on or before January 1, 2008, establishing a program to monitor and report on existing emissions and changes in emissions of greenhouse gases from sources identified by the state board, to monitor compliance with emission limits on greenhouse gases, to adopt market-based compliance mechanisms, and to adopt a schedule of fees to be paid by regulated sources of greenhouse gas emissions. Entities that voluntarily participated in the California Climate Action Registry prior to December 31, 2006 (such as Palo Alto) and have developed a greenhouse gas emission reporting program, shall not be required to significantly alter their reporting or verification program except as necessary to ensure that reporting is complete and verifiable for the purposes of compliance with this division as determined by the state board.

SB 1368 (Perata): This bill prohibits any load serving entity, including electrical corporations, community choice aggregators, electric service providers, and local publicly owned electric utilities, from entering into a long-term financial commitment (five years or longer) for baseload generation (60% annual capacity factor) unless that baseload generation complies with a greenhouse gases emission performance standard established by the Energy Commission, by regulation, in consultation with the CPUC and the State Air Resources Board. The bill requires that the greenhouse gases emission performance standard not exceed the per kWh emissions of greenhouse gases of a combined-cycle natural gas power plant. The bill authorizes the Energy Commission to adopt regulations for the enforcement of the greenhouse gases emission performance standard with respect to a local publicly owned electric utility. Staff is participating in CMUA and NCPA working groups with the Energy Commission in the design of the regulations.

Federal Bills

No update from last quarter.

IV. Commercial Fiber Optics Services

New fiber rates were approved in September. Customers on rate schedule EDF-1 will receive a 3.19% rate increase. This is a combined two year CPI increase.

City of Palo Alto (CPA) projects will be billed at full commercial rates. The public benefit rate will no longer be in effect.

The fiber installation was completed to Park and Dahl reservoirs and Foothill Park serving CPA Police Department and CPA Community services.

Cross training efforts continue within Utilities Marketing Services (UMS). Two account representatives have attended a week long class in fiber optics and two more staff members are scheduled to attend in Q3 FY 2007. The existing fiber representative is including UMS staff in all aspects of the fiber business. Fiber administrative functions are being transferred to UMS

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administrative staff as part of the cross training plan.

Interaction between UMS, Traffic Signals fiber crew and Engineering has reached an exceptional level of efficiency and cooperation. The good news is that the relationships only seem to be strengthening.

The following chart represents current sales efforts, reflecting new projects that have been completed and billed. NOTE: Please see the fiber financial report in the financial reports attachment for audited financial information.

Q1 FY 2007 Summary:	Number of New Projects	Annual Fees Billed
New Projects: Completed (have been billed)	8	\$ 121,581
New Projects: in Progress	6	\$ 153,830 (future billing)

V. Electric Public Benefits Program

Renewable Programs

PV Partners

PV Partners Installations	Number of Systems	Peak kW	Rebates
Q1 Installations (7/1 – 9/30/06)	13	52	\$127,624
Pending Applications to date	32	106	\$266,000
Installed to date (since 10/1/99)	149	510	\$1,643,000

The City PV Demonstration project design phase is complete and will go out to bid for construction in November 2006. Construction should be completed by the end of 2007 for the three sites (Baylands, MSC and Cubberley)

CA Senate Bill 1, signed 8/21/06, requires all publicly-owned utilities to offer specified minimum incentives for PV systems, on or before January 1, 2008, for a ten year period. This mandate also prevents public utilities from taking funds previously used for energy efficiency and low income programs to meet the customer demand for solar incentives. The budget to meet CPAU's share of the total California PV installation goal is projected to be \$13 million, averaging \$1.3 million per year for ten years. Staff will return to Council in 2007 with the revised new PV program design, and funding levels to meet the requirements of Senate Bill 1. All installations that are completed after January 1, 2007 will count towards SB1 goals.

PaloAltoGreen

As of September 30, 2006, PaloAltoGreen (PAG) had approximately 4,415 active participants or 15.81 % of all electric accounts. From July 1, 2006 through September 30, 2006, PAG had a net gain of 347 new sign ups or 7% growth for the quarter. The prior quarter growth was 5%. PAG became the number one ranked renewable energy program in the nation based on the percentage of utility customer enrollment. The City of Palo Alto has been recognized as an Environmental

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Protection Agency (EPA) Green Power Partner by buying an aggregate total of 3% for all City facility loads. The Regional Water Quality Control Plant (RWQCP) has also agreed to buy 3% of its load through PAG and become an EPA Green Power Partner. Together the two purchases have allowed the City of Palo Alto to pass the green power threshold and become the first Green Power Community in California.

PaloAltoGreen consumption by customer class (7/1/06 – 9/30/06)	kWh Sold
Residential (E1G & E2G)	7,089,240
Medium & Large customers (E4G & E7G)	2,393,000
Total PAG Energy kWh	9,482,240

Energy Efficiency Programs (for the period 07/01/2006 to 09/30/2006)

An RFP was issued for a turnkey lighting retrofit program targeted towards small commercial customers. UMS anticipates having a contract in place by Fall of 2006.

Residential and Commercial Efficiency Programs

Program	No. of Applications	kWh/yr	Peak kW	Therms/yr	Direct Costs (rebates, or contractor costs)
Residential Program	200	12,848	N/A	944	\$19,420
Low Income Efficiency Program	6	Not available	Not available	Not available	Not available
Refrigerator Recycling	9	14,400	Not applicable	Not applicable	\$1,188
Commercial Consultant Studies	0	Not applicable	Not applicable	Not applicable	\$0
Commercial Advantage Program	9	153,329	43	1,333	\$6,932
Total	224	180,577	43	2,277	\$27,540

New Reporting Requirements to the CEC

Staff completed the first SB 1037 Electric Energy Efficiency report, which was coordinated with NCPA. The report lists the electric efficiency program measures, costs, and savings achieved in FY 2005-06, and projected for FY 2006-07. All publicly-owned utilities in CA are using the same software tool for the SB1037 report. NCPA will file our report with the CEC in January 2007.

VI. Key and Major Accounts

The one year geexchange (ground source heat pump) demonstration project monitoring will be completed December 31, 2006. The consultant will compile the data taken over the last year and produce a final report comparing the efficiency of the conventional heating and air conditioning system to the efficiency of the geexchange heating and air conditioning system. Indications are that the geexchange system will exceed the efficiency ratings of the conventional system and UMS will look into offering incentives for the installation of these systems.

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Staff assisted in a presentation to the City/Schools Liaison Committee (consisting of School Board and City Council members) regarding all of the good work that the Palo Alto Unified School District (PAUSD) and the City of Palo Alto Utilities and Public Works departments have done together to promote efficiency education in the curriculum and reduce the energy, water and refuse costs on PAUSD's utility bills.

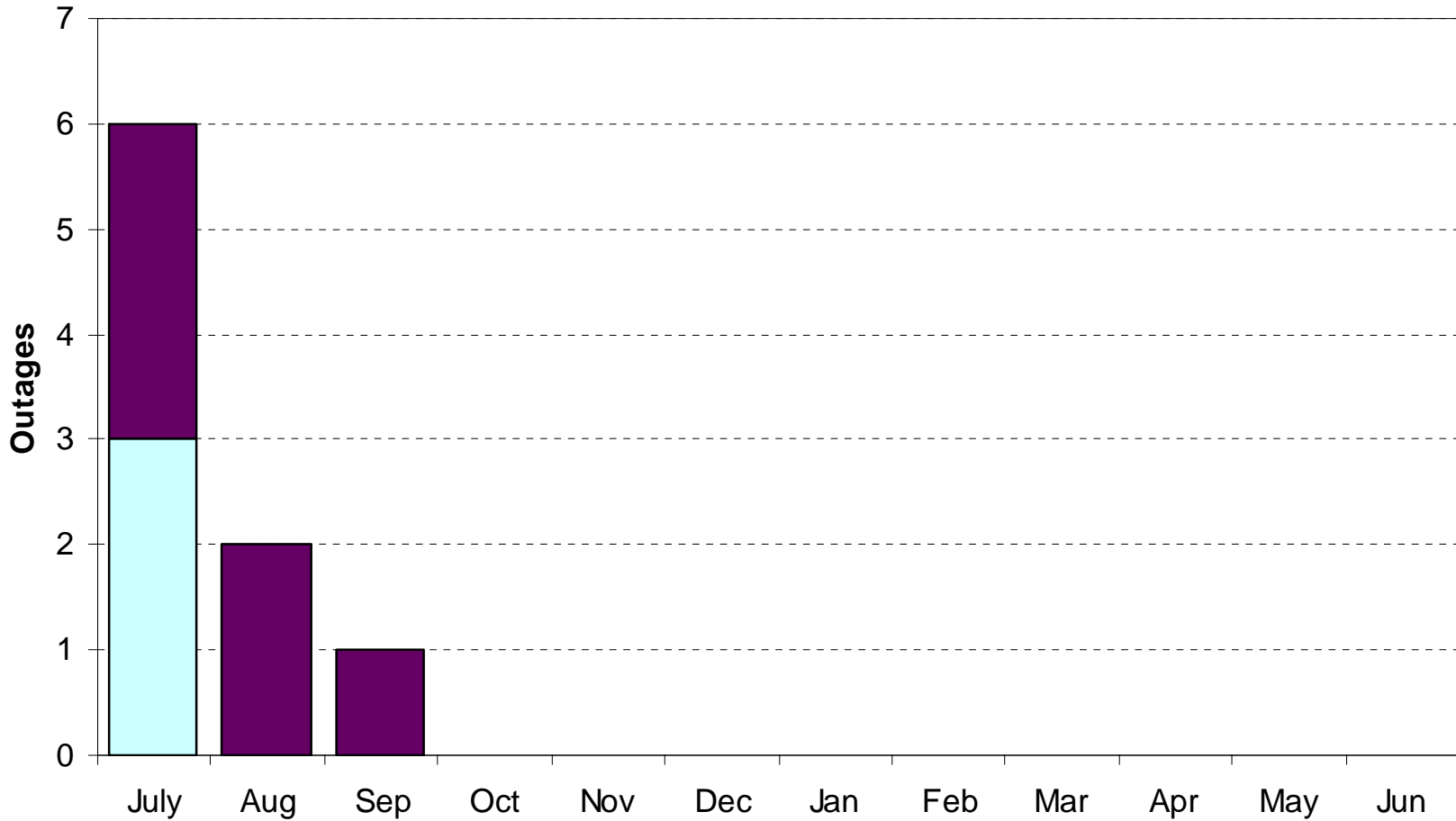
VII. Operations Update

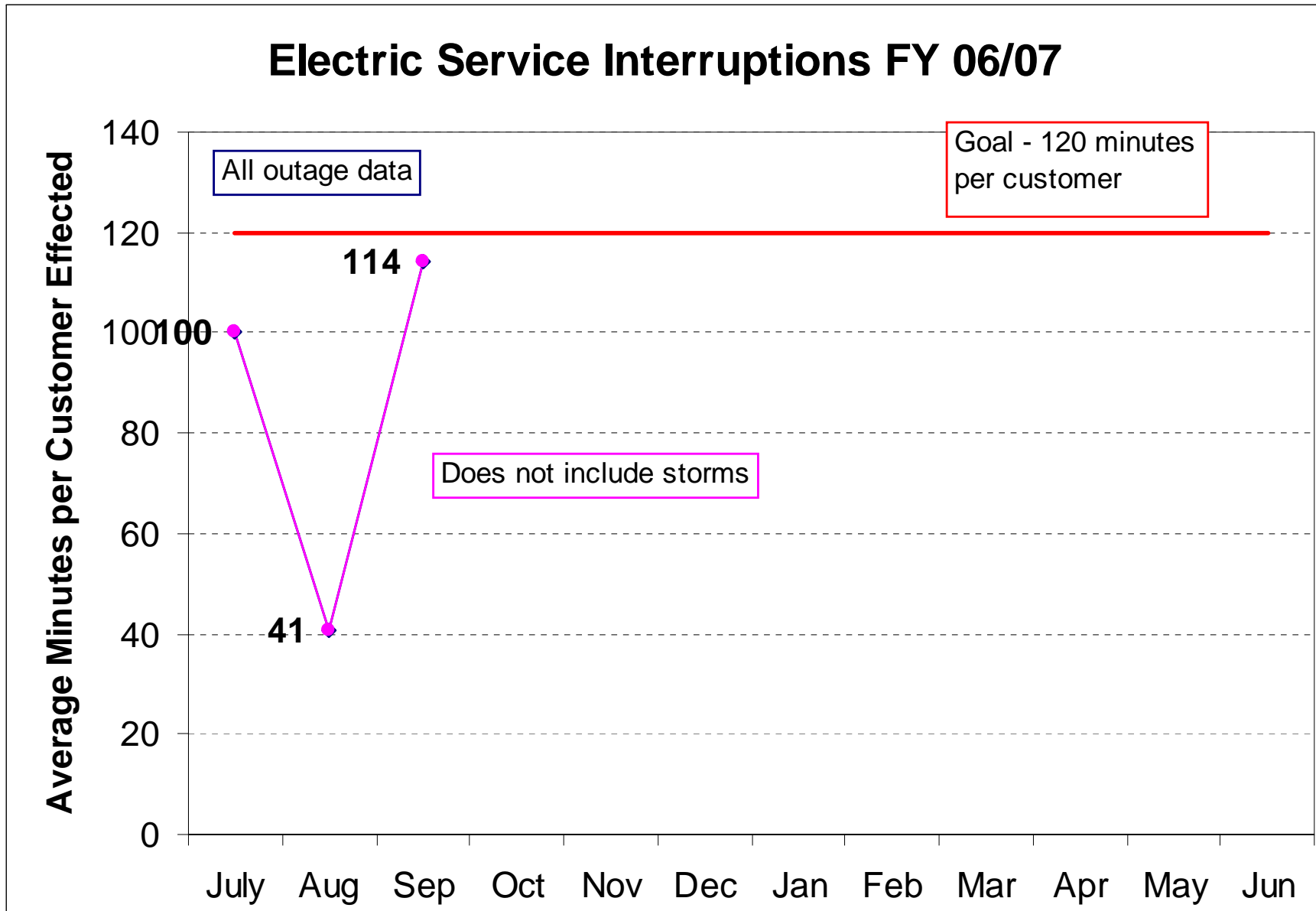
The three attached graphs showing operational performance measures through the first quarter of FY06-07 (July through September 2006):

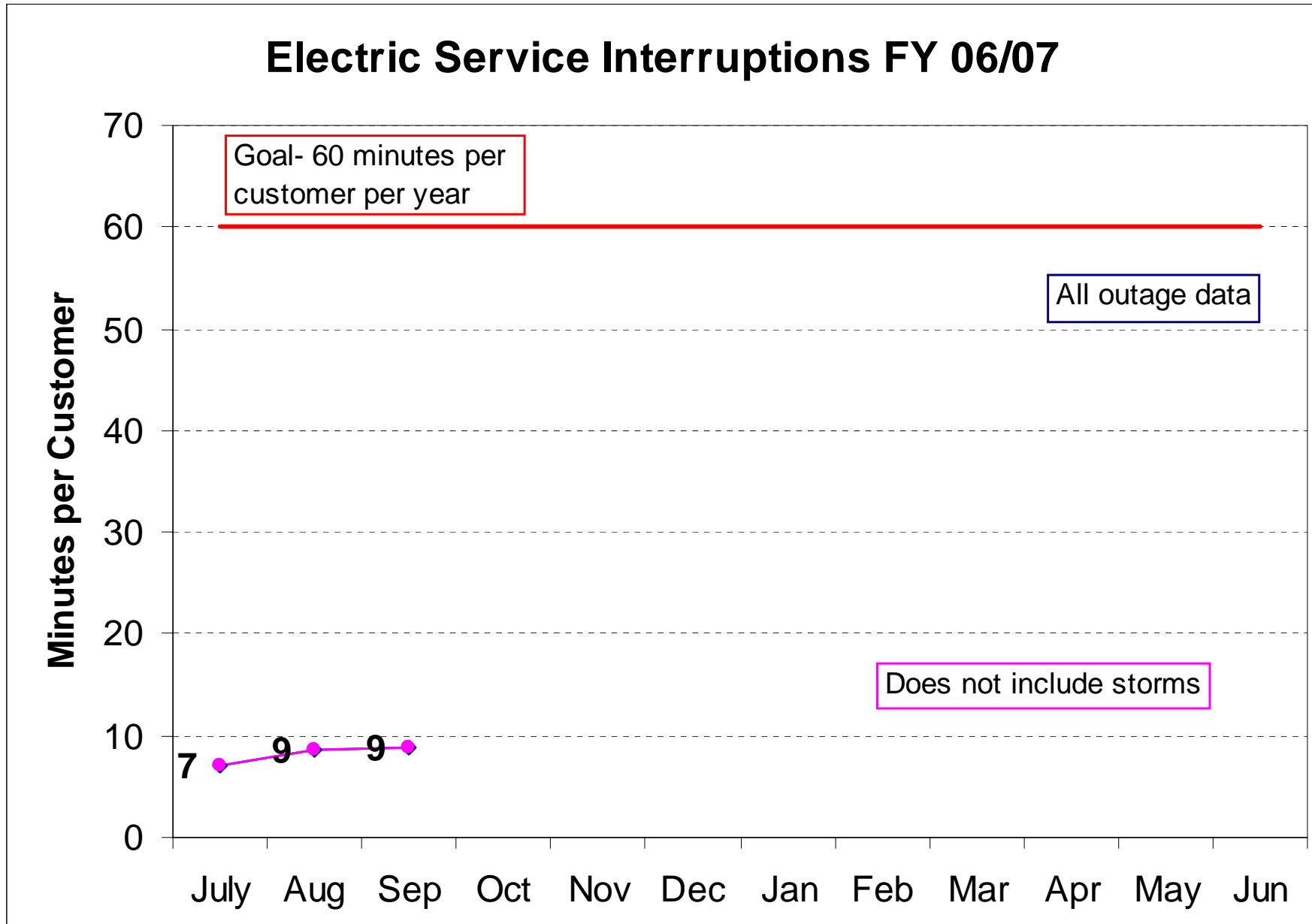
1. Electric Service Interruptions – FY 06-07 (number and types of outages)
2. Electric Service Interruptions – FY 06-07 (average minutes per customer affected)
3. Electric Service Interruptions – FY 06-07 (minutes per customer per year)

Electric Service Interruptions FY 06/07

Overhead Underground Other Storm







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