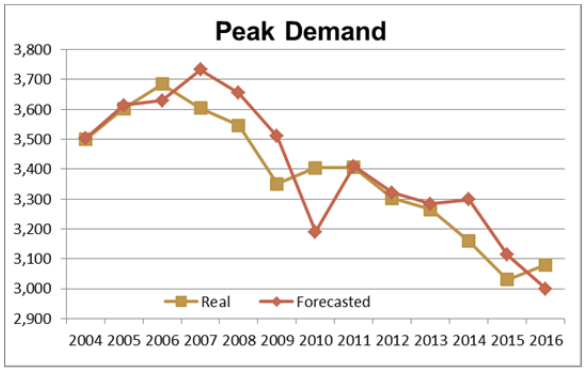
ATTACHMENT I – IRP PROJECTIONS - PREPA

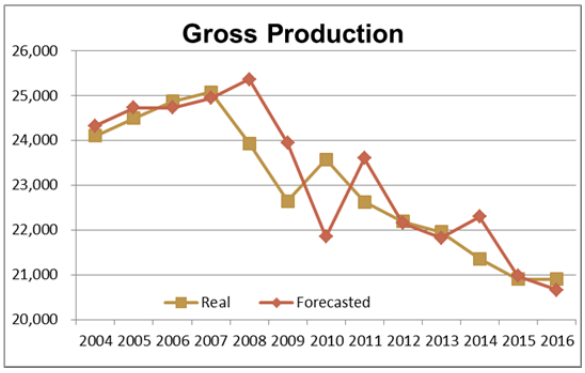
I. Summary

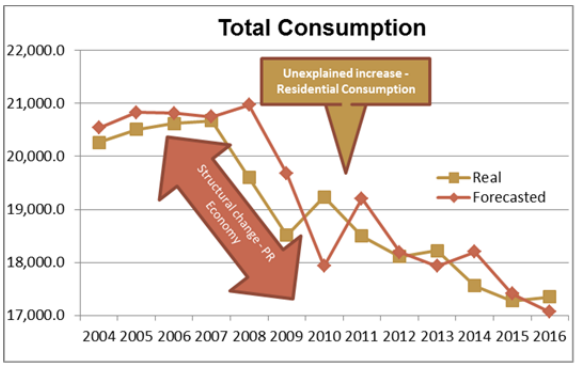
Annually, PREPA updates projections for demand, consumption, and power generation, in addition to customers and revenue. This update is the basis for financial and system planning. In March of each year, we begin the update process. The projection for financial planning is for five years, and system planning is for a 30 years period. PREPA chooses for financial planning the forecast which results in the least growth for the next fiscal year; and for the system the fastest growing in the five year period.

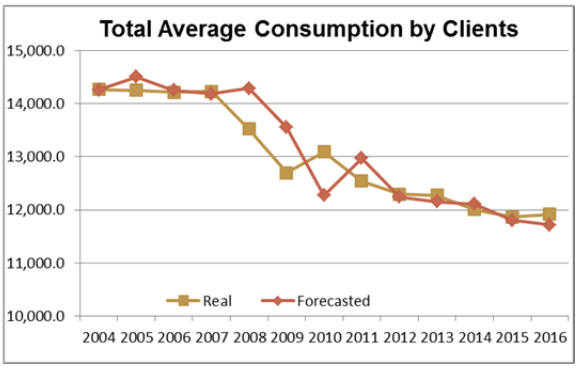
II. Projected and Actual

Historically, the selected medium-term projections for financial planning are very accurate for the budget year, except for the years between 2008 and 2014. In these years, there was a structural change to Puerto Rico's economy, and in 2012 and 2013 a distortion because of the change to PREPA's billing system. The last two fiscal years were very accurate, and in the 2017 fiscal year so far. Below are some graphs showing the results of the selected financial planning up until FY 2016. For FY 2017, with two actual months, consumption is 0.83% above projections. Demand and generation for the first trimester are 0.18% above and 0.28% below, respectively. The generation includes the loss from the outage on September 21st.



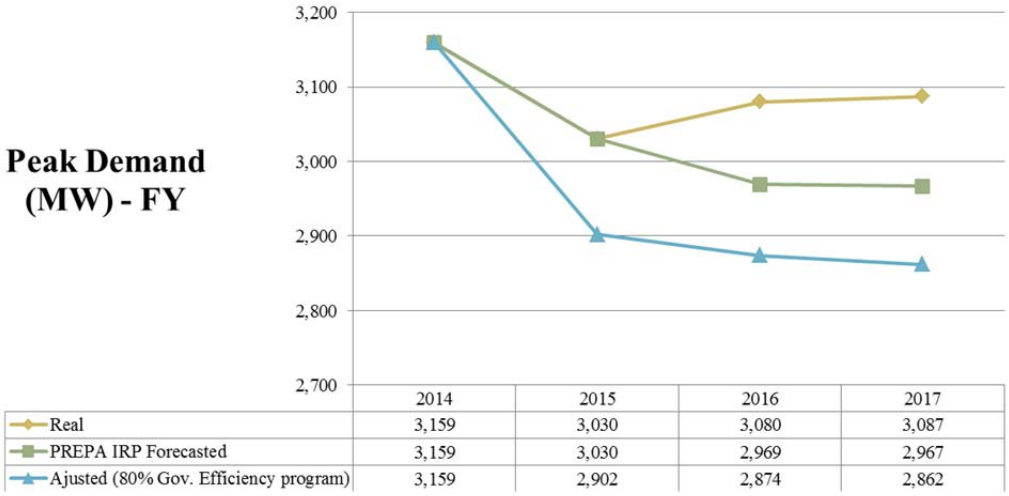






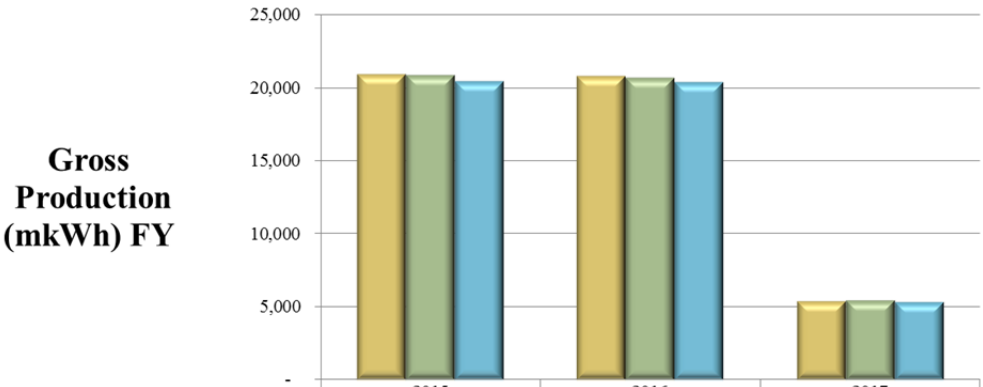
The projections for the IRP were developed with projected indicators of the Puerto Rico economy in October 2014 and with fuel costs above $90 per barrel. We analyzed the results with and without efficiency adjustments. In FY 2016, peak demand was 3.60%, or 111MW,

above projections without adjustments, and 6.68%, or 206MW, with efficiency adjustments. In the first trimester of FY 2017, the peak demand is 3.89%, or 120 MW, above projections without adjustments, and 7.29%, or 225 MW, above the adjusted projection



	2014	2015	2016	2017
Real	3,159	3,030	3,080	3,087
PREPA IRP Forecasted	3,159	3,030	2,969	2,967
Ajusted (80% Gov. Efficiency program)	3,159	2,902	2,874	2,862

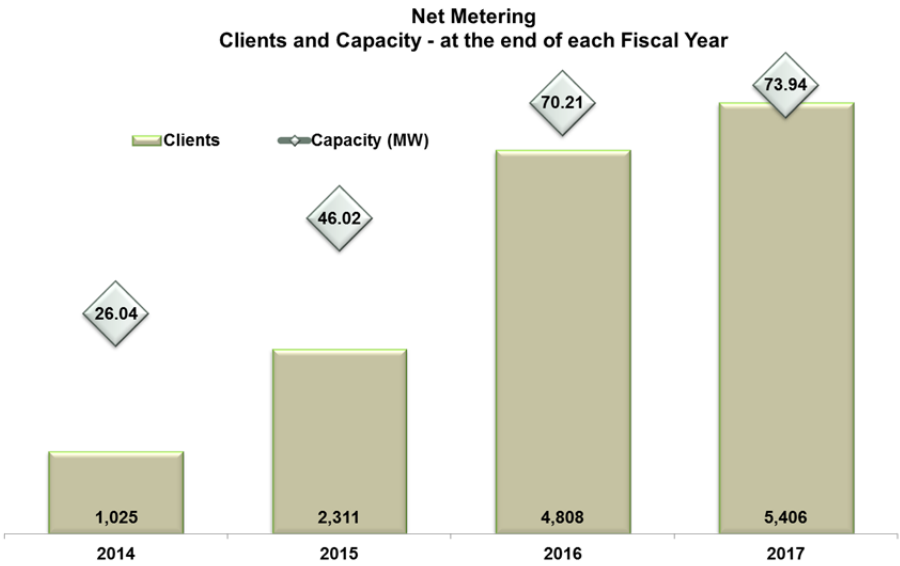
We also analyzed gross generation. In FY 2016, actual was 0.82% above projections without adjustment, and 2.13% with the adjustment. In the first trimester of FY 2017, despite the reduction from the outage on September 21st, actual generation is 1.06% below projections without adjustments, and 0.82% above adjusted. Generation was estimated based on behavior up until September 20th, had the collapse not happened the actual generation would have been 0.66% above projected without adjustments, and 2.57% with.



	2015	2016	2017
Real	20,904	20,833	5,417
PREPA IRP Forecasted	20,862	20,662	5,474
Ajusted (80% Gov. Efficiency program)	20,468	20,390	5,372

Net Metering:

This behavior occurs despite the integration of net metering systems. The following chart shows this growth in FY 2016 and FY 2017, the data is current to August 2016.



Government Efficiency

The other component of efficiency is the efficiency savings in government consumption established by Law 57-2014. The efficiency of municipal accounts related to CILT was amended by the Commission's October 2015 Regulation where it changed FY 2015 to FY 2016. Subsequently, Act 4-2016 changed the requirements for calculating the maximum CILT. The Commission amended its regulations to incorporate the changes and again changed the maximum for CELI for FY 2017. These variations are not consistent with the assumptions used in the IRP to establish efficiencies.

At the aggregate level, analyzing the behavior of the three additional components of government, in FY 2015 and FY 2016, only the Legislative branch and Public Corporations complied with the established reduction. However, we cannot conclude it was due to efficiency because there were some corporations closed that existed in FY 2013, the base year for the reductions. Only in 2016, did central Government Agencies reduce their consumption without achieving the goal established by 4-2016. Nor can we conclude that it was the result of efficiency in 2016 because there were agencies that closed. To definitively conclude that it was due to efficiency we need to observe the behavior of each entity individually, but for this analysis it is not pertinent.

III. Methodology

PREPA uses econometric models for updating projections. The process begins in March with the current data available; we estimate real consumption and generation per service class. We use extrapolations based on the behavior of these sectors with historical data. The peak demand of the fiscal year is usually already registered because the months of greatest demand are between August and October. Customers are estimated based on average monthly growth for each class of service in the months of the fiscal year to be estimated.

After obtaining the estimated consumption by customer class for the fiscal year in which the projections are updated, we proceed to run econometric models to project the three major classes of consumption for a 5 year period. These models use as exogenous variables macroeconomic variables of the Puerto Rico economy provided by three sources, two privately contracted economists, and the Planning Board. The private economists provide us the data twice a year, in October and April of the fiscal year. Due to the structural transformation the Puerto Rico economy underwent beginning 2008, the economists have difficulty providing us data before April. The uncertainty of the measures taken by the government caused some distortions between 2008 and 2015, and accordingly in our models. Due to the fact we do not have current projections for April 2015; the economic projections of a private economist provided in October 2014 were used as the projections in the IRP. This situation was repeated in the 2016 update.

We also incorporate an estimated price per kWh by major class based on current costs and projected annual short-term and long-term from the Energy Information Administration (EIA). These consider the fuel used for generation weighted with the ratio of barrels consumed for each one.

Selected Models for the IRP Projections:

Residential Class:

LRkWh = *f* (LPRM, LDPI, LLAGR), where	
RkWh =	kWh consumption for the residential class,
PRM =	Cost per kWh from the residential sector,
DPI =	Disposable personal income at real prices,
LAGR =	Residential energy consumption of the previous year. This variable represents the consumption habits that have these consumers of this class.

An "L" in front of the variable means the natural logarithm of the variable.

Commercial Class:

LCkWh = *f* (LGDP,LLAGC), where:	
CkWh=	kWh consumption of the commercial class.
GDP=	Gross Domestic Product at real prices.
LAGC=	Commercial energy consumption of the previous year. This variable represents the consumption habits of the customers of this class.

An "L" in front of the variable means the natural logarithm of the variable.

Industrial Class:

LIKWSRF=f (LGNP, LLAGIRF, LPIM), where:	
IKWSRF=	kWh consumption of the industrial group, where are excluded refineries and petrochemical and the owned gen included
GNP=	Gross National Product at constant prices
LAGIRF=	Industrial energy consumption of the previous year. This variable represents the consumption habits that have the customers of this class.
PIM=	Cost per kWh of the industrial sector

An "L" in front of the variable means the natural logarithm of the variable.

$$\text{Industrial Consumption} = \text{IKWSRF} + \text{Refineries and Petrochemical} - \text{Owned Generation}$$

The three classes with the least consumption, agricultural, public lighting and other authorities, remain fixed in the five-year projections with the estimated data from the extrapolations.

The gross generation is the result of the total consumption divided by the efficiency of the 12 months to December 2014 (consumption/generation).

Peak demand was obtained using a new methodology from previous years. Projected consumption by customer rate was distributed, and the load factor was applied for each rate with the corresponding rates to each month in order to obtain the non-coincident demand. We totaled all these non-coincident demands and we calculated the annual percentage delta or change of this total. The percentage delta or change was applied to the peak demand for the last year which we have current, in this case FY 2015, and from this result we extended it for the projected five years.

$$\Delta\%(y, y+1, ..) = \sum Non\ Coincident\ Demanda\ by\ rate\ (y) / \sum No\ coincident\ demanda\ by\ rate\ (y-1)$$

$$Peak\ Demand(y) \ldots = \Delta\%(y) * Offical\ Coincident\ Peak\ Demand(y-1)$$

$$Peak\ Demand(y+1) \ldots = \Delta\%(y+1) * Peak\ Demand(y)$$

$$Peak\ Demand(y+2) \ldots = \Delta\%(y+2) * Peak\ Demand(y+1)$$

Where, y = FY 2016

Finally, the long-term generation is projected using econometric models. In this we update the generation for five years according to the medium-term projection. We used the

population as independent or endogenous variables, time variables, and the generation for the previous year.