Witness CCS – 3
Exhibit CCS –3

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

	)	**Docket No. 06-035-21**
In the Matter of the Application	)	
Of PacifiCorp for Approval of	)	**PRE-FILED DIRECT TESTIMONY OF**
Its Proposed Electric Service	)	**ANTHONY J. YANKEL**
Schedules and Electric	)	**FOR THE COMMITTEE OF**
Service Regulations	)	**CONSUMER SERVICES**

September 27, 2006

TABLE OF CONTENTS

INTRODUCTION

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. I am Anthony J. Yankel. I am President of Yankel and Associates, Inc. My address is 29814 Lake Road, Bay Village, Ohio, 44140.

Q. WOULD YOU BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE?

A. I received a Bachelor of Science Degree in Electrical Engineering from Carnegie Institute of Technology in 1969 and a Master of Science Degree in Chemical Engineering from the University of Idaho in 1972. From 1969 through 1972, I was employed by the Air Correction Division of Universal Oil Products as a product design engineer. My chief responsibilities were in the areas of design, start-up, and repair of new and existing product lines for coal-fired power plants. From 1973 through 1977, I was employed by the Bureau of Air Quality for the Idaho Department of Health & Welfare, Division of Environment. As Chief Engineer of the Bureau, my responsibilities covered a wide range of investigative functions. From 1978 through June 1979, I was employed as the Director of the Idaho Electrical Consumers Office. In that capacity, I was responsible for all organizational and technical aspects of advocating a variety of positions before various governmental bodies that represented the interests of the electrical consumers in the State of Idaho. Since that time, I have been in business for myself. I am a registered Professional Engineer in the states of Ohio

and Idaho. I have presented testimony before the Federal Energy Regulatory Commission (FERC), as well as the State Public Utility Commissions of Idaho, Montana, Ohio, Pennsylvania, Utah, and West Virginia.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of the Utah Committee of Consumer Services (Committee or CCS).

Q. **DO YOU HAVE A SUMMARY OF THE KEY ISSUES AND CONCERNS ADDRESSED IN YOUR TESTIMONY?**

A. Yes I do. My testimony addresses Rate Design issues for customers taking service under Residential Schedule 1. There are three components to Schedule 1 that I specifically address: the Customer charge; the Minimum charge; and the Energy charges.

It is often said that Rate Design is more of an art than a science. However, Rate Design should not be done without a sound knowledge of the cost causation principles, as well as a good understanding of other regulatory principles that come into play. Because of the importance of cost causation, my testimony starts with a discussion of the relationship between monthly residential usage and contribution to summer system peaks. Because the costs being allocated to Utah are increasingly more dependent on a growing summer coincident peak demand, it is imperative that Rate Design be developed with knowledge of the relationship between

Residential monthly usage and Residential contribution to system peak demand.

My testimony next addresses the various regulatory principles that should be applied when designing rates, given the relationship that has been demonstrated between Residential monthly usage and coincident peak demand (cost causation).

I then present a history of Residential Rate Design in Utah over the last 60 years, where a host of different combinations of a Minimum charge, Customer charge, and various energy rate structures (declining, flat, and inverted) have been utilized by past Utah Commissions.

Next, I present testimony regarding several Residential Rate Design alternatives and show the impact on bills under each option.

I conclude my testimony with the Committee's recommended Residential Rate Design for this case. In particular, I discuss why the Committee's Rate Design recommendation is superior to alternative proposals.

RELATIONSHIP OF RESIDENTIAL MONTHLY USAGE TO COINCIDENT PEAK

Q. IS IT POSSIBLE TO DEMONSTRATE A RELATIONSHIP BETWEEN MONTHLY RESIDENTIAL USAGE DURING THE SUMMER MONTHS AND CONTRIBUTION TO SYSTEM PEAK DEMAND?

A. Yes, it is. During a Cost-of-Service task force in 2002, I empirically demonstrated using the Company's load research data for the Residential Class, there was a strong correlation between the amount of monthly Residential usage and the contribution to system peak demand during the summer months. I simply assembled each of the approximately 150 sample customers in ascending order of monthly usage. I then noted the coincident load factor (average monthly usage divided by usage at time of system peak) of each of these customers during a given month. This coincident load factor data was then averaged by ranges of monthly usage as summarized below for the summer of 2000:

kWh Range	May	June	July	Aug	Sept
0-400	173%	161%	176%	160%	165%
0-600	175%	146%	151%	161%	143%
601-1000	156%	117%	117%	114%	128%
1001 +	120%	86%	75%	84%	78%

The higher the coincident load factor, the better the cost causation relationship for the group. If the coincident factor is greater than 100%, it means that the average usage is greater than the demand at the time of system coincident peak (the customer/group has a lower "on-peak" load

than its average usage). Coincident factors less than 100% suggest "on-peak" users that contribute more to the system peak than to average usage.

As shown in the above table, these customers generally become more "on-peak" (more expensive to serve) as monthly usage levels increase. The above table strongly supports the present three-tiered, inverted block rate structure that is used for the Residential Class today. The more energy these customers use, the more they contribute to coincident peak summer demand, which drives the need for more expensive system resources and a greater allocation of these costs (based upon coincident demand allocators) to Utah and to the Residential Class.

Because the data from this task force could be considered stale, I conducted the same analysis on 2004 summer data (the most recent load research data available) and obtained the following results:

kWh Range	May	June	July	Aug	Sept
0-400	156%	240%	154%	201%	160%
0-600	134%	121%	146%	171%	140%
601-1000	137%	80%	118%	76%	94%
1001 +	103%	77%	82%	66%	73%

This data reveals the same pattern as the 2000 data.

In its 2004 IRP, the Company predicted[1] that the energy growth rate in Utah would be 3.5%, but the coincident peak growth rate would be 4.58%. In part, this forecast is based on the increasing air-conditioning load. In my opinion, this growth in load and associated increase in costs

[1] Company's 2004 IRP page 44

should be kept foremost in the minds of those developing an appropriate Residential Rate Design.

The above tables contain a line for monthly consumption for the range of 0-400 kWh and a line for 0-600 kWh. The first block of the inverted rate structure presently only covers 0-400 kWh. The coincident load factor data for the 0-600 kWh range is not that dissimilar from that for the 0-400 kWh range. Both ranges have been provided here because I will later propose to expand the size of the first block from its present 0-400 kWh range to a 0-600 kWh range.

REGULATORY PRINCIPLES TO BE APPLIED

Q. WHAT REGULATORY PRINCIPLES SHOULD BE APPLIED WHEN DEVELOPING THE RESIDENTIAL RATE DESIGN?

A. There are a host of regulatory principles that rate analysts should apply in developing a Rate Design proposal. At a minimum, Rate Design and the resulting rates should:

1. Promote economic and efficient use of electricity, while protecting the long-range interest of the consumers to obtain adequate levels of service at the lowest cost practical;
2. Provide for just and reasonable rates such that the utility has an opportunity to meet its revenue requirement;
3. Be easy to understand and administer;
4. Promote continuity of rates such that customers can have reasonable expectations from year to year;
5. Protect against wasteful use of electricity; and
6. Provide a fair apportionment of costs among customers, taking into consideration the other principles.

Q. IS IT POSSIBLE TO SATISFY ALL OF THESE PRINCIPLES AT THE SAME TIME?

A. No, it is not possible to satisfy all of these principles to the same degree at the same time. This is why Rate Design is considered more of an art than a science. For example, it is impossible to promote a fair apportionment

among all customers when there is diversity in the customer class and rates are being designed in order to be relatively simple. A Rate Design with a hundred different levels/components may better define specific cost causation to a variety of customers, but the complexity of such a structure would be clearly inappropriate. Additionally, there are usually three general cost categories recognized in electric utility rate making: Customer/Fixed; Energy; and Demand. The Demand component is not even measured for the Residential Class so this category of costs must be picked up under one of the remaining two rate components (Customer/Fixed or Energy).

Q. IF YOU WERE TO DESIGN A HIERACHY OF RATE DESIGN PRINCIPLES, WHICH ONES WOULD YOU CONSIDER MOST IMPORTANT?

A. I believe that the most important principle in Rate Design is the establishment of rates that (in combination) are designed to collect the assigned revenue requirement to the customer group. If this principle is not followed, the rate structure is useless.

The next important principle would be the development of a design that promotes the economic use of electricity in order to insure that utility service over the long run is provided at the lowest practical cost. What is important here is that an eye be kept on the future as well as the present relationship between costs and usage. For example, Residential customers could simply be charged a fixed fee for service (eliminating the need for a

meter and meter reading), but such a design would not promote the wise use of energy and ultimately may result in inefficient use of electricity.

Continuity of rates is clearly another major principle. Rates (and Rate Design) will likely change over time, but those changes need to be as gradual as possible. Appliance purchases and customer behavior are based upon reasonable expectations of the future. If a customer cannot have a reasonable expectation of the future because there is a lack of continuity of rates, any price signal a Commission may send via a change in Rate Design will be lost.

Simplicity is another principle that needs to be considered in designing rates, but its order of importance follows those listed above.

HISTORICAL RATE DESIGNS FOR RESIDENTIAL CUSTOMERS IN UTAH

Q. WHY IS A HISTORICAL PERSPECTIVE OF RESIDENTIAL RATE DESIGN IMPORTANT?

A. Generally speaking, it is easy in a case such as this to get caught up in and confused by arguments that are made on all sides of a given issue. A historical perspective, places the importance of various arguments into long-term relationships that have some distance from the issues raised by various parties during a single case.

In its initial testimony, the Company proposed that the Customer charge be increased from $0.98 to $3.40 per month, that each of the Energy rates be increased by the same amount ($0.00974 per kWh), and that the Minimum charge of $3.67 per month for single-phase service be dropped (while retaining the $11.01 per month Minimum charge for three-phase service). Other parties may offer other Rate Design proposals. By looking at the history of the Residential Rate Design in Utah, it is possible to put some perspective on these proposed changes.

Q. HAS THE RESIDENTIAL RATE DESIGN ALWAYS INCLUDED A CUSTOMER CHARGE?

A. No. From data provided by the Company, it appears that a Customer charge was not implemented until July 1985. At that time it was set at $1.00 per month. Over the last 20 years (with the exception of a short period of

time when it was $0.94 per month) the Residential Customer charge has been either $0.98 or $1.00 per month. It is presently $0.98 per month.

Q. HOW LONG HAS THE MINIMUM BILL BEEN IN EFFECT?

A. The Minimum bill has been around for 60 years, or 40 years longer than the Customer charge. Over time it has varied more than the Customer charge. In 1945, the Minimum bill started out at $0.75 per month. Over the last 60 years it hit a high of $5.46 per month. Today it is at $3.67 per month. In a broad sense, the Minimum bill has undergone changes that seem to track the overall change in energy rates.

Q. HOW HAVE ENERGY RATES VARIED OVER THE LAST 60 YEARS?

A. Residential energy rates contain two major changes over the last 60 years. These changes appropriately reflected changes in the electric industry and the Utah Commission's policy for developing rates that promote a more efficient use of electricity.

In 1945 the Residential Schedule 1 contained a three-tier declining block energy rate (with a Minimum bill). The structure was as follows:

3.5 cents per kWh for the first 60 kWh;
2.5 cents per kWh for the next 140 kWh;
1.5 cents per kWh for all additional kWh

By today's standards, this would be considered very steeply declining if it were not for the fact that the third block was reached after only 200 kWh. This Rate Design stayed in effect for 37 years with the tailblock continuing to start at 200 kWh. This Rate Design was appropriate at the time, given the economies of scale that were being realized from the construction of

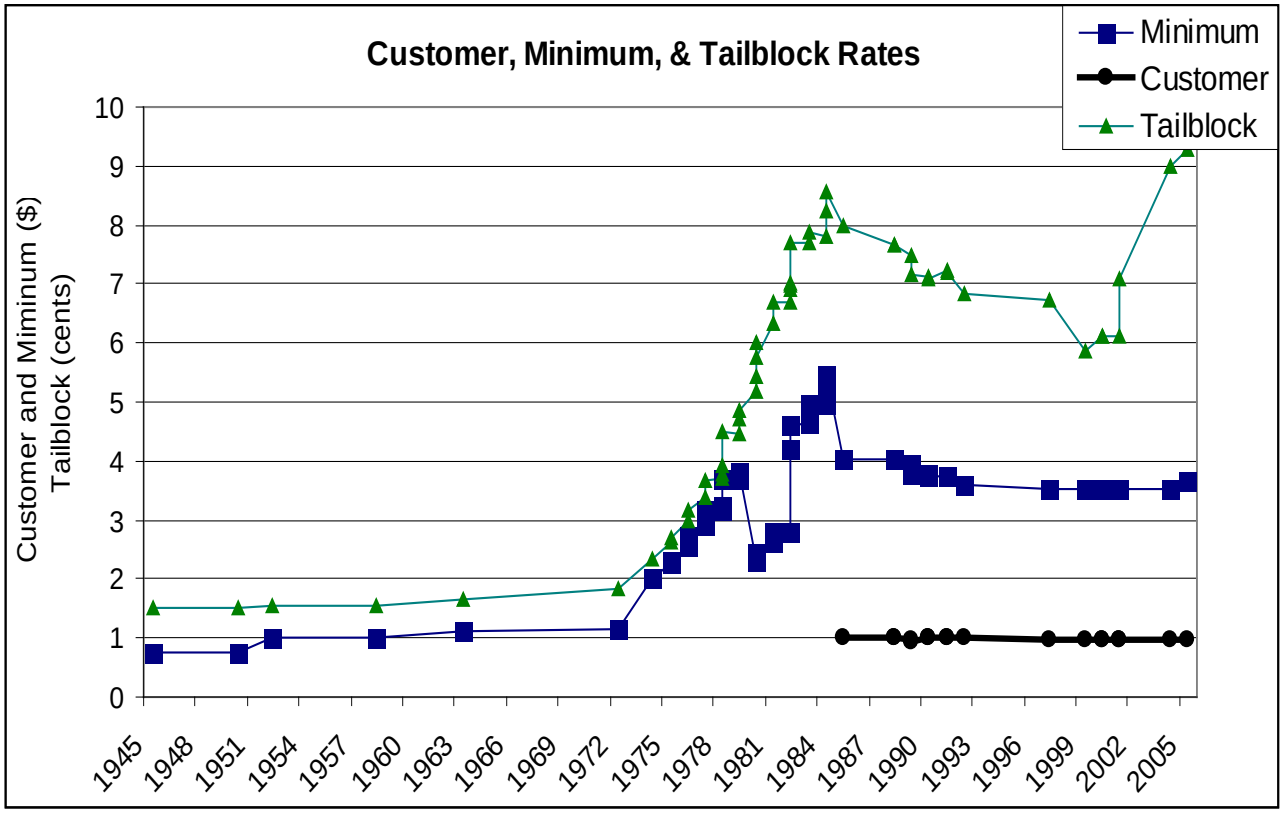
new generation facilities. Furthermore, increases in electric prices remained well below the rate of inflation for at least the first 25 years of this period.

The first major change in the Residential rate structure came in 1982. The previous 5-10 years was represented by substantial increases in electric rates stemming from the electric industry's need to build new generation plant and the disappearance of economies of scale associated with generation plant. New generation was starting to bring additional electricity onto the grid at higher prices per unit of consumption. In 1982 the Utah Commission adopted a flat energy rate structure, while maintaining a Minimum charge. This flat rate structure was utilized for approximately 20 years. The Customer charge (while maintaining the Minimum charge) came into existence three years later in 1985.

The second major change in the Residential energy rate structure came in November 2001 when the Commission adopted an inverted energy block rate structure during the summer months for the Residential Class. The purpose of this Rate Design was to reflect the increases in coincident peak demand that was being placed upon the system because of the rapid growth in air-conditioning load

Q: CAN YOU PROVIDE MORE DETAILED INFORMATION REGARDING THE CHANGE IN THE VARIOUS RATE COMPONENTS OVER THE LAST 60 YEARS?

A. Yes. Exhibit CCS-3.1 lists the dates of components of each rate structure that went into effect over the last 60 years. In addition, the following graph provides a simplified representation of the rates that were in effect at various times:



This graph illustrates the history of the Customer charge, Minimum charge, and the highest (tailblock) energy rate. As can be seen from the graph, the Customer charge has been virtually unchanged since its inception in 1985. The tailblock energy rate stayed relatively flat for 30 years, increased dramatically from 1975-1985 due to increases in general rates, decreased from 1986-1999 due to decreases in general rates, and has increased over the past five years as a result of increases in general rates and the implementation of the three-tiered energy rate structure. The Minimum

charge has generally followed the overall pattern demonstrated by the energy tailblock rate.

CONSIDERATION OF REGULATORY PRINCIPLES IN ASSOCIATION WITH RESIDENTIAL USAGE AND COINCIDENT DEMAND

Q. HOW DOES MONTHLY RESIDENTIAL USAGE, IN COMBINATION WITH THE COINCIDENT DEMAND THAT IT CAUSES, IMPACT THE REGULATORY PRINCIPLES TO BE CONSIDERED WHEN DESIGNING RESIDENTIAL RATES?

A. I have outlined a number of regulatory principles that I believe to be most important. These included: collection of the revenue requirement; long-range economic use of electricity; continuity of rates; and simplicity. Out of these four principles, the one that requires a more detailed analysis and evaluation is the establishment of rates that reflect the long-term economic use of electricity. It is this principle that I will address in detail.

As pointed out above, there have only been two major changes to the Residential energy rate structure in the last 60 years: 1) the flattening of the rate structure when the economies of scale were lost; and 2) the inverting of the rate structure when peak demand started to greatly out-pace the growth in energy usage because of the rapid increase in air-conditioning load. The need to recognize the cost of peak growth continues, so there is no need to consider another major shift in the overall Residential Rate Design. However, the Company's load research data for the Residential Class demonstrates that high use customers during the summer tend to be on-peak users and have worse coincident load factors than low-use

customers. Basically, the load research data shows that higher use customers are disproportionately adding to Utah's "peak demand" problem. Therefore, refinements to the current Residential rate structure should be made to send stronger price signals to high-use customers in the summer months to encourage greater energy conservation.

Q. WHAT IS THE PURPOSE OF THE MINIMUM CHARGE?

A. The Minimum charge is designed to recover a "minimum of fixed expenses" associated with providing service. It provides the Company with the ability to collect these costs, whether or not a customer uses any energy. The Commission best described the purpose of the Minimum charge in its Order dated April 12, 1982, when it replaced the declining block rate structure with a flat energy rate structure:

> … the purpose of a minimum bill is to permit recovery of certain customer costs … using as the basis for customer fixed investment costs those of the meter and the service drop, and for customer fixed expenses, those of meter reading, billing and accounting, pursuant to our order of January 16, 1980.

Q. WHAT IS THE PURPOSE OF A CUSTOMER CHARGE?

A. A Customer charge serves the same purpose as a Minimum charge—to collect the costs that the Company incurs for items such as billing and metering, even if a customer uses zero energy.

The basic difference between a Minimum charge and a Customer charge is that the Customer charge is a fixed charge that is collected from everyone, while the Minimum charge is only applied to those customers that use no energy or very little energy.

Q. WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF A CUSTOMER CHARGE COMPARED TO A MINIMUM CHARGE?

A. Basically, both charges are targeted at the same expense items. The advantage of a Customer charge over the Minimum charge is that every customer causes a meter to be read and bill to be sent every month.

The disadvantage of a Customer charge over the Minimum charge is that the more that is collected in the Customer charge from all customers, the less of the total class revenue requirement will be collected in the energy rates. If a $3.40/month Customer charge was assessed on 612,000 Residential customers, the Company would collect $25 million annually from Residential customers for something over which they have no control. By removing $25 million from the energy charges, the Commission would directionally move away from addressing this growing peak demand problem.

Q. IS THERE A NEED FOR BOTH A CUSTOMER CHARGE AND A MINIMUM CHARGE?

A. No. This is like wearing suspenders and a belt. Either one is effective, but both are a bit redundant.

Although the Customer charge may have a great deal of appeal to a rate analyst, they do not make much sense to a customer. Most consumers simply do not like the Customer charge and make statements like; “I do not have to pay a Customer charge for walking into a grocery store, why should I pay one to the utility?” There is more consumer support for a Minimum

charge, because there is an understanding in the non-utility environment that sometimes people are expected to make minimum purchases. By contrast, the Customer charge is paid equally by the largest and the smallest user.

The case that the Commission has made in the past for having both a Customer charge and a Minimum charge can be found in the Order in Docket No. 99-035-10 where the Commission stated:

> The combination of a small customer charge and a minimum bill allows the Company to collect a significant share of the customer-related costs while minimizing the ratepayer misunderstanding of these charges. In addition, a smaller customer charge promotes energy conservation and its associated social benefits which are enjoyed by all.

This statement succinctly outlines the alternatives and the impacts of those alternatives. From a policy standpoint, the Committee believes that the Commission needs to send stronger price signals to Residential customers that air-conditioning load is expensive to serve. Therefore, I propose that there be no increase in the Customer Charge (consistent with its 20 year history) so that as much emphasis can be placed on the energy rate structure (and preferably the tailblock) as possible. This Rate Design proposal is set forth in more detail later in my testimony.

Q. IN THIS CASE THE COMPANY INDICATED THAT IT CONDUCTED A SURVEY OF THE CUSTOMER CHARGES OF 13 OTHER ELECTRIC UTILITIES IN UTAH AND FOUND THAT THE AVERAGE CUSTOMER CHARGE WAS $5.39 PER MONTH. HOW RELEVANT IS THIS SURVEY

TO THE COMMISSION'S DECISION REGARDING THE LEVEL OF THE CUSTOMER CHARGE?

A. The "average" of what other utilities charge should not serve as a basis for increasing the Residential Customer charge in this case. Would the Company suggest that its Residential energy rates should be set based upon the average Residential energy rate of these same 13 utilities? I assume that all of the Company's Residential customers would be willing to have their rates based upon the average of these rates.

In spite of the inappropriateness of using this "average" Customer charge as the basis for setting rates in this case, some insight can be gained from a review of the data that the Company provided. The data from these utilities shows the following:

Utility	Customer Charge	Minimum Charge
Price City	$0.97	$3.50
RMP	$0.98	$3.67
Bountiful City	$1.62	$3.84
Springville City	$2.00	N/A
Murray City	$2.79	N/A
Provo City	$3.00	N/A
Spanish Fork	$3.50	N/A
Morgan City	$4.54	N/A
Dixie-Escalante REA	$6.00	N/A
Moon Lake Electric	$6.50	$16.00
Washington City Power	$8.50	N/A
St. George City	$9.66	N/A
Garkane Power	$12.50	$18.75
Bridger Valley Electric	$13.00	N/A

The first thing to observe from this data is the fact that most of the utilities do not have a separate Minimum charge. Without a Minimum charge, a Customer charge is necessary to cover some of these basic

expenses. The second thing to observe is that when the Minimum charge is used, it is designed to collect more than just the Customer charge because the Customer charge is apparently insufficient to cover all of these basic costs. If the basic cost of providing Residential service is $3.40 per month, as calculated by the Company, this is more than covered by the present Minimum charge of $3.67. If Moon Lake Electric or Garkane Power think that their basic costs are $16 or more, then so be it, but that is no reason to charge Rocky Mountain Power's residential customers a higher Customer or Minimum charge.

OPTIONS FOR RESIDENTIAL RATE DESIGN

Q. EARLIER YOU INDICATED THAT YOU WOULD PROVIDE VARIOUS RATE DESIGN ALTERNATIVES. ARE YOU PRESENTING THESE OPTIONS AS OPPOSED TO MAKING A SPECIFIC RECOMMENDATION?

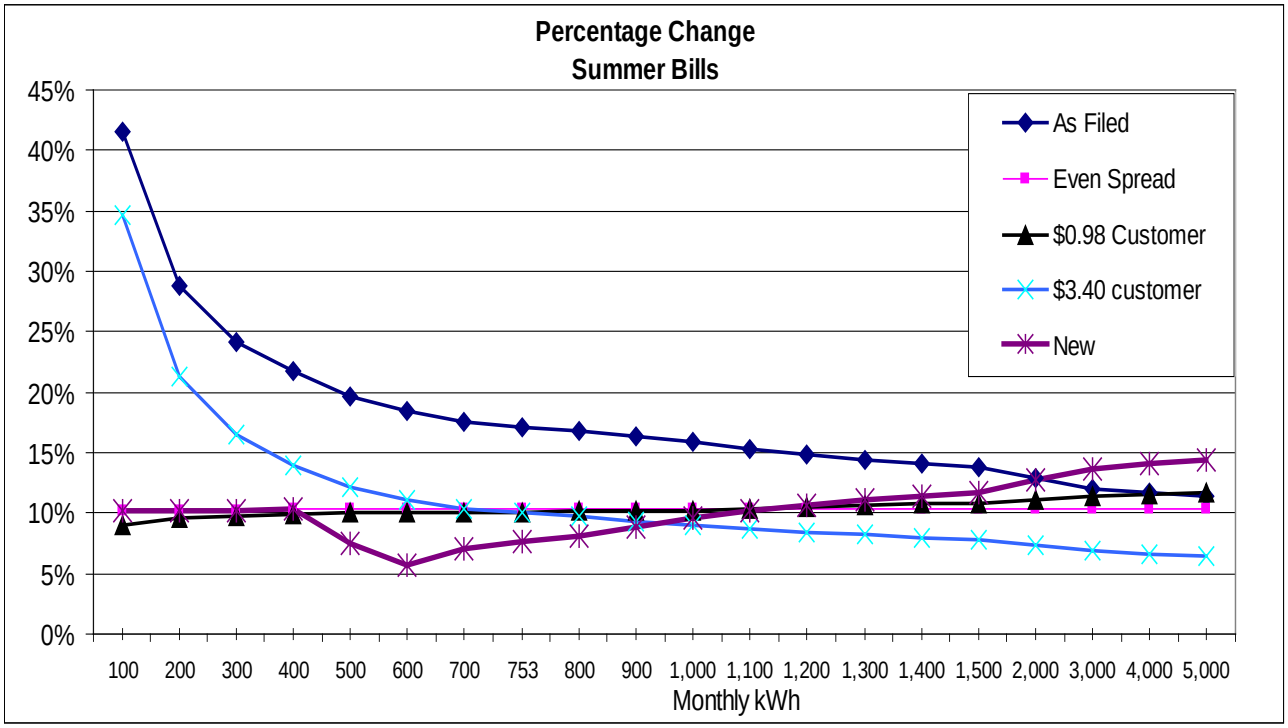
A. No. I will make a specific Rate Design recommendation, but first I will present different Rate Design options. By reviewing what each Rate Design (combination of different rates) produces, the appropriate choice of a Rate Design that best fits the circumstances in this rate case becomes clearer. Additionally, given the fact that Rate Design is more of an art than a science, a review of the impact of various combinations of rates will provide the Commission with information regarding the impacts on low, medium and high use segments within the Residential Class, as opposed to simply making a specific proposal.

Q. WHAT OPTIONS ARE YOU GOING TO ADDRESS?

A. I assume that the Commission will be offered different Rate Design proposals that address a wide range of Customer charge levels, as well as different proposals regarding the rate level of each of the energy blocks. Because the percentage increase for the Residential Class is fixed at 10.31%, the change in one component necessitates a change in some other component(s) in order to meet the target increase level. I will present five options:

1) The Rate Design proposed by the Company in its Direct Testimony;
2) An even spread of the increase across all rate components;
3) Maintaining the Customer charge at $0.98;
4) Increasing the Customer charge to $3.40; and
5) Increasing the range of the 1st energy block up to 600 kWh.

In order to fully present the differences between these various options and their impacts on segments within the overall Residential Class, I have developed a graph of the percentage change in summer bills under each option:



The above graph shows how the combination of all rate components impacts a customer's monthly summer bill along a continuum (low to high) of usage levels. By seeing how bills change as usage increases/decreases, it is easier to understand how different Rate Design proposals may affect customers' decisions relating to electricity usage and energy conservation.

The rates associated with each of these options are listed in Exhibit CCS-3.2. The bills that result from each of these rates and serve as the basis for the above graph can be found in Exhibit CCS-3.3.

Q. PLEASE DESCRIBE THE COMPANY'S PROPOSED RESIDENTIAL RATE DESIGN WHICH I WILL REFER TO AS THE "AS FILED" OPTION.

A. The "As Filed" option increases the Customer charge from $0.98 to $3.40. Each of the summer energy blocks are increased by the same 0.974 cents/kWh. This "equal-cents", as opposed to an "even-percentage", increase results in a 14.0% increase in the rates to the first summer energy block and only a 10.5% increase to the summer tailblock (usage greater than 1,000 kWh per month). Because the first summer energy rate is also the flat winter energy rate, this means that all energy consumption in the winter is increased by 14.0% as well.

The "As Filed" option is the highest line on the above graph. This location is only partially related to the fact that it is based upon the Company's original rate request for the Residential Class of 17.35% as opposed to the stipulated 10.31% increase for the Residential Class. Given the revenue requirement settlement in this case, but maintaining the Company's same Rate Design proposal ($3.40 Customer charge and an "equal-cents" increase), the curve would start at the same location, but would decline more steeply, with the ultimate increase in bills for the highest usage customers substantially less than shown here (on the order of 5%). In short, the Company's proposed Rate Design proposal results in half of

the rate increase being taken up by increasing the Customer charge to $3.40, which allows for only a small increase in energy rates and associated price signals.

Given the fact that I believe the Commission should be sending stronger price signals to Residential customers that high usage levels during the summer peak months is causing a disproportionate increase in system costs, I believe this steeply declining percentage increase in bills for high-use customers is inappropriate.

Q. PLEASE DESCRIBE THE "EVEN SPREAD" OPTION.

A. Under the "Even Spread" option, I simply increased all rate components by the stipulated 10.31% increase for the Residential Class. This increases the Customer charge from $0.98 to $1.08, the Minimum charge from $3.67 to $4.05, and all energy blocks by 10.31%.

The "Even Spread" line on the above graph is perhaps the least interesting of all the alternatives because it is simply a straight line at 10.31%—every bill is increased by the same percentage from the smallest to the largest customer.

Given the fact that this option gives all customers the same percentage increase in their bills, it basically maintains the status quo. In other words, it does not send an additional price signal to high-use customers to conserve energy, nor does it encourage high-use customers to consume more power by giving them a price break.

Q. PLEASE DESCRIBE THE "MAINTAIN THE $0.98 CUSTOMER CHARGE" OPTION.

A. This option simply maintains the Customer charge at $0.98. In addition, the Minimum charge, the first two summer energy rate blocks, and the flat winter energy rate are all increased by 10.31% (the class average increase). Because the Customer charge is left at $0.98 and the overall increase remains the same, the small shortfall must be taken up by the tailblock summer energy rate. This option results in the third block increasing by 11.98%. This option could be varied considerably depending on the Commission's Rate Design objectives. For example, the Customer charge could be eliminated (lowered to zero) and the revenue shortfall could be recovered in the energy blocks.

The "Maintain the $0.98 Customer Charge" line on the above graph closely tracks the 10% increase line. It results in slightly less than a 10% increase for low-use customers and approximately an 11% increase to customers using more that 1,000 kWh per month in the summer.

Given the fact that this option places a slightly greater increase upon those using over 1,000 kWh per month, it is sending a better (albeit small) price signal to these larger users. As I stated above, this option can be varied in order to make this price signal stronger than demonstrated here.

Q. PLEASE DESCRIBE THE "$3.40 CUSTOMER CHARGE" OPTION.

A. The "$3.40 Customer charge" option raises the Customer charge from $0.98 to $3.40 and eliminates the Minimum charge. Unlike the "As Filed"

option, this option is geared to meet the target increase of 10.31% and it increases all energy block rates by the same percentage (5.98%) as opposed to using equal-cents increases. The 5.98% increase in energy rates is substantially lower than the 10.31% overall increase, but this smaller percentage increase is necessary, once the revenue requirement is fixed and the Customer charge is set at $3.40. Increasing the Customer charge by $2.42 (from $0.98 to $3.40) may appear to be insignificant, but it results in half of the Residential rate increase being taken up in the Customer charge such that the percentage increase to the energy rates is only half the average rate increase.

The "$3.40 Customer charge" line on the above graph follows a path similar to that of the "As Filed" line. The line starts at a 35% increase for the lowest users (100 kWh per month) and then declines very steeply to a 7-9% increase for those customers using 1,000 kWh or more per month.

As pointed out above, I believe the Commission should be sending stronger price signals to Residential customers that high usage levels during the summer peak months is causing a disproportionate increase in system costs. I believe this steeply declining percentage increase in bills for the customers using air-conditioning is inappropriate.

Q. PLEASE DESCRIBE WHAT YOU HAVE LABELED AS THE "NEW" OPTION.

A. The option increases the range of the lowest priced summer rate block to include all consumption from 0-600 kWh per month as opposed to the

present 0-400 kWh blocking. There are primarily two considerations that support changing the summer energy rate blocking. First, it fits with load research data showing that the customers in the 0-600 kWh range have similar coincident factors compared to those in the 0-400 kWh range; thus, this extra 200 kWh should be similarly priced. Second, by expanding this block, more low-end usage is put under the first energy block. Thus, it forces rates to be raised for higher usage levels in order to meet the class revenue requirement.

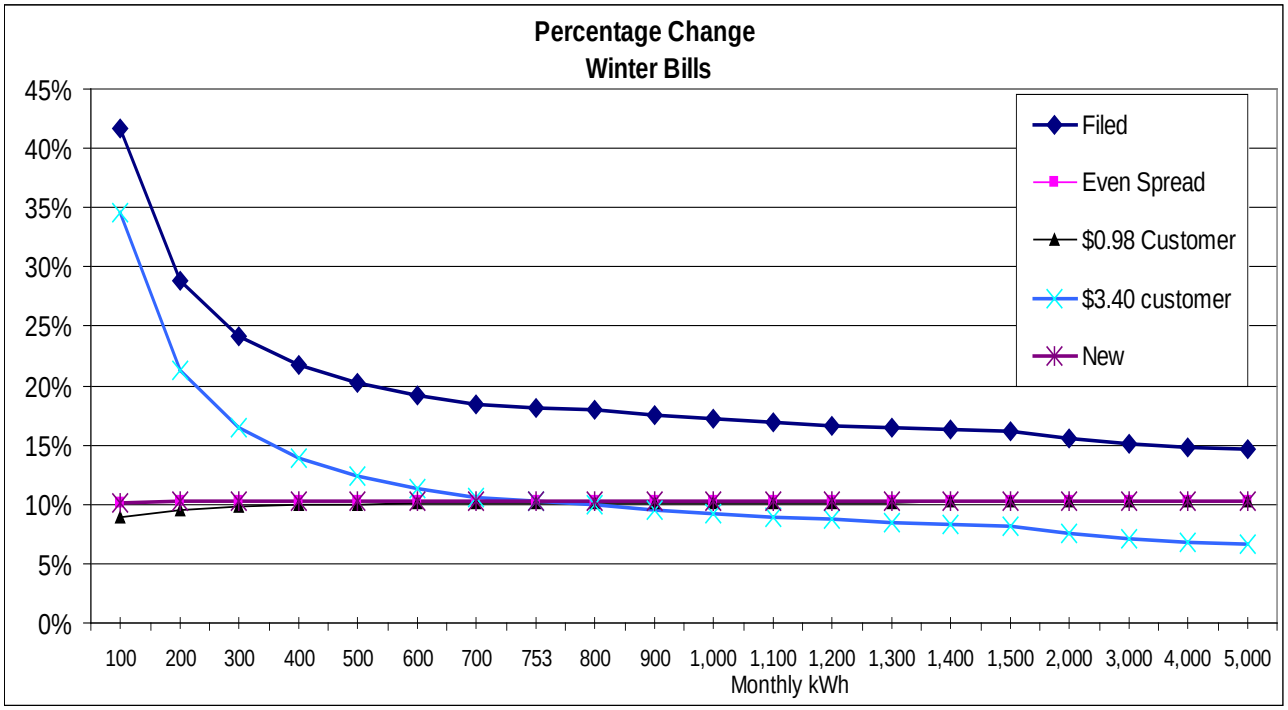
Under the “NEW” option, the Customer charge and the first summer energy block (now 0-600 kWh) would be increased by 10.31% (the class average increase). The Minimum charge and the winter energy rate would also be increased by 10.31%. The remaining revenue requirement would be collected via a 15.1% increase in the second summer energy block rate (601-1000 kWh) and a 15.3% increase in the third summer energy block rate (1,000 kWh and above).

The “NEW” line on the above graph has a noticeable dip in the percentage increase in the 500-700 kWh range. It starts off at an increase of 10.31% until the 400 kWh level is passed. At this point it dips to a low of 5.7% at 600 kWh. From here it begins a steady, although not steep, increase with additional usage. The “New” line crosses the “Even Spread” (10.31% increase) line just past 1,100 kWh. At 5,000 kWh (an extremely high usage level for a Residential customer) the bill increase is 14.3% (less than 40% greater than the average increase).

As I previously stated, I believe the Commission should be sending price signals to Residential customers that high usage levels during the summer peak months is causing a disproportionate increase in system costs. The “NEW” option sends a strong price signal, while not being disruptive. For continuity purposes, I believe bills to any given customer should not generally exceed 50% of the average increase—this option meets that objective.

Q. PLEASE BRIEFLY DISCUSS WHAT RATES WOULD RESULT DURING THE WINTER UNDER THESE VARIOUS RATE DESIGN OPTIONS?

A. Under all of these options I maintained two principles: (1) that the Customer charge and the Minimum charge would be the same for both winter and summer; and (2) the first summer energy block would be the same rate as the flat, winter energy rate. Based upon these principles, I produced the following graph (supporting data on Exhibit CCS-3.2 and Exhibit CCS-3.3).

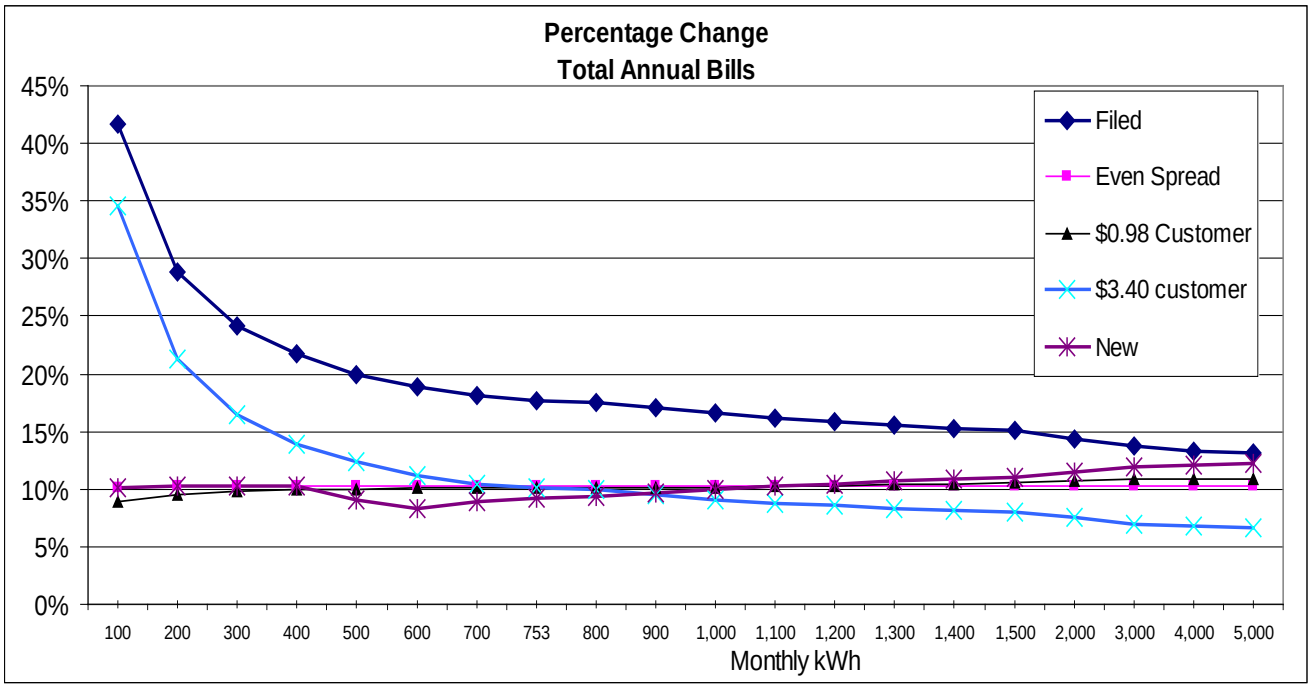


As can be seen from the above graph regarding winter bills, the "As Filed" and the "$3.40 Customer charge" options are the only two options that result in a declining percentage increase as usage increases. The other three options essentially give a 10.31% increase to all levels of usage.

Q. HOW ARE BILLS IMPACTED ON AN ANNUAL BASIS BY THESE OPTIONS?

A. The following graph sums the winter and summer bills together and presents a description of what happens under each option on an annual basis. As can be seen from the following graph, the only two lines that greatly deviate from the 10.31% increase on an annual basis are the "As Filed" option and the "$3.40 Customer charge" option. The "NEW" option demonstrates very little deviation from this 10.31% line—something that is

576 desirable because it attempts to influence customers' behavior more during
577 the summer months, when peak demand is high..



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CCS RATE DESIGN RECOMMENDATION

Q. YOU INDICATED THAT YOU WOULD MAKE A RECOMMENDATION WITH RESPECT TO RESIDENTIAL RATE DESIGN AFTER YOU PRESENTED VARIOUS OPTIONS. PLEASE MAKE THAT RECOMMENDATION NOW.

A. The Committee's position is that Residential rates should be developed that place a higher percentage increase on the summer tailblock rate than the average percentage increase. Although the present summer inverted block rates are sending the customers a price signal that air-conditioning load is expensive to serve, the present rates are not sending a strong enough signal. Lower-use customers (that are not extensively using air-conditioning) should not be punished for the cost increases that are being imposed by these larger users. Any increase in the Customer charge or less than average percentage increase to the summer tailblock rate will be doing just that—putting more of the burden of the present rate increase upon the smaller users and not the ones causing the problem.

The Committee recommends the following:

(1) High -use Residential customers (especially those using over 1,000 kWh per month during the summer) should realize a higher percentage increase in their bills than those using 600 kWh or less. There are a number of ways for the Commission to accomplish this. However, given the stipulated increase of 10.31%, it becomes much more difficult to

accomplish this if the Customer charge is even increased by a small amount. Therefore, the Committee proposes that the Customer charge remain at $0.98 per month (or even be decreased), so that more of the increase in the Residential revenue requirement can be collected from the higher energy blocks during the summer.

(2) The Minimum charge be increased by the class average increase of 10.31% (Minimum charge would increase from $3.67 up to $4.05 per month). As long as the Commission maintains the Minimum charge, there will be recovery from all customers of certain basic costs including the investment cost of the meter and the service drop, as well as the fixed expenses of meter reading, billing and accounting.

(3) The range of the summer first energy block be increased from its present range of 0—400 kWh to a range of 0—600 kWh. Additionally, the Committee proposes that the first energy block rate be increased by 10.31% (6.9360 cents/kWh to 7.6511 cents/kWh). Effectively what this means is that a customer's first 400 kWh will be increased by 10.31%, but the rate for his usage from 400—600 will slightly decrease from the present 7.8720 cents/kWh to the new first block rate of 7.6511 cents/kWh.

(4) As is now the case, the winter energy rate would equal the summer first block rate. Thus, the winter energy rate would be increased by 10.31% (6.9360 cents/kWh to 7.6511 cents/kWh).

(5) The level of second and third summer energy block rates be increased by 16.15%, which produces rates of 9.143 cents/kWh and 10.769 cents/kWh, respectively.

The Committee's recommendation can be summarized as follows:

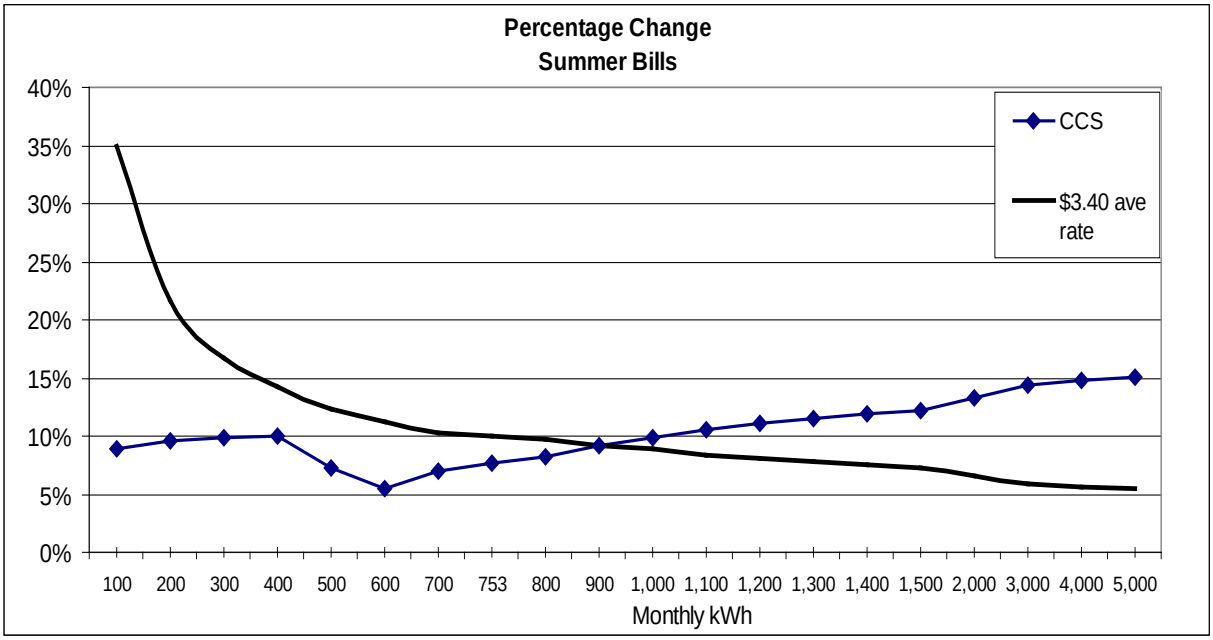
	Rate	% Increase
Customer charge	$0.98	0%
1st energy block (0—600)	$0.07651	10.31%
2nd energy block (601—1000)	$0.09143	16.15%
3rd energy block (+1000)	$0.10769	16.15%
Winter rate	$0.07651	10.31%
Minimum charge	$4.05	10.35%

Q: HAVE YOU PREPARED GRAPHS THAT COMPARE AND CONTRAST THE COMMITTEE'S AND THE COMPANY'S RESIDENTIAL RATE DESIGN PROPOSALS FOR THE SUMMER AND WINTER PERIODS?

Yes. I have developed graphs that compare and contrast the Committee's and Company's Residential Rate Design Proposals. Under the Company's proposal, the Customer charge would be increased to $3.40 and the remaining 10.31% increase collected by an "even-cents" increase to the energy rate blocks. Specifically, the following rates would result:

	Rate	% Increase
Customer charge	$3.40	246.94%
1st energy block (0—400)	$0.07374	6.31%
2nd energy block (401—1000)	$0.08310	5.56%
3rd energy block (+1000)	$0.09710	4.72%
Winter rate	$0.07651	6.31%
Minimum charge	$0.00	NA

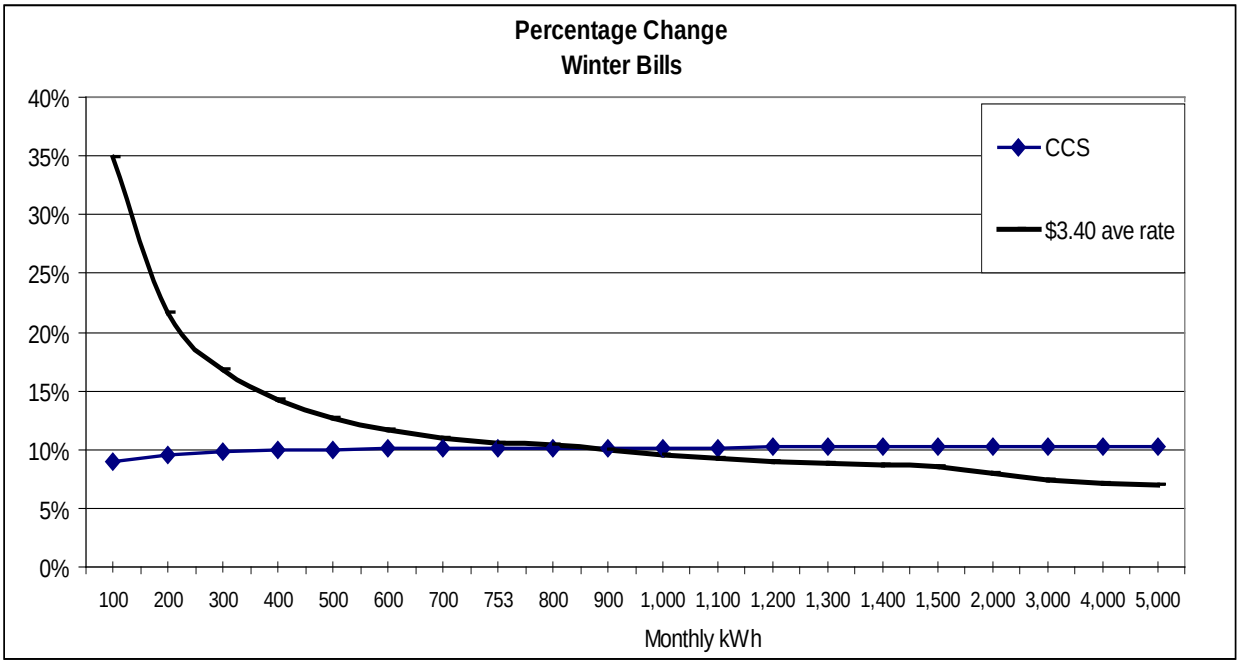
The following graph for the summer period demonstrates the sharp difference in these two Rate Design proposals on Residential customers' bills:



As shown in the above graph, the Committee's Rate Design proposal results in all customers using more than 1,050 kWh per month in the summer getting more than the class average increase. Even at 5,000 kWh, the bills are still slightly less than 50% above the class average increase.

By contrast, the Company's Rate Design Proposal results in customers using more than 700 kWh per month in the summer receiving less than the class average increase. At the 5,000 kWh level, bills would reflect something on the order of only a 5% increase.

Turning to the Winter period, the Committee's Rate Design proposal produces almost the same increase (10.31%) to customers over all usage levels.



By contrast, the Company's proposal places less emphasis on the energy rate so that during the winter months low use customers realize larger bill increases, while high use customers receive smaller bill increases. In fact, under the Company's proposal any customer using less than 800 kWh would receive more than the average rate increase.

Q. DOES THIS CONCLUDE YOUR PREFILED TESTIMONY?

A. Yes, it does.