

STATE OF MICHIGAN

IN THE MICHIGAN PUBLIC SERVICE COMMISSION

In the Matter of the Application of  
Consumers Energy Company for a  
Financing Order Approving the  
Securitization of its Regulatory Assets and  
other Qualified Costs

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MPSC Case No. U- 12505

**DIRECT TESTIMONY AND EXHIBITS OF CHARLES W. KING**

**ON BEHALF OF**

**ATTORNEY GENERAL JENNIFER M. GRANHOLM**

DIRECT TESTIMONY OF  
CHARLES W. KING

1 **Introduction**

2  
3 **Q. Please state your name, position and business address.**

4  
5 A. My name is Charles W. King. I am President of the economic consulting firm of Snavely  
6 King Majoros O'Connor & Lee, Inc. ("Snavely King"). My business address is 1220 L  
7 Street, N.W., Suite 410, Washington, D.C. 20005.

8  
9 **Q. Please describe Snavely King.**

10  
11 A. Snavely King, formerly Snavely, King & Associates, Inc., was founded in 1970 to conduct  
12 research on a consulting basis into the rates, revenues, costs and economic performance of  
13 regulated firms and industries. The firm has a professional staff of 12 economists,  
14 accountants, engineers and cost analysts. Most of its work involves the development,  
15 preparation and presentation of expert witness testimony before federal and state regulatory  
16 agencies. Over the course of its **30-year** history, members of the firm have participated in  
17 over 500 proceedings before almost all of the state commissions and all Federal commissions  
18 that regulate utilities or transportation industries.

19  
20 **Q. Have you prepared a summary of your qualifications and experience?**

21  
22 A. **Yes.** Attachment 1 is a summary of my qualifications and experience.

23  
24 **Q. Have you previously submitted testimony in regulatory proceedings?**

25  
26 A. **Yes.** Attachment 2 is a tabulation of my appearances as an expert witness before state  
27 and federal regulatory agencies.

1 Q. **For whom are you appearing in this proceeding?**

2

3 A. I am appearing on behalf of the Attorney General of the State of Michigan.

4

5 Q. **What is the objective of your testimony?**

6

7 A, The objective of my testimony is to review and evaluate the evidence presented by  
8 Consumers Energy Company (“CECo”) relating to the findings under Section 10i of 1939  
9 PA 3, as added by 2000 PA No. 142, that the Commission must make in order to issue a  
10 financing order authorizing securitization bonds.

11

12 Q. **What must the Commission find in order to issue a financing order?**

13

14 A. Section 10i requires the Commission to make the following findings before it can issue a  
15 financing order that would allow the Company to recover qualified costs through  
16 securitization bonds:

17

18 • Under Section 10i(1), the Commission must find that the net present value of the  
19 revenues to be collected under the financing order is less than the amount that would  
20 be recovered over the remaining life of the qualified costs using conventional  
21 financing methods.

22

23 • Under Section 10i(2)(a), the Commission must find that the proceeds of the  
24 securitization bonds are used solely for the purposes of the refinancing or retirement  
25 of debt or equity.

26

27 • Under Section 10i(2)(b), the Commission must find that securitization provides  
28 tangible and quantifiable benefits to customers of the electric utility.

29

- 1 • Under section 10i(2)(c), the Commission must find that the expected restructuring  
2 and expected pricing of the securitization bonds will result in the lowest  
3 securitization charges consistent with market conditions and the terms of the  
4 financing order, and  
5
- 6 • Under Section 10i(2)(d), that the amount securitized does not exceed the net present  
7 value of the revenue requirement over the life of the proposed securitization bonds  
8 associated with the qualified costs sought to be securitized  
9

10 **Q. Does CECo claim to have passed all of these tests?**

11  
12 **A. Yes, Mr. Francis Ernst claims that he has demonstrated that CECo passes each test.**  
13

14 **Section 10i(1) Cash Flow Test**

15  
16 **Q. How does CECo support its claim to pass the Section 10i(1), test that the net present  
17 value of the revenues to be collected under the financing order is less than the amount  
18 that would be recovered over the remaining life of the qualified costs using  
19 conventional financing methods?**

20  
21 **A. On page 1 of his Exhibit (FAE-3), Mr. Ernst compares the revenue requirements of the  
22 “qualifying costs” with and without securitization. Specifically, he says that if there is no  
23 financing order and prior Commission stranded costs orders are allowed to continue, the  
24 present value of the revenue requirements would be \$619.7 million. By contrast, he says  
25 securitization would generate a net present value of future revenues of only \$538.6 million,  
26 for a savings of \$81.2 million. For purposes of my analysis, I am assuming that the costs  
27 identified by Mr. Ernst are qualifying costs even though the Attorney General does not  
28 concede that question for purposes of the ultimate decision in this case.  
29**

1 **Q. Is this a correct comparison?**

2

3 **A.** No. Mr. Ernst ignores the fact that during the coming three years, and for some customers  
4 during the coming five years, there is no difference in the revenues that will be collected  
5 under “conventional financing methods” and under securitization. That is because Section  
6 1 Od of 1939 P A 3, as added by 2000 PA 14 1, freezes rates at their present levels for three  
7 more years and then caps them for two additional years for residential customers, one more  
8 year for small commercial customers. As demonstrated in Mr. Ernst’s Exhibi(FAE-8), the  
9 effect of securitization is not to reduce cash flows, but simply to divert some of them to the  
10 Special Purpose Entity (“SPE”) that pays the bonds interest and principal recovery. The  
11 current cash flows continue for the duration of the rate freeze and likely for the rate cap  
12 periods as well. Those current cash flows recover both the securitization costs and any  
13 increment in revenue requirement over securitization costs represented by conventional  
14 financing costs.

15

16 **Q. Can you demonstrate the effect of the incorporation of conventional cash flows into**  
17 **existing rates?**

18

19 **A.** Yes. Exhibit I-D\_\_\_\_(CWK-1) shows the effect of the rate freeze and caps. t e  
20 freeze years, all customers pay a revenue requirement corresponding to that already  
21 prescribed by the Commission. This condition continues for the additional years of the rate  
22 caps on residential and small commercial customers. The exhibit reflects a very favorable  
23 assumption to CECO that rates are readjusted immediately to recognize the lower costs of  
24 securitization as soon as the freeze or caps expire. I have thus assumed that cash flow during  
25 the remaining years beyond the expiration of the freeze and caps corresponds to revenue  
26 requirement of the securitization bonds.

27

28 Exhibit I-\_\_\_\_\_ (CWK-1) demonstrates that the present value of the cash flow to the  
29 Company is \$6 19.8 without securitization and \$709.6 million with securitization.

1 Q Does the five percent rate reduction to residential customers prescribed by Section 10d of  
2 1939 PA 3, as added by Act No. 142, affect amount of stranded cost recovered by CECo  
3 under securitization and under conventional financing?  
4

5 A. No. Whatever the level of stranded cost recovery in the present rates, it will still be the same  
6 during the rate freeze and rate cap years whether there is securitization or not. The only  
7 condition under which the five percent residential rate reduction might influence the result  
8 shown on Exhibit I-(CWK-1) would be if the Commission were to find that the  
9 reduction deprived the Company of the opportunity to recover its net stranded costs. Such a  
10 finding might increase the transition cost recovery during the years following the expiration  
11 of the rate freeze and rate cap.  
12

13 Q. **How likely is it that the Commission will find that the residential rate reduction  
14 justifies an increase in transition cost recovery?**  
15

16 A. Very unlikely. Since the Company reports that it earned 18.89 percent on equity from its  
17 electric service in 1998 and 17.2 1 percent in 1999,<sup>1</sup> the Commission might well find that the  
18 Company is able to recover its stranded costs even with a five percent rate reduction to  
19 residential customers. However, a more likely finding is that the net stranded cost recovery  
20 justifies a reduction in the revenue requirement from that shown in Mr. Ernst's exhibits.  
21

22 Q. **What is the relevance of net stranded costs?**  
23

24 A. Section 1 Oa requires the Commission to issue an order by January 1, 2002 providing for the  
25 full recovery of each utility's net stranded costs, along with implementation costs. Unlike the  
26 costs to be securitized, net stranded costs reflect the net difference between overvaluation of  
27 assets that cannot be recovered under a condition of open market competition and the

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<sup>1</sup>Response to EM-CE-4.

1 undervaluation of assets that increase in economic value as a result of competition. This  
2 netting process is certain to reduce the revenue requirements of stranded costs from those  
3 presented in Mr. Ernst's exhibit.  
4

5 **Q. What is the basis for your statement that the Commission's finding of net stranded**  
6 **costs will reduce revenue requirements?**

7  
8 **A.** There is every reason to believe that CECo's non-nuclear plants have gained value relative to  
9 their net book value since the introduction of open market access. These "stranded gains" are  
10 the flip side of stranded costs, and in the netting process they must be subtracted from the  
11 stranded costs previously claimed by CECo.  
12

13 **Q. What is the basis for your belief that CECo's non-nuclear plants have gained value**  
14 **from the introduction of open market competition for power?**

15  
16 **A.** The basis for this belief is the evidence of power plant sales by other utilities. Since the end  
17 of 1995, and particularly since late 1997 when electric competition began to develop, there  
18 have been 50 separate sales of generating assets by incumbent utilities to non-incumbent  
19 entities, either non-utility power merchants or unregulated affiliates of non-local utilities.  
20 These sales are listed in Exhibit I-The (CWK12). It reveals that over 243  
21 individual steam, hydraulic and peaker generating plants have been sold, representing 75,572  
22 MW of capacity. The average sales price has been \$384 per kW of capacity.  
23

24 These sales prices have consistently exceeded the book value that has been used to establish  
25 the respective utilities' rate bases for purposes of setting regulated rates. For the 64,590  
26 MW of sales for which I am able to estimate the book value, the average sales price was  
27 \$392 per kW, the average book value \$204 per kW, for an average gain of \$188 per kW — a  
28 markup up of 92 percent over book value.  
29

1 **Q. Assuming CECo's non-nuclear plants display a similar gain in value, how would it**  
2 **affect the calculation of the net present value of conventional financing?**

3  
4 A. If CECo's non-nuclear plants experience a gain in value as a result of competition, then when  
5 the Commission nets the stranded gains against the stranded costs, as the legislation requires,  
6 it will reduce the revenue requirement associated with conventional accounting and financing  
7 for stranded costs. To illustrate, the average year-end 1998 book value for CECo's non-  
8 nuclear generation assets is \$167 perkW as shown on Exhibit I-I f (CWK-3) m a r k e t  
9 value of these assets even approaches that demonstrated by recent sales, then the true net  
10 present value of conventional financing of net stranded costs will be much lower than that  
11 shown in Mr. Ernst's exhibits.

12  
13 **Q. What do you conclude with respect to the statutory test in section 10i(1)?**

14  
15 A. I conclude that when the actual (as opposed to theoretical) cash flows are compared, the net  
16 present value of the revenues thatCECo will collect under a financing order will be greater  
17 than the amount that it would recover under conventional financing. Therefore, CECo's plan  
18 fails the statutory test in Section 1 Oi( 1).

19  
20 **Section 10i(2)(a) Use of Funds Test**

21  
22 **Q.** How does the Company purport to satisfy the Section 10i(2)(a) test that the proceeds from  
23 the securitization bonds are to be used solely for purposes of refinancing or retiring debt or  
24 equity?

25  
26 A. CECo witness John Murphy testifies that the Company will use the proceeds to retireCECo  
27 debt and repurchase equity.

28

1 **Q. Are these assertions adequate to satisfy this test?**

2  
3 **A.** Mr. Murphy’s statements are the truth but not the whole truth. To the extent that CECo  
4 retires debt, it does indeed conform to this test. The “retirement” of equity, however, is a  
5 subterfuge that is inconsistent with the obvious intent of the legislation. CECo will not buy  
6 back common stock from investors, rather it will flow equity investment back up to its parent  
7 company, CMS Energy Corporation. Neither Mr. Murphy nor any other CECo witness has  
8 expressed any commitment on the part of CMS Energy Corporation to retire its equity. If  
9 CMS Energy does not retire any equity, then the intent of Section 10i(2)(a) will not be  
10 satisfied.

11  
12  
13 **Section 10i(2)(b) Ratepayer Benefits Test**

14  
15 **Q.** How does CECo purport to pass the test in Section 10i(2)(b) that securitization must provide  
16 tangible and quantifiable benefits to customers?

17  
18 **A.** CECo witness Ernst claims that the Company’s securitization plan passes the Section  
19 10i(2)(b) customer benefit test because it reduces the weighted average cost of the  
20 Company’s capital from 10.96 percent to 10.48 percent, resulting in a reduction in revenue  
21 requirement of \$18.24 million annually.

22  
23 Although he does not characterize it as a test of Section 10i(2)(b), Mr. Ernst separately shows  
24 the difference in the levelized annualized cost of recovering the stranded costs through  
25 conventional revenue requirements and through securitization payments. He claims to  
26 demonstrate that the annual “saving” is \$58.7 million.

1 **Q. Is the reduction in return a benefit to customers from securitization?**

2

3 **A.** No. Mr. Ernst's workpapers reveal his alleged savings result from reducing the equity  
4 percentage of CECo's capital structure from 43.1 percent to 40 percent and increasing the  
5 debt proportion from 56.9 percent to 60 percent.\* He then applies the differential of 0.48  
6 percent to a May 31, 2000, rate base of \$3.82 billion to derive the presumed annual savings  
7 of \$18.24 million.

8

9 While this realignment of the debt/equity mix might yield a lower-cost capital structure, it is  
10 not contingent on securitization. CECo could achieve the identical savings at any time  
11 simply by selling more debt and buying back some of its equity. Therefore, even accepting  
12 the propriety of the \$18.24 million savings, it is not a benefit of securitization.

13

14 **Q. Is Mr. Ernst's estimate of \$18.24 in annual savings from lower capital costs correct?**

15

16 **A.** No. Mr. Ernst's estimate of \$18.24 million is an overstatement of the savings ratepayers  
17 might realize from a lower-cost capital structure. That is because it is computed against the  
18 total rate base, inclusive of production plant. By the year 2003, retail open access will have  
19 been implemented, and the market will set generation rates, not rate base/rate-of-return  
20 regulation. The only savings ratepayers could possibly realize from a lower capital cost  
21 would be that relating to transmission, distribution and general plant.

22

23 **Q. Would the corrected figure, one that reflected only the portion of rate base that will be**  
24 **subject to future regulation, justify a finding that there are net benefits to ratepayers?**

25

26 **A.** No. First of all, a lower cost of capital does not automatically translate into reductions in  
27 rates paid by CECo's customers. In fact, CECo earns returns that do not conform to its cost

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<sup>2</sup>Workpaper FAE-4.

1 of capital. Specifically, the authorized return to CECo's equity is 12.25 percent,<sup>3</sup> yet the  
2 Company reports that it earned a 18.89 percent return to equity from its electric service in  
3 1998 and 17.21 percent in 1999.<sup>4</sup>

4  
5 This disparity between the required return and the return generated by rates will become  
6 embedded by force of law during the next three years. Until 2004, CECo's rates are frozen,  
7 and no savings whatever can be passed through to ratepayers.<sup>5</sup> Subsequently, rates will be  
8 capped until 2005 for small commercial customers and until 2006 for residential customers.  
9 During these rate cap periods, it is unlikely that there would be any cost-based rate  
10 adjustments.

11  
12 Finally, even if there were eventual savings in capital costs that could be ascribed to  
13 securitization and properly quantified, they would not begin to offset the very tangible and  
14 quantifiable added burdens securitization will impose on CECo's customers, as I will discuss  
15 shortly.

16  
17 **Q. Does Mr. Ernst's Exhibit (FAE-4) comparing levelized capital recoveries justify a**  
18 **finding of customer benefit?**

19  
20 **A.** No. First, Mr. Ernst's higher levelized annual cost of the revenue requirement pursuant to  
21 prior Commission orders would apply for seven years, while his levelized securitization  
22 payments extend for 14 years. Simply multiplying the two numbers by their respective  
23 durations reveals that customers would pay \$941,675 over the life of the conventional  
24 financing described by Mr. Ernst compared with \$1,061,480 under securitization.

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<sup>3</sup>Final Order, Case No. U-10685, February 5, 1996

<sup>4</sup>Response to EM-CE-4.

<sup>5</sup>See Act No.141, §10d(1).

1 Second, and more important, this exhibit, like **all** of Mr. Ernst's other exhibits, ignores the  
2 effect of the rate **freeze** and rate caps. Because of these rate constraints, securitization creates  
3 a significantly larger financial burden on CECo's customers.  
4

5 **A.** What is the basis for your statement that the rate constraints cause securitization to create a  
6 significantly larger burden on CECo's customers?  
7

8 **A.** CECo's securitization plan imposes burdens upon customers by deferring substantially more  
9 of the recovery of the Company's stranded costs into periods beyond the rate freeze and rate  
10 caps imposed in Section 1 Od. That section **freezes** all rates at their May 1, 2000 level until  
11 December 31, 2003. It then forbids the Company from raising residential rates until January  
12 1, 2006 and rates for small commercial customers under 15 kW of demand until January 1,  
13 2005. During these rate freeze and cap periods, the securitization charges will be subtracted  
14 **from** the existing energy charges so that the net rate effect of securitization on ratepayers is  
15 zero.  
16

17 Since securitization is independent of the rate freeze and rate caps, the same netting against  
18 existing rates would apply even if there were no securitization. Under that scenario, the  
19 stranded costs would be recovered in base rates charged to bundled service customers or  
20 through transition charges to retail open access customers in accordance with earlier  
21 Commission orders. Because of the rate freeze and caps, however, there will be no effect on  
22 the rates actually paid by ratepayers.  
23

24 Once the rate freeze and rate caps expire, then rates will presumably reflect the underlying  
25 costs, plus any Commission-prescribed "nonbypassable" surcharges. Unbundled generation  
26 rates (and the generation component of bundled rates) will gravitate to the market price of  
27 power in Michigan. Transmission and distribution rates will continue to be set by  
28 Commission or FERC regulation based on cost. Stranded costs recovery charges, be they  
29

1 transition charges already prescribed by the Commission or securitization charges resulting  
2 from a financing order, will be added to these market and cost-based rates.

3  
4 The difference between the conventional financing and the securitization plans lies in the  
5 duration of the stranded cost recovery charges. The Company's proposed securitization  
6 recovery extends for 14 years, while the transition charges adopted by the Commission  
7 terminate **after** seven years. The effect of this difference is that securitization will push more  
8 of the recovery of stranded costs out beyond the rate cap periods. Even on a present value  
9 basis, this effect increases the financial burdens borne by CECo's customers.

10  
11 **Q. Have you quantified the effect of this deferral of stranded cost recovery?**

12  
13 **A.** Yes. These effects are demonstrated in Exhibit I-The (CWK-4) data in columns B  
14 and C are drawn from the Mr. Ernst's exhibits, as is the present value factor of 10.63 percent.

15  
16 During the rate cap periods, the effect of securitization on ratepayers is zero; they pay the  
17 same rates regardless of whether or not CECo **securitizes** its stranded costs. After the lifting  
18 of the rate caps, the Company would be able to impose the transition charges or the  
19 securitization charges in addition to whatever cost-based rates it may be permitted to charge  
20 for transmission and distribution. At that time, the difference between the transition charges  
21 without securitization and the securitization charges with it becomes very relevant.

22  
23 Immediately following the termination of the rate freeze and rate caps, the transition charges  
24 are higher, reflecting the more rapid recovery of stranded costs as well as the higher  
25 financing costs. However, the transition charges terminate at the end of 2007, but the  
26 securitization charges continue until 2014. As Exhibit I-(CWK-4) demonstrates, this  
27 ultimately results in greater cumulative ratepayer costs.

1 The final columns of Exhibit I-(CWK-4) reveal that even on a present value basis, all  
2 classes of ratepayers incur greater cost under securitization than under the Commission's  
3 transition charge plan. Assuming that the rate caps last for the minimum periods prescribed  
4 in Act No. 141, the cumulative present value of these added ratepayer burdens is \$96.2  
5 million, as shown in the bottom right of Exhibit I-(C W K - 4 ) .  
6

7 **Q. Could the customer burden from securitization be more than \$96.2 million?**

8  
9 **A.** Yes. Section 10d(2) releases the Company from its rate caps only on the condition that it  
10 passes the market power tests in Section 10f and that it has completed the transmission  
11 expansion required under Section 1 Ov. If the Company fails either of these requirements, the  
12 rate caps continue, customers avoid more of the high transition charges, and the relative  
13 burden of the securitization charges in the out-years beyond 2007 increases. Indeed, if the  
14 Company fails either the Section 10f or 1 Ov tests until 2008, ratepayers under the no-  
15 securitization scenario will not pay any incremental transition charges. Under securitization,  
16 they would have seven more years to pay securitization charges.  
17

18 **Q. What is your conclusion with respect to the customer benefits test under Section**  
19 **10i(2)(b)?**

20  
21 **A.** I conclude that securitization yields no customer benefits whatever. Instead, it produces  
22 added burdens on customers of at least \$96.2 million in year 2000 net present value. CECO's  
23 plan fails this test.  
24

1 **Section 10i(2)(c) Lowest Securitization Charge Test**

2  
3 **Q. Will you address the test under Section 10i(2)(c), that the expected restructuring and**  
4 **expected pricing of the securitization bonds will result in the lowest securitization**  
5 **charges?**

6 **A. No.** I will not. This is largely a subjective test requiring comparisons of numerous alternative  
7 financing scenarios. I do not have sufficient time to make such comparisons.  
8  
9

10 **Section 10i(2)(d) Securitized Amount Test**

11  
12  
13 **Q. Does CECO pass the test required by Section 10i(2)(d) of Act No. 142?**

14  
15 **A. No.** It does not.  
16

17 **Q. How does CECO support its claim to pass the test of Section 10i(2)(d), that the amount**  
18 **securitized does not exceed the net present value of the revenue requirement of the**  
19 **qualified costs over the life of the proposed securitization bonds?**

20  
21 **A.** In his Exhibit (FAE-3), Mr. Ernst compares the amount of the securitized bonds to the net  
22 present value of the 14-year revenue requirements of the qualified costs that CECO seeks to  
23 securitize discounted at 7.73 percent and at 10.34 percent. He finds that both discounted  
24 numbers are larger than the amount of the securitized bond issue. Specifically, Mr. Ernst  
25 calculates the discounted present value of the revenue requirements at 7.73 percent to be  
26 \$639.5 million and at 10.34 percent to be \$577.4 million, both of which are larger than the  
27 proposed securitized bond issue of \$472.5 million.  
28

1 **Q. Has Mr. Ernst demonstrated that CECo passes the Section 10i(2)(d) test?**

2

3 A. **No.** First, there is no justification for Mr. Ernst's use of reduced discount rates. The time  
4 value of money to CECo is always its composite capital cost. More important, however, is  
5 the fact that the calculation understates the amount actually being recovered via securitization  
6 charges. As Mr. Peloquin points out in accompanying testimony on behalf of the Attorney  
7 General, the actual amount of qualifying cost is \$727 million, assuming CECo's claims are  
8 valid. Under the Company's plan, this amount will be recovered through a combination of  
9 securitization charges and tax charges, even though the ratepayers have already paid \$254.5  
10 million in deferred income taxes.

11

12 **Q. Does CECo pass the test required by Section 10i(2)(d) of Act No. 142?**

13

14 A. **No.** It does not.

15

16

17 **Conclusion**

18

19 **Q. What do you conclude from the analyses you have presented in your testimony?**

20

21 A. I conclude that CECo fails three of the five tests it must pass for the Commission to issue a  
22 financing order allowing CECo to securitize \$472.5 million in bonds. Those are the tests  
23 required under Sections 10i(1), 10i(2)(b) and 10i(2)(d). In addition, CECo fails the spirit, if  
24 not the letter of the test in Section 10i(2)(a).

25

26 **Q. Does this conclude your testimony?**

27

28 A. **Yes.** It does.

# Charles W. King

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## Experience

### **Snavely King Majoros O'Connor & Lee, Inc. Washington, DC**

*President (1989 to Present)  
Vice President (1970 - 1989)*

Mr. King, a founder of the firm and acknowledged authority on regulatory economics, brings over thirty years of experience in economic consulting to his direction of the firm's work in transportation, utility and telecommunications economics.

Mr. King has appeared as an expert witness on over 300 separate occasions before more than thirty state and nine U.S. Canadian federal regulatory agencies, presenting testimony on rate base calculations, rate of return, rate design, costing **methodology**, depreciation market forecasting, and ratemaking principles. Mr. King has also testified before House and Senate Committees on energy and telecommunications legislation pending before the U.S. Congress.

In telecommunications, Mr. King has testified before the Federal Communications Commission on a number of policy issues, service authorization, competitive impacts, video dialtone, and prescription of interstate depreciation rates. Before state regulatory bodies, he has presented testimony in proceedings on intrastate rates, earnings and depreciation. Mr. King recently directed analyses of the prices of services under Federal Government's FTS2000 long distance system.

In addition to his appearances as a witness in judicial and administrative proceedings, Mr. King has negotiated settlements among private parties and between private parties and regulatory offices. Mr. King also has directed depreciation studies, investment cost benefit analyses, demand forecasts, cost **allocation** studies and antitrust damage calculations.

In Canada, Mr. King designed and directed an extended inquiry into the principles and procedures for regulating the telecommunication carriers subject to the jurisdiction of the Canadian Transport Commission. He also was the principal investigator in the Canadian Transport Commission's comprehensive review of rail costing procedures.

### **EBS Management Consultants, Inc., Washington, DC**

*Director, Economic Development Department  
(1968-1970)*

Mr. King organized and directed a five-person staff of economists **performing** research, evaluation, and planning relating to economic development of depressed areas and communities within the U.S. Most of this work was on behalf of federal, state, and municipal agencies responsible for community or regional economic development.

*Principal Consultant (1966-1968)*

Mr. King conducted research on a broad range of economic topics, including transportation, regional economic development, communications, and physical distribution.

### **W.B. Saunders & Company, Inc., Washington, DC**

*Staff Economist (1962-1966)*

For this economic consulting firm, which later merged with EBS Management Consultants, Inc., Mr. King engaged in numerous research efforts relating primarily to economic development and transportation.

### **U.S. Bureau of the Budget, Office of Statistical Standards**

*Analytical Statistician (1961-1962)*

Mr. King was responsible for the review of all federal statistical and data-gathering programs relating to transportation.

## Education

*Washington & Lee University, B.A. in Economics*

*The George Washington University, M.A. in  
Government Economic Policy*

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Appearances before State Regulatory Agencies

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
AK	Exxon USA	P-89-1,2	Trans Alaska Pipeline System	October 18, 1990
AZ	Arizona Corporation Commission Arizona Retailers Association	U-1345-I U-1345-II	Arizona Public Service Co. Arizona Public Service Co.	December 16, 1980 January 15 1981
CA	California Retailers Association California Retailers Association California Retailers Association California Retailers & California Manufacturers California Retailers Association	57666 57602 59351 59351 61138	Pacific Gas & Electric Co. Southern California Edison Pacific Gas & Electric Co. Southern California Edison Southern California Edison	March 6, 1978 April 25, 1978 June 12, 1981 May 20, 1982 May 28, 1982
co	U.S. Department of Defense J.C. Penny Company U.S. Department of Defense U. S. Department of Defense U.S. Department of Defense U.S. Department of Defense U.S. Department of Defense	I&S 1100 5693 I&S 1339 I&S 1540 C. Council C. Council C. Council C. Council	Colorado Springs (Elec) All Electric Utilities Colorado Springs DPU (Gas) Colorado Springs DPU (Gas) Colorado Springs DPU (Gas) Colorado Springs DPU (Elec) Colorado Springs DPU (Elec) Colorado Springs DPU (Elec)	June 14, 1977 March 8, 1978 October 18, 1979 February 9, 1982 September 30, 1984 June 6, 1985 May 19, 1986 June 30, 1987
CT	Retailers Merchants Association Division of Consumer Counsel Public Utilities Control Auto Division of Consumer Counsel Division of Consumer Counsel Division of Consumer Counsel Division of Consumer Counsel Coalition of Hotels, Alloys& Retailers Coalition of Hotels, Alloys& Retailers	72-0204 76-0604,5 78-0303 80-0403,4 81-0413 81-0602,4 82-0701 85-10-22 87-07-01	Various Electric Utilities CL&P and HELCO Bridgeport Hydraulic Co. CL&P and HELCO United Illuminating Company CL&P and HELCO CL&P CL&P CL&P	July 22, 1976 November 10, 1977 (none) August 11, 1980 July 20, 1981 October 5, 1981 September 28, 1982 (none) April 25, 1988

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
DC	D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel Washington Metro Area Transit Authority Washington Metro Area Transit Authority D.C. People's Counsel Washington Metro Area Transit Authority D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel D.C. People's Counsel	666 715 725 737 746 756 785 759 665 Remand Q05 912 634, III 917 922 929 934 939 917 951 945	Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Washington Gas Light Company Potomac Electric Power Company Washington Gas Light Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company Potomac Electric Power Company	March 6, 1978 (none) April 4, 1980 January 1, 1981 June 26, 1981 December 15, 1981 September 21, 1Q62 March 29 1964 June 10, 1985 August 20, 1991 May 7, 1992 May 22, 1Q92 September 24, 1QQ2 June 15, 1993 December 16, 1993 Filed April 22, 1QQ4 March 16, 1995 April 16, 1995 February 20, 1957 September 29, 1999
DE	DPSC Staff DPSC Staff	94-164 94-149	Artesian Water Company Wilmington Suburban Water Company	(none) March 10, 1QQ5
FL	Florida Retail Federation Florida Retail Federation Florida Retail Federation Florida Retail Federation Florida Retail Federation Florida Retail Federation Florida Retail Federation	790593-EU 810002-EU 820097-EU 820097-EU 830012-EU 830465-EI 830465-EI	All Electric Utilities Florida Power and Light Company Florida Power and Light Company Florida Power and Light Company Tampa Electric Company Florida Power and Light Company Tampa Electric Company	March 5, 1981 July 23, 1981 September 22, 1Q82 April 11, 1983 August 19, 1983 April 19, 1984 (none)
GA	Georgia Retail Federation Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission Georgia Public Service Commission	3270-U 4007-U 4384-U 4755-U 4697-U 9355-U	Georgia Power Company Georgia Power Company All Electric Utilities Georgia Power Company All Utilities Georgia Power Company	September 3, 1981 August 21, 1991 August 1, 1993 January 25, 1994 May 10, 1QQ4 November 4, 1 QQ8
HI	Public Utilities Department Hawaii Consumer Advocate	2793 4536	All Electric Utilities Hawaiian Electric Company	February 14, 1978 February 1, 1983

**CHARLES W. KING**  
**Appearances before State Regulatory Agencies**

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
IL	Illinois Retail Merchants Association/ Chicago Bldg. Mgrs. Association	76-0698	Commonwealth Edison	June 22, 1977
	Illinois Retail Merchants Association/ Chicago Bldg. Mgrs. Association	76-0566	All Electric Utilities	(none)
	Illinois Retail Merchants Association/ Chicago Bldg. Mgrs. Association	80-0546	Commonwealth Edison	March 5, 1981
	Illinois Retail Merchants Association/ Chicago Bldg. Mgrs. Association	82-0026	Commonwealth Edison	July 22, 1982
	Illinois Retail Merchants Association/ Chicago Bldg. Mgrs. Association	83-0537	Commonwealth Edison	March 19, 1984
	Illinois Retail Merchants Association/ Chicago Bldg. Mgrs. Association	87-0427	Commonwealth Edison	March/April 22, 1988
	Illinois Retail Merchants Association/ Chicago Bldg. Mgrs. Association	90-0169	Commonwealth Edison	October 29, 1990
IN	Indiana Retail Council	35780-S2	N. ind. Public Service co.	June 1, 1980
	Indiana Retail Council	35780-S1	Public Service of Indiana	October 15, 1980
	Indiana Retail Council	36318	Public Service of Indiana	May 4, 1982
KS	J.C. Penny Company	115,379-U	All Kansas Utilities	January 22, 1981
KY	Seven Kentucky Retailers	7310	Louisville Gas & Electric Co.	April 25, 1979
MA	Coalition of Municipalities	20279	Western Massachusetts Electric	March 19, 1960
	Coalition of Municipalities	5571556	Western Massachusetts Electric	May 14, 1981
	Coalition of Municipalities	957	Western Massachusetts Electric	March 9, 1982
	Coalition of Municipalities	1300	Western Massachusetts Electric	January 1, 1963
	Coalition of Municipalities	85-270	Western Massachusetts Electric	March 26, 1986
MD	Maryland People's Counsel	6977	Washington Gas & Light Company	September 17, 1976
	Maryland People's Counsel	6814	Potomac Electric Power Company	
	Maryland People's Counsel	6807	All Electric Utilities	September 1, 1977

**CHARLES W. KING**  
**Appearances before State Regulatory Agencies**

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
MD	Maryland People's Counsel	6882	Baltimore Gas & Electric Company	(none)
	Maryland People's Counsel	6985	Baltimore Gas & Electric Company	September 28, 1976
	Maryland People's Counsel	<b>7070</b>	Baltimore Gas & Electric Company	<b>December 20, 1976</b>
	Maryland People's Counsel	7149	Potomac Electric Power Company	April 18, 1978
	Maryland People's Counsel	7163	All Electric Utilities	January 17, <b>1979</b>
	Maryland People's Counsel	7236	<b>Delmarva</b> Power & Light Company	October 23, 1978
	Retail Merchants of Baltimore	7397	Baltimore Gas & Electric Company	June <b>20, 1980</b>
	Maryland People's Counsel	7427	<b>Delmarva</b> Power & Light Company	September 8, 1980
	Maryland People's Counsel	7574	Baltimore Gas & Electric Company	December <b>2, 1981</b>
	Maryland People's Counsel	7597	Potomac Electric Power Company	<b>February 18, 1982</b>
	Organization of Consumer Justice	7604	Potomac Electric Power Company	April 20, 1982
	Maryland People's Counsel	7588	Baltimore Gas & Electric Company	October <b>19, 1982</b>
	Maryland People's Counsel	7663	Potomac Electric Power Company	November <b>22, 1982</b>
	Retail Merchants of Baltimore	7685	Baltimore Gas & Electric Company	April 12, 1983
	Genstar Stone Products, et al.	7878	Potomac Electric Power Company	December <b>9, 1985</b>
Industrial Intervenors	7878	Potomac Electric Power Company	June <b>28/July 1986</b>	
Maryland People's Counsel	7983	Baltimore Gas & Electric Company	March 4, 1987	
MI	General Services Administration Michigan Attorney General	<b>U-10102</b> U-I 1772	Detroit Edison Company Consumers Energy/Detroit Edison	March 22, 1993 November <b>16, 1998</b>
MN	Minnesota Retail Federation	<b>EOO2/6R-77-611</b>	Northern States Power	1979
MO	Missouri Retailers Association	EO-78-161	Kansas City Power & Light Company	February 19, 1981
NC	North Carolina Merchants Association	E-I 00	All Electric Utilities	December <b>18, 1975</b>
NH	Business & Industry Association of N.H.	<b>79-187-II</b>	Public Service of N.H.	February <b>6, 1981</b>
	Business & Industry Association of N.H.	80-260	Public Service of N.H.	February 5, 1981
	Business & Industry Association of N.H.	82-333	Public Service of N.H.	November 2, <b>1983</b>

**CHARLES W. KING**  
**Appearances before State Regulatory Agencies**

State	Electric, Gas, Water Utility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
NJ	Dept. of Public Advocate Dept. of Public Advocate N.J. Retail Merchants Association Department of Public Advocate Resorts International Hotel, Inc. Dept. of Public Advocate Dept. of Public Advocate Dover Township Fire Chiefs	761-6 <b>7911-951</b> <b>803-151</b> 815-459 8011-827 822-116 355-87 88-080967	Public Service Electric & Gas Atlantic City Electric Co. All New Jersey Utilities N.J. Natural Gas Company Atlantic City Sewerage Co. Atlantic City Electric Co. Elizabethtown Gas Tom's River Water Company	January <b>18, 1977</b> April <b>21, 1980</b> March 31, 1981 (none) (none) August <b>11, 1982</b> June <b>9, 1987</b> February <b>22, 1989</b>
NY	N.Y. Council of Retail Merchants Metropolitan N.Y. Retail Council Metropolitan N.Y. Retail Council N.Y. Metro. Transit Authority	26806 27029 27136 27353	All Electric Utilities Consolidated Edison Company Long Island Lighting Company Consolidated Edison Company	February <b>3, 1976</b> (none) July <b>1, 1977</b> September <b>5, 1980</b>
OH	Ohio Council of Retail Association Ohio Council of Retail Association	<b>88-170-EL</b> <b>83-1529-EL</b>	Cleveland <b>Elec.</b> Illuminating Cincinnati Gas & Electric	(none) February <b>15, 1992</b>
PA	Pennsylvania Retail Association Southeastern Pa. Transp. Authority Eastern Penn Energy Users Group Eastern Penn Energy Association Penn Business Utility User Group	76-PRMD-7 R-811626 R-822169 R-842651 R-850152	All Electric Utilities Philadelphia Electric Company Penn. Power & Light Company Penn. Power & Light Company Philadelphia Electric Company	September <b>7, 1977</b> December 11, 1981 March/April 1983 December <b>3, 1984</b> February <b>19, 1986</b>
TX	Houston Retailers Association Houston Retailers Association Cities for Fair Utility Rates	5779 6765 842518431	Houston Lighting Company Houston Lighting Company Houston Lighting Company	October 19, 1984 September 25, 1986 April <b>25, 1989</b>

**CHARLES W. KING**  
Appearances before State Regulatory Agencies

State	Electric, Gas, WaterUtility Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
VA	Consumer Congress of Virginia Consumer Congress of Virginia Va. Business Committee on Energy Virginia Pipe Trades Council	19426 19960 PUE 7900012 PUE 8900051	Virginia Electric Power Company Virginia Electric Power Company Virginia Electric Power Company Old Dominion Electric Corp. &	July 1, 1975 September 19, 1978 February 25 1981 October 31, 1989
WI	Wisconsin Merchants Federation	6630-ER-2	Wisconsin Electric Power Company	May 15, 1978

**CHARLES W. KING**  
**Appearances before State Regulatory Agencies**

State	Telecommunications Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
AL	U.S. Department of Defense	24472	All Telephone Companies	June 14, 1995
AZ	Arizona Burglar & Fire Alarm Association	9981 -E-	Mountain State Telephone	(none)
	Federal Executive Agencies	<b>1051-80-64</b> <b>E-1051-88-146</b>	Mountain State Telephone	(none)
CA	Western Burglar & Fire Alarm Association	59849	Pacific Telephone & Telegraph	March 25, 1981
	Western Burglar & Fire Alarm Association	5984cont.	Pacific Telephone & Telegraph	June 23, 1982
	Western Burglar & Fire Alarm Association	<b>A83-01-22</b>	Pacific Telephone & Telegraph	June 29, 1983
	Western Burglar & Fire Alarm Association	<b>A83-02-02</b>	General Telephone of California	January 17, 1984
	Western Burglar & Fire Alarm Association	<b>A82-11-07</b>	Pacific Telephone & Telegraph	Jan. 18, Oct. 31 November 28, 1984
	Western Burglar & Fire Alarm Association	<b>A85-01-034</b>	Pacific Telephone & Telegraph	June 4, 1985 October 2, 1986
	Western Burglar & Fire Alarm Association	<b>A87-01-02</b>	General Telephone of California	October 22, 1987
	Western Burglar & Fire Alarm Association	<b>A88-07-17019</b>	Pac. Bell Tel. & GTE of CA.	January 23, 1989
	California Cellular Resellers	<b>A.88-11-1040</b>	All Cellular Carriers	August 11, 1989
	Federal Executive Agencies	1.87-11-033	All Telephone Companies	March 6-7, 1991
c o	U.S. Department of Defense	<b>I&amp;S 717</b>	Mountain Bell Telephone Company	1972
	U.S. Department of Defense	<b>I&amp;S 1700</b>	Mountain Bell Telephone Company	(none)
	U.S. Department of Defense	<b>Appl.</b>	Mountain Bell Telephone Company	September 18, 1986
	U.S. Department of Defense	<b>I&amp;S 1766</b>	Mountain Bell Telephone Company	November 28, 1988
	Colorado Municipal League	Appi 36883	Mountain Bell Telephone Company	December 13, 1988
	U.S. Department of Defense	<b>I&amp;S 89 I -082T</b>	U.S. West Communications	February 21, 1990
	U.S. Department of Defense	<b>905-544T</b>	U.S. West Communications	July 17, 1991
	U.S. Department of Defense	<b>90A-665T</b>	U.S. West Communications	October 23, 1991
	U.S. Department of Defense	<b>92M-039T</b>	U.S. West Communications	February 24-24, 1992
	U.S. Department of Defense	<b>92S-229T</b>	U.S. West Communications	July 30-31, 1992
U.S. Department of Defense	<b>90A-665T</b>	U.S. West Communications	November 6, 1996	
AT&T	<b>96S-331 T</b>	U.S. West Communications	April 17, 1997	

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State	Telecommunications Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
CT	Connecticut Consumer Counsel CT Cellular Resellers Assn. CT Cellular Resellers Coalition AT&T	770526 89-12-05 94-03-27 AT&T/SNET Arbitration	Southern New England Telephone Co. Southern New England Telephone Co. Springwich Cellular/Bell Atlantic Southern New England Telephone Co.	November 10, 1977 (none) May 16, June, 1994 Filed October 28, 1996
DC	DC. People's Counsel DC. People's Counsel General Services Administration General Services Administration General Services Administration General Services Administration	729 798 827 854 850 926	Chesapeake & Potomac Tel. Co. Chesapeake & Potomac Tel. Co. Chesapeake & Potomac Tel. Co. Chesapeake & Potomac Tel. Co. Chesapeake & Potomac Tel. Co. Chesapeake & Potomac Tel. Co.	May 13, 1980 July 18, 1983 May 7, 1985 April 16, 1987 October 7, 1991 October 7, 1993
DE	Public Service Commission Federal Executive Agencies Public Service Commission	Depr.Repre 86-20 Depr.Repre	Diamond State Telephone Co. Diamond State Telephone Co. Diamond State Telephone Co.	April 1, 1985 July 31, 1987 March 8, 1988
FL	GTE Sprint Communications Company Office of Public Counsel Federal Executive Agencies Federal Executive Agencies Federal Executive Agencies	720536-TP Depr.Repre 880069-TL 880069-TL 880069-TL	All Telephone Companies Southern Bell Southern Bell Southern Bell Southern Bell	September 12, 1983 July 30, 1986 July 21, 1988 November 30, 1990 February 11, 1992
GA	Georgia Attorney General Federal Executive Agencies Federal Executive Agencies Georgia Public Service Commission	3893-U 3905-U 3987-U 4018-U	Southern Bell Telephone Co. Southern Bell Telephone Co. Southern Bell Telephone Co. Southern Bell Telephone Co.	January 8, 1990 June 12, 1990 February 13, 1992 Jan 14, Feb 10, 1993
HI	Hawaii Public Utility Commission Four Hawaii Counties Department of Defense Department of Defense Department of Defense Department of Defense	1871 4588 7579 94-0093 7702 94-0298	Hawaiian Telephone Company Hawaiian Telephone Company Hawaiian Telephone Company Oceanic Communications All Communications Carriers GTE Hawaiian Telephone Company	July 8, 1971 December 15, 1983 April 26, 1994 March 13, 1995 June 2, 1995 May 7, 1996

**CHARLES W. KING**  
**Appearances before State Regulatory Agencies**

State	Telecommunications Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
ID	U.S. Department of Energy U.S. Department of Energy	U-I 000-63 u-i 000-70	Mountain Bell Telephone Co. Mountain Bell Telephone Co.	May 16, 1983 March 6, 1984
IL	Illinois Alarm Companies Attorney General of Illinois GTE Sprint Communications Co. Federal Executive Agencies	79-0143 <b>81-0478</b> 83-0142 89-0033	Illinois Bell Telephone Illinois Bell Telephone All Telephone Companies Illinois Bell Telephone	September 26, 1979 December 28, 1981 August 4, 1983 June 12, 1989
KS	State Corporation Commission Federal Executive Agencies Federal Executive Agencies	Depr. Repr. <b>166.856-U</b> 190,492	Southwestern Bell Southwestern Bell All Telephone Companies	May 12-14, 1986 November 7, 1989 <b>November 4, 1994</b>
MD	Maryland People's Counsel Maryland People's Counsel Maryland People's Counsel Maryland People's Counsel Federal Executive Agencies Federal Executive Agencies Federal Executive Agencies	6813 6881 7025 7467 7851 8106 8274	C&P Telephone Company C&P Telephone Company C&P Telephone Company C&P Telephone Company C&P Telephone Company C&P Telephone Company C&P Telephone Company	1975 December 17, 1975 March 15, 1975 <b>October 20, 1981</b> March 20, 1985 May 9, 1988 August 2, 1990
MI	Michigan Attorney General Michigan Attorney General	U-8911 u-9553	Michigan Bell Telephone Co. AT&T Communications/MCI	November 7, 1988 December 4, 1990
MN	GTE Sprint Communications Co. U.S. Department of Defense	<b>83-102-HC</b> 87-021- <b>BC</b>	All Telephone Companies Northwest Bell Telephone Co.	August 5, 1983 (none)
MO	GTE Sprint Communications Co. Federal Executive Agencies Federal Executive Agencies	<b>TR83-253</b> TC-89-14 TO-89-56	Southwestern Bell Tel. Co. Southwestern Bell Tel. Co. Southwestern Bell Tel. Co.	September 5, 1983 (none) November 7, 1990
MS	Federal Executive Agencies	u-5453	South Central Bell Tel. Co.	May 15, 1990

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**Appearances before State Regulatory Agencies**

State	Telecommunications Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
NJ	Department of Public Advocate Department of Public Advocate Department of Public Advocate Department of Public Advocate Department of Public Advocate	DeprRepr. 815-458 DeprRepr. DeprRepr. TO92030358	N.J. Bell Telephone Company N.J. Bell Telephone Company N.J. Bell Telephone Company N.J. Bell Telephone Company N.J. Bell Telephone Company	Mar-79 October 15, 1981 March 1, 1982 February 1, 1985 September 30, 1992
NM	New Mexico Corporation Commission New Mexico Corporation Commission	1032 86-151-TC	Mountain Bell Telephone Co. General Telephone of Southwest	November 14, 1983 February 5, 1987
NV	Prime Cable of Las Vegas Prime Cable of Las Vegas	95-8034/8035 969035	Central Telephone - NV Sprint/Centel, Nevada Bell	Filed November 22, 1995 June 2, 1997
NY	Holmes Protection, inc. Holmes Protection, Inc. 5 Alarm Companies GTE Sprint Communications Co.	27350 27469 27710 28425	New York Telephone Company New York Telephone Company New York Telephone Company All Telephone Companies	October 17, 1978 May 17, 1979 July 24, 1980 July 8, 1983
PA	City of Philadelphia	R-832316	Pennsylvania Bell Telephone	September 20, 1983
SC	Office of Consumer Advocate Office of Consumer Advocate Office of Consumer Advocate Office of Consumer Advocate Off ice of Consumer Advocate	Depr.Repr. 86-511-C 86-541 -C DeprRepr. 89-180-C	Southern Bell Southern Bell General Telephone of South Southern Bell ALLTEL of South Carolina	July 1, 1986 December 11, 1986 April 8, 1987 July 10, 1989 September 26, 1989
TX	U.S. Department of Defense	858518218	Southwestern Bell Telephone Co.	(none)
VA	U.S. Dept. Of Defense, GSA, et Federal Executive Agencies	19696 PUC 890014	C&P Telephone Company All Telephone Companies	October 6, 1976 February 13, 1989

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Appearances before State Regulatory Agencies

State	Telecommunications Cases			Date of Cross-Examination
	Client	Case		
		Case Number	Utility	
VI	V.I. Department of Commerce V.I. Public Service Commission	205 <b>341</b>	Virgin islands Telephone Co. Virgin Islands Telephone Co.	April <b>29, 1980</b> March <b>20, 1991</b>
WA	U.S. Department of Defense U.S. Department of Defense U.S. Department of Defense U.S. Department of Defense WA Attorney General & TRACER U.S. Department of Defense U.S. Department of Defense WA Attorney General/ TRACER WA Attorney General/ TRACER	u-72-39 <b>U-87-796-T</b> <b>U-88-20524</b> <b>U-89-2698-F</b> UT-940641 UT-941464  UT-951425 UT-961632	Pacific Northwest Bell Pacific Northwest Bell Pacific Northwest Bell US West Communications US West Communications US West Communications US West Communications US West Communications GTE Northwest, Inc	1973 December <b>20, 1983</b> November <b>8, 1988</b> November <b>28, 1989</b> Filed October <b>14, 1994</b> June <b>22, 1995</b> January <b>22, 1996</b> Filed June 23, 1997 July 29, 1997
WI	GTE Sprint	<b>6720-TR-38</b>	All Telephone Companies	October <b>20, 1983</b>

Federal Communications Commission			
Client	Docket	Subject	Date of Cross-Examination
Department of Defense Airline Parties Airline Parties National Data Corporation Press Wire Services Aeronautical Radio Department of Defense State of Hawaii international Record Carriers ITT World Communications Aeronautical Radio MCI Ind. Data Corn. Mfg. Assn. Tymnet, inc. Adeiphia Jones intercable, et. al. Adeiphia Jones intercable, et. al. Adeiphia Jones Intercable, et. al.	16020 16258 18128 19989 19919 20814 20690 21263 CC78-97 CC84-633 CC78-72 CC84-800 CC85-26 ENF84-22 Bell Atlantic Bell Atlantic Bell Atlantic	Consat Rate of Return Bell System Rates TELPAK WATS Private Line Rates Private Line Rates 1,544 Mbps Service interstate Separation Telex/TWX Rates Rate of Return Access Line Charges Rate of Return AT&T Accounting Plan Packet Switching Costs Video Daitone Video Daitone Video Daitone	1973 July 22, 1968 3/22, 10/15 1971, Feb. 22, 1972 (none) (none) October 5, 1978 January 30, 1979 February 7, 1979 March 6, 1980 (none) (none) (none) (none) (none) (none) Filed 7/29/94 Filed 8/23/94 Filed 2/21/95
Nuclear Regulatory Commission			
Fauquier League for Environment Protection	50-328 50-329	Va. Electric Power Co.	1976
Postal Rate Commission			
Association of Third Class Mail Users Dow Jones & Company Dow Jones & Company Dow Jones & Company Dow Jones & Company Dow Jones & Company Warshawsky & Company Dow Jones & Company Dow Jones & Company Dow Jones & Company Dow Jones & Company Dow Jones & Company Dow Jones & Company	R71-1 R72-1 R74-1 MC76-2 MC79-3 R80-1 C82-1 R84-1 R87-1 R90-1 MC91 -1 MC91 -3	Rates Rates Rates Rate Structure Rate Structure Rates Rate Structure Postal costs Rate Structure Costs Rate Structure Costs Pre-barcoding Discounts Palletization Discounts	1970 1972 September 13, 1974 January 6, 1979 September 12, 1979 November 25, 1980 (none) June 14, 1984 November 2, 1987 Sept 12, Oct 10, 1990 November 19, 1991 March 2, 1992

U.S. Congress			
Client	Docket	Subject	Date of Cross-Examination
National Retail Merchants Association	House/Senate Hearings	Electric Rate Reform Legislation	1976, 1977 & 1979
National Wireless Resellers Association	House Commerce Committee	Interconnection & Resale of Wireless Services	October 12, 1995
Federal Maritime Commission			
State of Hawaii Foss Alaska Line Palmetto Shipping and Stevedoring	71-16 79-54 85-20	Ocean Shipping Rates Barge Rate Increase Vessel Charge Liability	October-71 Jul-79 October 27, 1986
Interstate Commerce Commission			
Western Coal Traffic League Western Coal Traffic League Western Coal Traffic League Arkansas Power & Light Co. Central Illinois Light Co. Western Coal Traffic League	Ex Parte 349 Ex Parte 357 Ex Parte 375 (Subl) 37276 37450 Ex Parte 347	R.R. Rate Increase R.R. Rate Increase R.R. Rate Increase Cost of Capital Cost of Capital Costing Methods	May-76 Oct-78 June 1, 1980 (none) March 10, 1981 (none)
Thomas Cook, Inc.	36595	Air Fare Deregulation	(none)
Copyright Royalty Tribunal			
Public Broadcasting Service	88-2-86CD	Television Valuation	(none)
Federal Energy Regulatory Commission			
Exxon USA	OR89-2-000	[Pipeline Quality Bank	October 18, 1990
Canadian Transport Commission			
Rail Costing Inquiry, 1967-1969 Telecommunications Costing Inquiry, 1972-1975			

ConsumersEnergyCompany  
 Present Value of Cash Flows Assuming Stranded Cost Recovery  
 (Dollars in Thousands)

Year	CEC Co-Claimed Flows		Residential @ 31.5%		Small Commercial @ 6.1%		Other @ 62.4%		PV Factor @ 10.63%	Present Value Total	
	Without Securitization FAE-3,p 2	With Securitization FAE-5	Without Securitization	With Securitization	Without Securitization B*.061	With Securitization C*.061	Without Securitization B*.624	With Securitization C*.624		Without Securitization	With Securitization
2,001	124,415	84,771	39,191	39,191	7,589	7,589	77,635	77,635	0.90391	112,460	112,460
2,002	142,653	70,768	44,936	44,936	8,702	8,702	89,015	89,015	0.81706	116,556	116,556
2,003	138,315	70,284	43,569	43,569	8,437	8,437	86,309	86,309	0.73855	102,153	102,153
2,004	133,315	71,155	41,994	41,994	8,132	8,132	83,189	44,401	0.66759	88,999	63,105
2,005	127,656	71,991	40,212	40,212	7,787	4,391	79,657	44,922	0.60344	77,033	54,023
2,006	124,188	72,905	39,119	22,965	7,575	4,447	77,493	45,493	0.54546	67,740	39,767
2,007	111,154	73,910	35,014	23,282	6,780	4,509	69,360	46,120	0.49305	54,804	36,441
2,008		75,014	0	23,629	0	4,576	0	46,809	0.44567	0	33,432
2,009		76,231	0	24,013	0	4,650	0	47,568	0.40285	0	30,710
2,010		77,575	0	24,436	0	4,732	0	48,407	0.36414	0	28,248
2,011		79,045	0	24,899	0	4,822	0	49,324	0.32915	0	26,018
2,012		80,653	0	25,406	0	4,920	0	50,327	0.29753	0	23,996
2,013		82,423	0	25,963	0	5,028	0	51,432	0.26894	0	22,167
2,014		84,358	0	26,573	0	5,146	0	52,639	0.24310	0	20,507
										619,746	709,584

U.S. Electric Utility Non-nuclear Generating Asset Sales

Sale I	Date Announced	Plant(s) Name(s)	Date Completed	Seller	State	Buyer	Purchase Price	Reported Book	Summer	Type	Fuel	Avg Age	Price/Book Ratio	Market Value \$/kW	Book Value \$/kW
							Price (\$M)	Value (\$)	Capacity (MW)			12/98			
1	8/6/97	Salem Harbor	7/20/98	NEES	MA	US Gen (PG&E)	\$1,675,000,000	\$1,100,000,000	703	ST	Oil & Coal	35	1.52	\$437.95	\$267.61
		Brayton Point							467			30			
		Brayton Diesel							11			31			
		Wyman #4 (9.27%)							57			20			
		Gloucester							24			32			
		Newburyport							9			26			
		Manchester Street							469			4			
		Nantucket							12.4			7			
		Bear Swamp							566			24			
		Deerfield #5							14			24			
		Merriman							34			24			
		Bellows Falls							41			60			
		Wilder							36			30			
		McInbes							11			67			
		Vernon							16			63			
		Fifebrook							9.9			24			
		Comerford							140			64			
		Moore							140			41			
		Deerfield #3							6.5			66			
Deerfield #4	5.7	66													
Deerfield #2	6.1	65													
2	11/18/97	Mosa Landing	8/1/98	PG&E	CA	Duke Energy	\$501,000,000	\$380,000,000	2,058	ST	Gas	37	1.32	\$155.3	\$117.83
		Morro Say							1,002			39			
		Oakland							165			21			
3	11/24/97	Alemitos		Southern California Edison	CA	AES	\$781,000,000	\$228,600,000	1950	ST	Gas	36	3.42	\$166.4	\$46.71
		Alemitos GT							133			24			
		Huntington Beach							670			36			
		Huntington Beach GT							138			30			
Redondo	1602	44													
4		Cool Water		Southern California Edison	CA	Houston Ind.	\$237,000,000	\$133,200,000	146	ST	Gas	35	1.70	\$96.9	\$55.59
		Cool Water GT							560			20			
		Eitwanda							911			31			
		Eitwanda GT							138			30			
		Mandalay							435			39			
		Mandalay GT							136			26			
Eitwood	46	24													
5		Ormond Beach*		Southern California Edison		Houston Ind.	\$43,000,000		1500	ST/CT	Gas	27		\$26.7	
6	2/4/98	Long Beach	3/26/98	Southern California Edison	CA	NRG/Destec	\$28,800,000	\$98,000,000	530	CT/CC	Gas	23	1.33	\$86.1	\$64.80
		EI Segundo							1020			36			
6	11/24/97	Highgrove*		Southern California Edison	CA	ThermoEcotek	\$9,500,000		169	ST	Gas	44		\$56.3	
		San Bernadin							130			40			
9	11/29/95	1/2 Fort Martin 1	10/31/96	DQE	PA	AYP Capital (AEP)	\$169,000,000	\$39,000,000	276	ST	Coal	31	4.33	\$612.3	\$141.30
10	1/6/98	Mason	11/25/98	Central Maine	ME	FP&L	\$846,000,000	\$228,600,000	96	ST	Oil/Bio	45	3.70	\$776.9	\$209.92
		Wyman 1,2,3							223			36			
		Wyman 4							362			20			
		Cape							33			26			
		AllHydro							373			56			
11	12/10/97	Mystic	5/1/98	Boston Ed	MA	Sithe	\$778,000,000	\$450,000,000	1065	ST	O & G	30	1.73	\$361.2	\$220.46
		Mystic GT							14.2			29			
		New Boston							717			32			
		Edgar							26.4			30			
		Framingham							42.6			29			
		West Medway							135.2			26			
		Lstreet							16.6			32			
12	3/2/98	Kincaid*	3/30/98	Com Ed	IL	Dominion	\$186,000,000	\$186,000,000	1100	ST	Coal	30	1.00	\$169.1	\$169.09



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							Price (\$M)	Value (\$)	Capacity (MW)						
23	12/4/98	All Hydroelectric	7/1/99	Niagara Mohawk	NY	Orion Power Holdings	\$425,000,000	\$250,000,000	661	HY	Water	62	1.70	\$642.97	\$376.21
24	12/15/98	Encina 17 CTs	3/1/99	San Diego G & E	CA	Dynegy/NRG Energy	\$356,000,000	\$93,684,211	937 297	ST GT	O&G O&G	44 29	3.60	\$266.49	\$75.92
25	12/24/98	Huntley* Dunkirk	6/11/99	Niagara Mohawk	NY	NRG Energy (NSP)	\$355,000,000	\$370,000,000	760 600	ST ST	Coal Coal	45 41	0.96	\$261.03	\$272.06
26	1/29/99	Ravenswood Ravenswood GT	6/21/99	Con Ed	NY	KeySpan	\$597,000,000	\$284,000,000	1753 415	ST GT	Gas/FO6 Gas	34 26	2.10	\$275.37	\$131.00
27	1/29/99	Arhuer Kill Station Astoria GT	6/28/99	Con Ed	NY	NRG	\$505,000,000	\$240,000,000	642 614	ST GT	Gas Gas	33 26	2.10	\$346.64	\$164.64
28	1/22/99	W. Springfield Sta* Gardners Falls Dwight Indian Orchard Red Bridge Putts Bridge	7/22/99	Western Mass. (NE Utilities)	MA	Con Ed Energy	\$47,000,000		113 18.6 3.5 1.5 3.7 3.6 3.2	ST JE HY HY HY HY HY	O&G Kerosene Water Water Water Water Water	41 30 60 76 70 68 80		\$319.51	
29	3/3/99	Astoria Gowanus Narrows		Con Ed	NY	Orion Power (BGE)	\$550,000,000	\$301,000,000	1090 494 271	ST GT GT	Gas Oil Gas	36 27 26	1.63	\$236.50	\$162.26
30	9/29/98	Wyman #4 Medway Milford Vaazla Ellsworth Howland Stillwater		Bangor Hydro-Electric	ME	PP&L Global	\$89,000,000	\$49,000,000	52 3.44 6.4 6.4 6.9 .875 1.95	ST HY HY HY HY HY HY	OH Water Water Water Water Water Water	20 75 92 64 79 62 67	1.62	\$1,072.74	\$590.61
31	10/16/98	Somerset Station		Montaup Elect.(Eastern Util.)	MA	NRG Energy (NSP)	\$55,000,000	\$30,500,000	160	ST	Coal	44	1.80327869	\$343.75	\$190.63
32	11/2/98	Colstrip 1.2 Colstrip 3.4 Corrette Black Eagle Cochran Hauser Lake Hoffer Kerr Lake Morony Mystic Lake Rainbow Ryan Thompson Falls Madison Milltown	12/20/99	Montana Power/Portland General/Puget Sound Energy	MT	PP&L Global	\$1,586,000,000		660 1034 163 13.6 22.6 10.1 20.7 160 22.1 11.5 24.5 66.9 35 9 3.2	ST ST ST HY HY HY HY HY HY HY HY HY HY HY HY HY	Coal Coal Coal Water Water Water Water Water Water Water Water Water Water Water Water Water Water	23 14 30 71 40 67 80 51 68 90 63 62 61 92 93		\$699.65	
33	10/15/98	2.63% Wyman #4		Montaup/Newport Electric	ME	FPL	\$2,445,000	\$1,805,120	16	ST	Oil	20	1.35	\$153	\$112.62
34	11/24/98	67% Bowline*		Con Ed	NY	Southern Energy	\$135,000,000		606	ST	Oil & Gas	25		\$167	
35	11/24/98	33% Bowline Lovett Hillburn Shoemaker Mongaup Rio Swinging Bridge Grahamsville		Orange & Rockland	NY	Southern Energy	\$345,000,000	\$330,000,000	397 492 36 3a 4 10 12 17	ST ST GT GT HY HY HY HY	Oil & Gas Coal/Gas Gas Gas Water Water Water Water	25 33 27 27 75 71 64 42	1.05	\$342	\$327.38
36	3/24/99	Collins		ComEd	IL	Edison Mission	\$4,800,000,000	\$2,250,000,000	2699	ST	Oil & Gas	20	2.13	\$529	\$246.02

U.S. Electric Utility Non-nuclear Generating Asset Sales

Sale #	Date Announced	Plant(s) Name(s)	Date Completed	Seller	State	Buyer	Purchase Price		Summer Capacity (MW)	Type	Fuel	Avg Age 12/98	Price/Book Ratio	Market Value \$/kW	Book Value \$/kW
							Price (\$M)	Value (\$)							
		Crawford							532	ST	Coal	33			
		Crawford GT							149	GT	Oil & gas	30			
		Fisk							316	ST	Coal	39			
		Fisk JE							157	JE	Oil & Gas	30			
		Fisk IC							10	IC	Oil & Gas	32			
		Joliet							1309	ST	Coal	35			
		Joliet GT							103	GT	Oil & Gas	29			
		Joliet IC							10	IC	Oil	31			
		Powerton							1400	ST	Coal	25			
		Waukegan							725	ST	Coal	39			
		Waukegan JE							113	JE	oil	30			
		Will County							1060	ST	Coal	39			
		Bloom							53	GT	Oil	27			
		Calumet							134	GT	Oil & Gas	29			
		Electric Junction							154	GT	Oil & Gas	26			
		Lombard							54	JE	Oil & Gas	23			
		Sabrooke							95	GT	Oil	29			
37	5/11/99	Centralia	5/8/00	Pacificorp/Avista/Others	WA	TransAlta Corp.	\$454,000,000	\$200,000,000	1340	ST	Coal	27	2.27	\$338.81	\$149.25
36	5/25/99	Sunbury* Sunbury IC	10/1/99	PP&L	PA	WPS Power	\$106,000,000		362 6	ST tc	Coal Oil	47 31		\$266.04	
39	6/11/99	3.35% Wyman 4* Carabou Carabou IC Carabou Hydro Flo's Inn Squa Pan Tinker Hydro (Canada) Tinker IC (Canada)		Maine Public Service	ME/ Canada	WPS Power	\$37,000,000		20.7 23 7.2 1 4.2 1.4 33.5 1	ST ST IC HY IC HY HY IC	Oil Oil Oil Water Oil Water Water Water Oil	20 46 49 72 39 57 46 50		\$402.17	
40	11/16/98	4.5% New Haven Harbor*		Unitil/Fitchburg Gas & Electric Light CO.	CT	United Illuminating	\$5,300,000		20	ST	O & G	23		\$265.00	
41	4/15/98	Jepson Diesel Eldred Diesel	10/1/98	Newport Electric (Eastern Utilities)	RI	Wabash Power Equip.	\$1,600,000	\$1,498,000	6 6.6	IC IC	OU Oil	36 25	1.07	\$96.39	\$90.24
42	4/1/99	Oswego		Niagara/Rochester G & E	NY	NRG	\$90,900,000	\$377,000,000	1700	ST	Oil	21	0.24	\$53.47	\$221.76
43	7/8/99	Northfield Mountain Rocky River Bulls Bridge Falls Village Robertsville Scotland Dam Shepaug Stevenson Tatville Tunnel Hydro Bantam		Conn. L & P/WMECO	MA/CT	NGC	\$865,500,000	\$125,800,000	1060 29.4 6.4 9.9 0.4 2.2 43 20.9 2 1.4 0.3	HY-PS HY-PS HY HY HY HY HY HY HY HY HY	Water Water Water Water Water Water Water Water Water Water Water	26 70 95 64 74 61 43 75 71 64 93	6.88	\$717.72	\$104.32
44	7/8/99	Montville Middletown Devon Norwalk Harbor Montville Diesels Branford Cos Cob Devon Jet Franklin Drive Jet Middletown Jet Norwalk Harbor GT Torrington Jet Tunnel Jet South Meadow Jet South Meadow Refuse		Connecticut L a P	CT	NRG	\$460,000,000	\$86,900,000	491 753 214 330 5.6 14.9 54.7 17.2 17.2 17.2 12.3 17.2 17.2 156 63.6	ST ST ST ST IC JE JE JE JE JE GT JE JE JE ST	Oil Oil Oil Oil Oil Jet Fuel Jet Fuel Jet Fuel Jet Fuel Jet Fuel Oil Jet Fuel Jet Fuel Jet Fuel Refuse	29 31 41 37 31 29 29 10 30 33 32 31 29 26 52	5.29	\$207.09	\$39.12

U.S. Electric Utility Non-nuclear Generating Asset Sales

Sale I	Date Announced	Plant(s) Name(s)	Date Completed	Seller	State	Buyer	Purchase Price	Reported Book	Summer	Type	Fuel	Avg	Age	Price/	Market	Book	
							Price (\$M)	Value (\$)	Capacity (MW)			12/98	Book Ratio	Value \$/kW	Value \$/kW		
		Devon GT							40	GT	Gas	2					
45	8/25/99	Indian River*		Orlando Utilities Commission	FL	Reliant Energy	\$205,000,000		638	ST	Oil & Gas	30			\$321.32		
46	9/28/99	Avon Lake Cheswick Elrama New Castle Niles Brunot Island Phillips (Site/plant can be repowered) New Castle Diesel Niles CT Avon Lake CT	5/1/00	Duquesne Light Co.	OH PA PA PA OH PA PA OH OH	Orion Power	\$1,705,000,000	\$1,100,000,000	692 662 474 332 136 189 0 6 25 24	ST ST ST ST ST CT ST IC CT CT	Coal Coal Coal Coal Coal oil Coal Oil Oil oil	30 2a 40 40 44 25 47 26 26 27		1.55	\$698.77	\$450.82	
47	10/7/99	Albany Steam Station	5/12/00	Niagara Mohawk	NY	PSEG Power UC	\$47,500,000	\$36,000,000	400	ST	Gas	45		1.32	\$118.75	\$90.00	
4a	5/10/00	70% Mohave Station*		Southern California Edison	NV	AES Corp.	\$667,000,000		1106	ST	Coal	27			\$603.07		
49	5/19/00	9.72% Conemaugh Conemaugh Diesel		Potomac Electric Power (PEPCO)	PA PA	PPL/Alegheny Energy	\$152,500,000	\$71,933,962	166 1	ST ST	Coal Oil	2a 2a		2.12	\$913.17	\$430.74	
50	6/8/00	Dickerson Chalk Point Morgantown Potomac River Dickerson GT Chalk Point GT Morgantown GT		Potomac Electric Power (PEPCO)	MD MD MD VA MD MD MD	Southern Company	\$2,650,000,000	\$1,728,066,038	546 1907 1164 482 291 516 24a	ST ST ST ST GT GT GT	Coal Coal/Oil Coal Coal Gas/Oil Gas/Oil Oil	3a 25 2a 44 6 a 25		1.53	\$514.16	\$335	
TOTALS							\$28,998,845,000		75,672						\$384		
TOTAL6 Excluding sales with unknown book values							\$25,338,045,000	\$13,192,607,331	64,590					1.92	\$392	\$204	

\* No Book Value in Database or sales price distorted by terms of power purchase contract included in the sale or other factors.

## Calculation of Consumers Energy Generation Asset Net Book Value

Plant in <b>Service</b> Source: Pages 204-206 <b>FERC-1</b>			Allowance for Depreciation Source: Page 219 <b>FERC-1</b>			Net Book Value
Line	Column g Category	Balance	Line	Column c Category	Balance	12/31/98
15	Steam	1,479,132,750	20	Steam	811,679,640	
32	Hydro	217,368,223	23 & 24	Hydro-PS	81,589,503	
41	Other	36,984,779	25	Other	36,906,860	
Total		<b>1,733,485,752</b>			<b>930,176,003</b>	<b>803,309,749</b>
						0
						38,556,700
						45,837,493
						38,564,650
						117,611
						<b>926,386,203</b>
						\$167.31

1998 FERC-1 Data used; Consumers Had not yet filed 1999 data as of July 2000

**Consumers Energy Company**  
 Present Value of Customer Cash Flows  
 (Dollars in Thousands)

A Year	B CECo Claimed Cost MSC Order FAE-3,p2 Line 63	C Securitization FAE-5, p1 Col (p)	D Residential @ 31.5%			E Small Commercial @6.1%			F Other @ 62.4%			M PV Factor @ 10.63%	N Present Value Differences			
			MSC Order	Securitization	Difference	MSC Order	Securitization	Difference	MSC Order	Securitization	Difference		Residential	Small Commercial	Other	Total
			Os from Act 141, Sec 10d(2)			Os from Act 141, Sec 10d(2)			Os from Act 141, Sec 10d(1)				F*M	I*M	L*M	N+O+P
			B*.315	C*.315	D-E	B*.061	C*.061	G-H	B*.624	C*.624	J-K					
2,001	124,415	84,771	0	0	0	0	0	0	0	0	0	0.90391	0	0	0	0
2,002	142,653	70,768	0	0	0	0	0	0	0	0	0	0.81706	0	0	0	0
2,003	138,315	70,284	0	0	0	0	0	0	0	0	0	0.73855	0	0	0	0
2,004	133,315	71,155	0	0	0	0	0	0	83,189	45,682	37,507	0.66759	0	0	25,039	25,039
2,005	127,656	71,991	0	0	0	7,787	4,391	3,396	79,657	46,218	33,439	0.60344	0	2,049	20,179	22,228
2,006	124,188	72,905	39,119	22,965	16,154	7,575	4,447	3,128	77,493	46,805	30,688	0.54546	8,811	1,706	16,739	27,257
2,007	111,154	73,910	35,014	23,282	11,732	6,780	4,509	2,272	69,360	47,450	21,910	0.49305	5,784	1,120	10,803	17,707
2,008	0	75,014	0	23,629	(23,629)	0	4,576	(4,576)	0	48,159	(48,159)	0.44567	(10,531)	(2,039)	(21,463)	(34,034)
2,009	0	76,231	0	24,013	(24,013)	0	4,650	(4,650)	0	48,940	(48,940)	0.40285	(9,674)	(1,873)	(19,716)	(31,262)
2,010	0	77,575	0	24,436	(24,436)	0	4,732	(4,732)	0	49,803	(49,803)	0.36414	(8,898)	(1,723)	(18,135)	(28,757)
2,011	0	79,045	0	24,899	(24,899)	0	4,822	(4,822)	0	50,747	(50,747)	0.32915	(8,196)	(1,587)	(16,703)	(26,486)
2,012	0	80,653	0	25,406	(25,406)	0	4,920	(4,920)	0	51,779	(51,779)	0.29753	(7,559)	(1,464)	(15,406)	(24,428)
2,013	0	82,423	0	25,963	(25,963)	0	5,028	(5,028)	0	52,916	(52,916)	0.26894	(6,983)	(1,352)	(14,231)	(22,566)
2,014	0	84,358	0	26,573	(26,573)	0	5,146	(5,146)	0	54,158	(54,158)	0.24310	(6,460)	(1,251)	(13,166)	(20,876)
													(43,704)	(6,414)	(46,060)	(96,178)