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- July 2, 1998 article, "Competitive Electricity Prices: An Update" by J. Alan Beamon
- July 13, 1998 letter from Black & Veatch to APUC
- August 18, 1998 statement of Dr. Peter Fox-Penner
- August 18, 1998 "Alaska Electric Utility Restructuring" by Donn T. Wonnell, Counsel for Municipal Light & Power
- August 18, 1998 "Electric Utility Industry Restructuring in Alaska", Discussion Paper #1 by Alaska Rural Electric Cooperative Association

ALASKA STATE LEGISLATURE

Joint Committee on Electric Utility Restructuring

Senate Members:

Sentor Bert Sharp, Co-Chairman

Senator Loren Leman

Senator Robin Taylor

Senator Al Adams

Address: 119 N. Cushman, #201

Fairbanks, AK 99701-2879

Telephone: (907) 452-7885

FAX: (907) 456-4221



House Members:

Rep. Norman Rokeberg, Co-Chairman

Rep. Alan Austerman

Rep. Fred Dyson

Rep. John Davies

Address: 716 W. 4th Avenue, #640

Anchorage, AK 99501-2133

Telephone: (907) 258-8191

FAX: (907) 258-2916

AGENDA

August 18, 1998

Noon:

Opening Remarks from Co-Chairmen

**Dr. Peter Fox-Penner, author: Electric Utility Restructuring:
A Guide to the Competitive Era**

**Commissioner Sam Cotten, Chairman
Alaska Public Utilities Commission**

Public Testimony

Announcements



CHUGACH ELECTRIC ASSOCIATION, INC.

EUGENE N. BJORNSTAD, P.E.
General Manager

August 18, 1998

Rep. Norman Rokeberg, Co-Chairman
Joint Committee on Electric Utility Restructuring
Alaska State Legislature
716 West Fourth Avenue, #640
Anchorage, Alaska 99501-2133

Dear Rep. Rokeberg:

You asked for our view on legislative building blocks for retail electric competition. We believe they should be as follows:

- **Clear legislative policy favoring retail competition in the electric industry.**
- **Pilot Program for large densely populated distribution service territories.** This could involve, for example, requiring access to the transmission and distribution facilities of a certificated electric utility for the provision of retail electric service if the electric utility has annual electric power sales over 200 million kWh and more than thirty customers per mile of distribution lines.
- **Broad outline of stranded investment recovery guidelines.** These should include protections for the consumers against inclusion of costs not truly stranded as result of competition. Any utility being paid for stranded generation capacity should make the capacity available for use by those paying these costs.
- **Consumer protection.** This can include a provision establishing consumer protection bonding requirements for unregulated power marketers and a directive that the APUC ensure universal service. Any additional consumer protections can be provided under existing APUC authority.

Since I am out of town attending a conference this week, please feel free to call Don Edwards if you require any additional information.

Sincerely,


Eugene N. Bjornstad
General Manager

Testimony before Joint Committee on Electric Utility Industry Restructuring
August 18, 1998

Robert A. Wilkinson, General Manager
Copper Valley Electric Association, Inc.

I was here on August 6 on behalf of 4DP, now I am here on behalf of CVEA
About CVEA

- 480 miles of transmission, distribution, 2 diesel plants, Solomon Gulch
- area the size of West Virginia, 23000 square miles
- 25 feet of snow/year in Valdez, 60 below in Copper Basin
- reliability is a big concern for our 3300 customers
- very high rates

Most important issue ever to face the industry

Proposing to change the rules of the game

The 50 year promise of doing business as a regulated monopoly may be withdrawn

Important to distinguish between coops and investor owned utilities

- Coop purpose is to maximize the wealth of our member-owners not our shareholders
- Why are we concerned?

- Stranded investment for rural Alaska utilities is huge
 - 50% of our energy sales are to commercial customers, every one is a target
 - Recent attempts by APS reveal the serious competitive threat of cherry picking
 - APUC has not dealt effectively with the issue
 - Conduct by ASTF in awarding grants and ignoring the industries concerns has been shameful
 - Chugach has repeatedly contacted our largest industrial customer-25% of energy sales with offers to serve leaving CVEA and our other customers out of the deal
- Limitations of AS 10.25 on the powers of electric and telephone cooperatives
- Concern that in a competitive environment utilities will not be able to
 - Invest in infrastructure projects with potential future economics
 - Who can invest \$70 million in an intertie for 3300 customers
 - Who can build a \$2 million 16 mile line extension to Lake Louise with the threat of dispersed generation to cherry pick those lodge customers
 - Who can invest \$700,000 in a substation in Thompson pass to support winter tourism with the threat of losing customers
 - Will not be able to invest in community as we have done in the past
 - Every transaction and investment will rise and fall on the question of can we afford, for competitive reasons, to do this?
 - The bottom line is good bye ball caps, key fobs, annual meeting prizes, sponsorship of community events and activities because in a competitive environment we will no longer be able to afford it. For Copper Valley that will include the Prince William Sound Community College theatre conference, the World Extreme Skiing Championships and support of our 2 local ARDORS just to name a few

Is competition good?

Maybe if you can afford to shop at the company store but the majority of customers cannot

Who is pushing competition? Those that plan to profit from it

- Chugach-if my variable cost to produce a kwh was 17 mills I'd be pushing it too
- Aurora Energy-plans for shareholders and managers to profit at others expense
- The bottom line is that this is a zero sum game and when the big dog eats the rest may go hungry
- Be careful what you ask for or you may wind up with a real monopoly which I think you don't want

Is the threat of competition good? I think it has been so far

What is CVEA doing to prepare to be competitive in the face of industry change?

- We are trying to inject the profit motive into our not for profit electric cooperative. Profits will be returned to members in the form of lower power rates
- Strategic plan November 1996, tabled the intertie as not cost justified, in the face of the changing industry it gets further away every day, pursuing least cost options
- Remote control generation project January 1998
- Reduced rates April 1998 by 11% for residential and 13% for small commercials
- Waste heat project for Copper River Glennallen schools studied, funding obtained
- Combustion turbine cogeneration project with Petro Star probable development in 1999
- Divestiture of Solomon Gulch and 4DP
- Surveyed membership on diversification opportunities, preparing business plans

In closing

- What rural Alaska needs a lot more than competition in the electric utility industry is some support from Juneau to help us with building some infrastructure which will lead to economic development thus promoting a supporting healthy economies
- What we need is an understanding about the uniqueness of the problems of rural Alaska and some effort put in to developing creative solutions for those problems
- What we don't need is a rush to find a solution on industry restructuring before we adequately define and study the problem if in fact there is one
- On behalf of ratepayers from Sheep Mountain to Glennallen (mp 109-189) on the Glenn highway, from Alyeska pump station 12 to Hogan's Hill (mp 62-156) on the Richardson highway, from Valdez to Thompson Pass (mp 0-10) on the Richardson highway, from mile 0-12 on the Tok cutoff and from mp 0-17 on the Edgerton highway toward Chitina, I ask you to
 - Proceed deliberately
 - Study the issues, define the problems
 - Observe what others in America are doing with the issue
 - Consider that Alaska is indeed different
 - Develop a solution that is in the best interest of all Alaskans

Thank you for allowing me the opportunity to testify

Sent to: --

Senator Loren Leman

Senator Robin Taylor

Senator Al Adams

Address: 119 N. Cushman, #201

Fairbanks, AK 99701-2879

Telephone: (907) 452-7885

FAX: (907) 456-4221



Rep. John Davies

Rep. John Davies

Address: 716 W. 4th Avenue, #640

Anchorage, AK 99501-2133

Telephone: (907) 258-8191

FAX: (907) 258-2916

August 21, 1998

Mike Notar

Assistant Business Manager

IBEW Local 1547

124 Front Street

Juneau, AK 99801

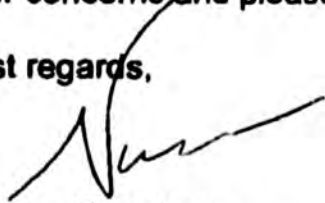
Dear Mike:

Thank you for submitting your written testimony regarding electric utility restructuring. It will, of course, be made a part of the Joint Committee's record.

The Joint Committee will hold its next public meeting on September 16th at the Fairbanks Legislative Information Office ("LIO"), beginning at 10:00 a.m. The meeting will be teleconferenced to the Juneau, Anchorage, Kenai, Kodiak, and Mat-Su LIOs.

The questions posed in your letter are among those being considered by me as well as the other members of the Joint Committee. Please keep me advised of your concerns and please feel free to offer your suggestions.

Best regards,


Norman Rokeberg
State Representative
House District 11

Mike Notar
Assistant Business Manager
IBEW Local 1547
124 Front St. Juneau, AK 99801
Tel. (907) 586-3050
Fax (907) 586-9614

AUG 17 1998

Co-Chairmen Representative Rokeberg, Senator Sharp, and Committee Members,

As we all know State and federal efforts are taking place to restructure the power industry with the so-called intent of gaining more efficiency and lowering consumer costs. Political pressure mostly from larger users, predatory utilities, and power marketers combined with the shallow notion that market forces have the ability to solve the problems of this industry, could well result in changes that hurt our system rather than making it better. Now it appears that we in Alaska are looking in that direction also.

Competition and deregulation are buzzwords that are supposed to conjure up the vision of great benefit to all. I offer you just a few of the questions that pop into my mind when I think about this complicated potential endeavor. Will everyone be afforded a chance at access to affordable power or will those large customers in more densely populated areas of our state just enjoy this? Will local governments maintain their tax revenues if local power facilities fail because they are deemed to be non-competitive? What will the results of deregulation be if there is excessive cost cutting and downsizing by electric utilities for their employees, their employees' safety and the public safety in this new competitive market structure? Will utilities face bankruptcy due to their inability to pay off their existing debt on their power plants and other facilities should competitors strip off their larger customers? Will the distribution and generation of power be as dependable as it was before restructuring?

As Senator Frank Murkowski, Chairman of the Senate Energy and Natural Resources Committee observed quoting the Deputy Secretary of Energy, "This is not an industry in crisis - unless we make it so." I would urge this Committee and the State of Alaska to continue to please make a thorough examination of the known effects of restructuring and the potential effects to all consumers and affected workers across our State before accelerating changes to the Alaskan electric market structure, that for all practical purposes serves the public well.

Thank you.

LANG CONSULTING
Electric Power
211 7 Belair Dr.
Anchorage, Alaska 99517
Tel/fax 907-274-7448

AUG 18 1998

8/17/98

Letters
Anchorage Daily News
P.O. Box 149001
Fax 258-2157

Dear Ms. Pembleton

BEWARE ON YOUR SAY ON ELECTRICITY

Choosing an electric company is not that simple. You are already connected to a supplier. Yesterdays ML&P power outage and the major CEA power outage in Aug. 95 is only the tip of the iceberg on power faults. When electric utilities cut operating expenses to remain competitive, public safety and reliability are sacrificed.

The Alaska Public Utility Commission is our regulatory agency that keeps the Utilities on track. It may be wiser to augment their staff to check the Utility practices closer. Also any competing electric Utility must employ an adequately trained and maintained staff from IBEW linemen, professional engineers, dispatchers and managers. Cost cutting here to be competitive will jeopardize consumer service. Consolidation of electric utilities especially in the railbelt area is more apt to bring about the desired consumer benefits.

Henry P. Lang, Electric Utility Engineer
Private Practice

Post-It [®] brand fax transmittal memo 7571		# of pages = 1	
To: Norman Beckeborg	From: H.P. Lang		
Co: Alaska Legislature	Co: Lang Corbett		
Dept: House Member	Phone: -		
Fax: 907 258-2916	Fax: -		

Joint Committee on Elect. Util. Restruct.

Author: Representative Norman Rokeberg at LAA_TRANS
Date: 8/18/98 7:21 AM
Priority: Normal
TO: Janet Seitz
Subject: Electric utility regulation

August 14, 1998

To the Joint Committee on Electric Utility Restructuring, Rep. Norm Rokeberg, Co-chair:

I am writing to urge your committee to favor legislation allowing customers to choose their own electricity suppliers.

As a homeowner in Anchorage, a small business owner in Alaska for over 15 years, and as one who works with many other small businesses, I firmly believe that government should control or limit services as a last resort only. In every case in my memory, increased competition has

resulted in improved value for the customers (and usually for the service providers, as well).

Nationally, internationally, and here in Alaska, the concepts of privatization and deregulation are opening doors to more business, better service, new ideas and better lives. It will happen with electric service, too.

It will happen. Your committee has the opportunity to make it happen sooner rather than later. That will be a real service to homeowners, businesses, and legislative constituents who need the service and pay the bills.

Sincerely,

Stu Kingsley
Indelible Ink
Anchorage, AK
ndlbl@alaska.net

--

Stu Kingsley
Indelible Ink
825 West Eighth Ave. #202
Anchorage, Alaska 99501-3410
Ph 907/277-9715 Fx 907/277-2799
Pager 907/275-3252
ndlbl@alaska.net

AUG 18 1998
AUG 18 1998

Author: DonCassas@compuserve.com (Don Cassas) at CC2MHS1
Date: 8/17/98 11:23 AM
Priority: Normal
BCC: Representative Norman Rokeberg at LAA_TRANS
TO: Blind.Copy.Receiver@compuserve.com at CC2MHS1
Subject: Support Electric Utility Competition
Representative_Norman Rokeberg@legis.state.ak.us

August 14, 1998

Joint Committee on Electric Utility Restructuring
Representative Norman Rokeberg, Co-Chair
716 W. Fourth Avenue, Suite 640
Anchorage, AK 99501

Dear Representative Rokeberg:

I am writing to urge your committee to support electric utility competition in its upcoming recommendations to the legislature. As sole proprietor of a small business and a homeowner in Anchorage, I want to choose my electrical provider the way I choose the other companies I do business with: those that provide the best services and prices for my needs. Open competition is the basis of the market economy in the United States, and it has been demonstrated time after time that competition results in better prices and more services for the consumer. Competition helps companies perform better, become more efficient and provide choices that benefit consumers who make the ultimate decision on which companies serve them best. An example is the dramatic change that has occurred in Alaska as a result of telecommunications deregulation. Not only do we have more providers and services, but the rates are lower than ever before. As a consumer, I think I have the right to choose which company provides the service I am paying for, including the one that provides electricity.

I am in support of legislation to be passed during the upcoming session that allows electric utilities to compete for my business, as well as that of other Alaskans, so that we can enjoy the benefits of competition in yet another industry.

Sincerely,

Donald B. Cassas
Visual Information Systems
70372.3315@compuserve.com

AUG 17 1998



PIERCE CARTWRIGHT CO. INC

8/17/98

To: Joint Committee on Electric Utility Restructuring
Norm Rokeberg Co-Chairman

Regarding the above subject it is our opinion that it definitely would be a good decision for customers and potential customers to be able to choose the power supplier that they would prefer, rather than not having a voice in the matter.

We appreciate this opportunity to be able to give you our opinion.

Thank you.

A handwritten signature in cursive script, appearing to read "Pierce Cartwright".

Pierce Cartwright
Chairman

AUG 17 1998



FOOD AND MERCHANDISE BROKERS
1205 E INTERNATIONAL AIRPORT RD., SUITE 204 • ANCHORAGE, ALASKA 99518
TELEPHONE 907-563-3032 • FAX 907-562-3473

August 14, 1998

AUG 17 1998

Rep. Norm Rokeberg
716 West 4th Ave., Suite 640
Anchorage, AK 99501-2133

Dear Rep. Rokeberg:

I am writing to ask for your support in allowing me to choose the electric company that supplies power to my home. The ideal of a competitive marketplace is the cornerstone of the American economic system. Two or more companies, offering a similar product or service, give the consumer a choice. The nature of this system requires the individual companies to compete by improving service, price, and availability of their product. Currently, as you know, we lack this freedom of choice in what entity supplies our electric power.

Electricity in this state is a necessity and the current system forces me to use one supplier, giving them a virtual monopoly in their service area. Years ago we experienced this same monopoly in long distance telephone service. We had one long distance carrier and paid them for all our long distance calls. Long distance competition caused the cost of those calls to drop dramatically and the level of service improved. Recently competition for local phone service began and we are seeing lower rates and improved service as a result. I believe that we will see the same reduction in rates and improvement in service if the electric utilities compete with each other.

When election season comes you have no guarantee that everyone in your district will vote for you. This fact assures that you work hard to provide the highest level of professionalism and assistance to your constituency. You prove yourself every day to your district. The utilities on the other hand know that everyone in their "district" must vote for them (with a monthly bill). Lets make the utilities prove themselves the same way you do.

Open up the power lines and tell the utilities that they must compete with each other. Tell them that they are no longer guaranteed a base of customers regardless of their level of service. Make them prove to the consumer that they are offering a fair deal. By allowing consumers to choose their electric utility you will force the utilities to improve their level of service and their rates. You will also be endorsing the ideals of free choice for all consumers.

Sincerely,



Richard S. Henningsen

2521 Melvin Ave.
Anchorage, AK 99577

Author: pprmnt@alaska.net (mary p bogan) at CC2MHS1

Date: 8/17/98 6:27 AM

Priority: Normal

TO: Representative Norman Rokeberg at LAA_TRANS

Subject: customer choice

I've been following the discussion regarding customers and choice for the electric industry. I feel electric customers are capable of making smart, practical choices for themselves and should be allowed to choose their electric provider, rather than having it chosen for them.

I urge you to support legislation allowing competition in Alaska because I believe the result will be more services and better prices.

Mary Bogan

P.O. Box 220103

Anchorage, AK 99522-0103

AUG 17 1998



a subsidiary of Alaska Basic Industries

ANCHORAGE SAND and GRAVEL CO., INC.

1040 O'Malley Road • Anchorage, Alaska 99515 • Phone (907) 349-3333 • FAX (907) 344-2844

August 12, 1998

Representative Norman Rokeberg
Co-Chair Joint Committee on Electric Utility Restructuring
716 West 4th Avenue
Anchorage, AK 99501-2133

Regarding: Support for Electric Deregulation

AUG 14 1998

Dear Representative Rokeberg:

I am writing you to support Electric Deregulation now. I am submitting this letter as written testimony. Anchorage Sand & Gravel (AS&G) is currently enjoying reduced cost due to the deregulation of the natural gas industry and fully expects to be able to reduce costs on electricity once we are allowed to shop for the best rate. Reduced electrical rates due to competition will allow AS&G and other Alaskan businesses to manufacture and produce materials and products currently shipped in from the lower 48 states and other parts of the world.

This country is based on the free market system, allowing competitive markets to keep goods and services competitively priced and in proportion to their cost. Currently AS&G has the ability to choose suppliers on virtually any other item used in our manufacturing process. Electricity should be no different.

We need the opportunity to compete with firms from the lower 48 states. By deregulating electricity not only will the cost of electricity most likely drop but more services will be given to customers like ourselves who are willing to shop for the best service and rates.

Electric deregulation should mean new opportunities for AS&G to reduce our electric cost, gain better service and produce products here in Alaska that we can not otherwise afford to produce. AS&G requests that this committee move forward quickly, to fully deregulate the electric industry in our area.

Anchorage Sand & Gravel
Steven M. Lova
Vice President/General Manager



CHUGACH ELECTRIC ASSOCIATION, INC.

Letter to the editor

August 12, 1998

Speak up for customer choice

If you believe you should have the right to choose your electric company, now is the time to speak up.

A special joint committee appointed by the Legislature will hold a public hearing on this issue. The hearing starts at noon, Tuesday, Aug. 18, at the Anchorage Legislative Information Office at 716 W. 4th Ave. Members of the public will have 3-5 minutes apiece to address the committee.

If you'd rather send written comments, address them to Rep. Norm Rokeberg, 716 W. 4th Ave. Suite 640, Anchorage, AK 99501-2133 (send e-mail to Representative_Norman_Rokeberg@legis.state.ak.us).

In a survey of 1,400 Anchorage residents earlier this year, 91 percent said they felt customers should have the right to choose which company they buy their electric power from. Chugach supports customer choice in the electric utility industry. It is our opinion that empowering customers with the right to choose their power provider will lead to better services and lower prices – just as it has in other deregulated industries.

If you agree, now is the time to share your opinion with the committee. Legislators will hear from plenty of industry representatives. It's important for them to hear from customers as well.

Sincerely,

A handwritten signature in cursive script that reads "Eugene N. Bjornstad".

Eugene N. Bjornstad, General Manager
Chugach Electric Association

**Alaska State Legislature
Joint Committee on Electric Utility Restructuring**

Committee Members

	Phone	Fax
Sen. Bert Sharp (Co-chair)	452-7885	456-4221
Sen. Al Adams	465-3707	465-4821
Sen. Loren Leman	258-8189	258-3768
Sen. Robin Taylor	874-2318	874-3470
 Rep. Norm Rokeberg (Co-chair)	 258-8191	 258-2916
Rep. Alan Austerman	486-8872	486-5264
Rep. John Davies	456-8172	451-9293
Rep. Fred Dyson	694-6683	694-1015

Send written comments to:

Rep. Norm Rokeberg
716 W. 4th Ave., Suite 640
Anchorage, AK 99501-2133

Fax: 258-2916

E-mail: Representative_Norman_Rokeberg@legis.state.ak.us

For more information:

Legislative Information Office
716 W. 4th Ave., Suite 200
Anchorage, AK 99501-2133
258-8111
258-1261 (fax)

Chugach Electric Association
762-4709
choice@chugachelectric.com

AUG 07 1998



**Best Western
Barratt Inn**

4616 Spenard Road
Anchorage, Alaska 99517-3271
Phone: (907) 243-3131
Fax: (907) 249-4917
For Reservations, Call
1-800-221-7550

August 5, 1998

Representative Norman Rokeberg
Co-chair, Joint Committee on Electric Utility Restructuring
716 West 4th Avenue
Anchorage, Alaska 99501-2133

Dear Representative Rokeberg:

My written testimony is submitted in lieu of personal testimony at the public hearing of the special Legislative Joint Committee on Electric Utility Restructuring scheduled for August 18.

I would encourage your committee to recommend immediate restructuring of the electricity industry in the Anchorage Bowl.

Please consider the following points:

1. Alaska businesses are not able to achieve savings in electricity costs because we are not allowed to exercise our right to choose our electric power provider.
2. Alaska businesses, large and small, make every effort to hold down overhead costs while still providing the best products and services.
3. As a business organization in one of the most competitive areas of the economy, I know that competition helps keep prices down.
4. We have a choice on every product and service we buy, EXCEPT electricity.
5. Government should not be in a position to tell the private sector business community who they can or cannot buy electricity from.
6. I would like the opportunity to choose my electricity provider.
7. Gas costs have been cut because of the competitive market on the large commercial gas level.

Representative Norman Rokeberg

Page 2

August 5, 1998

8. In a deregulated environment, the lowest cost provider could serve my business.
9. Restructuring will insist that service levels rise and product availability will be increased.

Thank you for your consideration about a product/service that affects all of us in almost every facet of our lives every single day.

Sincerely,

BEST WESTERN BARRATT INN



John J. Payne
General Manager

JJP/kk

/

August 17, 1998

State of Alaska Legislature
Joint Committee on Electric Utility Restructuring
Representative Norm Rokeberg
716 W. 4th Ave., Suite 640
Anchorage, Ak 99501-2133

Dear Mr. Rokeberg,

I am writing this letter to express my support for having a choice in who provides residential consumers with electricity. I support legislature to open competition in Alaska because of the benefits to the consumer. The major advantage will be greater competitive pricing. It is my understanding that just the "threat" of competition has already caused utilities to cut costs. Consumers are well informed enough to make these utility decisions themselves.

Other deregulated industries already include; natural gas, telecommunications, airlines, trucking, and railroads. It was not too long ago that a quick roundtrip flight to Seattle was \$1200, and consumers were paying three or four times more for long distance calling.

Thank you for your time and allowing me the opportunity to express my support to open utility competition in Alaska.

Sincerely,



Will L. Fancher
PO Box 92090
Anchorage, AK 99509
(907) 762-0311

WAI **WESTBROOK ASSOCIATES**
Consulting Engineers
Anchorage, Alaska

August 17, 1998

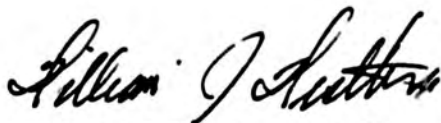
State of Alaska Legislature
Joint Committee on Electric Utility Restructuring
Rep. Norm Rokeberg
716 W. 4th Ave., Suite 640
Anchorage, AK 99501-2133

Dear Rep. Rokeberg:

As a residential and a small business owner in Anchorage, I strongly support legislation that would allow me to personally choose the electric company from which I purchase my electrical power.

Over the years many other industries have deregulated, allowing the consumer to benefit from lower prices and increased services. I believe competition will benefit electric consumers as well.

Sincerely,



William J. Westbrook, P.E.
Westbrook Associates

The Family Church
ANCHORAGE BAPTIST TEMPLE

August 18, 1998

Alaska State Legislature
Joint Committee on Electric Utility Restructuring

Dear Committee Members:

The Anchorage Baptist Temple supports deregulation among electric power producers. Deregulation would provide users with a choice of electrical providers and services.

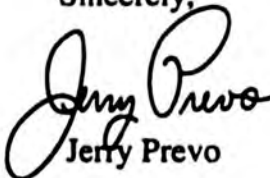
As a nonprofit organization, we are always seeking opportunities to reduce our operating budget. Keeping cost of overhead to a minimum provides savings that can be used to meet the needs of people our ministry touches.

We enjoy a similar savings with the cost of our natural gas because of deregulation. Changing the structure of electric regulations would provide users with additional savings on utility costs.

We also realize that protections for rural electric providers and users must be addressed. These concerns, however, should not hinder the process to provide urban consumers the right to choose their electric producer.

Your decision on this issue will have a financial impact on our ministry. We hope you are able to see the wisdom in providing deregulation of electrical zones within urban areas.

Sincerely,



Jerry Prevo

My name is Bruce Vergason, I am employed as a plant manager with Signature Flight Support here in Anchorage. Our company provides the refueling services for a majority of the flights at Anchorage international airport, moving an average of 1.8 million gallons of jet fuel per day.

In managing the costs related to all the aspects of our business I have a tremendous concern about electricity costs and our inability to seek competitive pricing in the market place under the current PUC directives. Although, and correct me if I'm wrong, I don't see anything outside their own directives that preclude them from allowing limited competition from occurring. Many states across the country have chosen to deregulate their electric utilities and in most cases it resulted in significant savings to the consumers.

Deregulation or re-regulation is an important step in contributing to long term economic stability. By providing low cost electricity through a competitive environment we will not only assist existing businesses by reducing operating costs but also attract new businesses to our area.

Obviously, There are a few fundamental issues to consider in the decision to re-regulate, first would be the exclusion of all non-rail belt utilities and possibly even limit de regulation to the Anchorage area. Rural Alaska's situation will require long term efforts even to solve its existing problems. Second would be to ensure all the utilities involved are properly and fairly unbundled. This would be needed to ensure fair and reasonable access charges for competitors.

These and others are some fairly complexed issues to deal with in the process of de regulation however, lets not reinvent the wheel, there are many other states that are deregulated or in the process of deregulating. My suggestion is to step the process and to look at the their programs and learn from their experience. A necessary first step is to develop a pilot program limited to the Anchorage bowl. The charter for this program must include the flexibility to deal with the various problems that will arise. It should have a term of one to three years, And it will also need a structured oversight committee made up of the following individuals:

- APUC commissioner,
- Legislator
- Representatives from the major utilities
- Balanced by an equal number of consumer group representatives from
- Large commercial
- Small commercial
- residential

These individuals would then regularly report to this committee on their findings and the impact of the program. The important thing is to get started down the road towards deregulation and start taking the necessary steps.

Have your say on electricity

If you believe you should have the right to choose your electric company, now is the time to speak up.

A special joint committee appointed by the Legislature will hold a public hearing on this issue. The hearing starts at noon on Tuesday at the Anchorage Legislative Information Office at 716 W. Fourth Ave. Members of the public will have three to five minutes apiece to address the committee.

If you'd rather send written comments, address them to Norm Rokeberg, 716 W. Fourth

Ave., Suite 640, Anchorage, 99501-2133. Send e-mail to Representative_Norman_Rokeberg@legis.state.ak.us.

In a survey of 1,400 Anchorage residents earlier this year, 91 percent said they felt customers should have the right to choose which company they buy their electric power from. Chugach supports customer choice in the electric utility industry. It is our opinion that empowering customers with the right to choose their power provider will lead to better services and lower prices — just as it has in other deregulated industries.

If you agree, now is the time to share your opinion with the committee. Legislators will hear from plenty of industry representatives. It's important for them to hear from customers as well.

— Eugene N. Bjornstad, general manager
Chugach Electric Association

ADN

17 Aug 1998 p. 8-7

Consumers can weigh in on state's electric system

By HELEN JUNG
Daily News reporter

Turning on the lights in a home in Noatak in Northwest Alaska costs nearly six times more than flicking the same switch in Anchorage. There are more electric utilities in Alaska than five Pacific Northwest states combined.

In other words, Alaska's electric power industry is complex, with hugely different customer groups, said Eric Yould, executive director of the Alaska Rural

Electric Cooperative Association. Changing the rules that govern how these utilities do business could devastate some areas while granting windfalls to others, he contended.

Yould and others from the electric power industry testified this month at the first hearing of a state legislative committee considering whether and how to foster competition among power providers in Alaska. The second hearing, which seeks testimony

from consumers, businesses and other members of the public, is scheduled from noon to 5 p.m. today at the Anchorage Legislative Information Office at 716 W. Fourth Ave.

But others, including the state's largest electricity provider, Chugach Electric Association, said consumers would benefit if the state embraced a broad policy of allowing competition.

"Competition is a cornerstone of American business," said Gene

Blornstad, general manager of Chugach. "Competition makes for new ideas, better customer service, innovation, efficiency, reduction in costly regulatory oversight and added value to customers and shareholders."

The Legislature doesn't need to get involved with the details — that's the job of the utility regulators, he said. But it does need to state that "competition is the

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POWER: Panel discusses competition

Continued from Page F-1

norm, rather than the exception," he said.

Several states in the Lower 48 have adopted measures to lift restrictions from power providers and encourage the kind of competitive scrambling taking place in the telecommunications industry.

But, speakers said, Alaska is different. Some utilities fear that power providers may try to pick up some of the largest customers in a village — like the school — but leave behind the residential customers. That would mean those households could see higher rates to cover the costs of providing electricity, they said.

Noatak, for example, at about 55 cents per kilowatt hour is one of the rural communities with the highest

electric costs. Although some rural areas pay less, overall the region pays more than 40 cents per kilowatt hour compared with Anchorage's 9.5 to 9.8 cents a kilowatt hour, according to ARECA.

And Yould of the rural cooperative group urged the committee to consider, if it goes ahead with restructuring the industry, protecting all customers; leaving rural Alaska out of any restructuring plans; and conducting a third-party study on the pluses and minuses of restructuring the industry in Alaska.

Others endorsed the idea of a third-party review, including city-owned Municipal Light & Power, a main competitor to Chugach in Anchorage.

"ML&P is in favor of competition," said Donn Wonnell of ML&P. "What we're not in favor of is shooting into a

dark alley."

The committee, chaired by Sen. Bert Sharp, R-Fairbanks, and Rep. Norman Rokeberg, R-Anchorage, is to develop recommendations for the Legislature to consider next year on potential restructuring of the electric utility industry. The committee will have a third meeting in Fairbanks in mid-September, and a fourth in November at an undecided location.

Also on the committee are Sen. Robin Taylor, R-Wrangell; Sen. Al Adams, D-Kotzebue; Sen. Loren Leman, R-Anchorage; Rep. Alan Austerman, R-Kodiak; Rep. Fred Dyson, R-Eagle River; and Rep. John Davies, D-Fairbanks.

□ Reporter Helen Jung can be reached at hjung@adn.com.

MEMORANDUM

DATE: August 17, 1998
TO: Sam Cotten, Chairman
FROM: Bob Lohr, ^{BL}Executive Director
SUBJECT: Procurement Schedule for Possible Major Contract

You have asked what the procurement process would look like for a major procurement contract related to electric re-structuring. A formal Request for Proposals (RFP) would be required, as would advertising in the media and the Alaska Administrative Journal. Competing proposals that meet the minimum qualifications would be evaluated by a Proposal Evaluation Committee and the highest scoring proposal would be eligible for a contract to do the work.

From the time a professional services RFP drafted and ready to be distributed¹ until a signed contract would be in place, with the contractor ready to begin work, would require approximately 70 days. If a disappointed bidder elected to protest the bid process, that would add to the timetable. A typical procurement schedule is attached.

A contract could be put in place more quickly if the procurement was either exempt from the Procurement Act (expert witness in a litigated proceeding or government-to-government contract) or if it qualified as an emergency or sole source contract. This type of project would not qualify for any exception or exemption to the Procurement Act, to the best of my knowledge.

Please let me know if you have other questions.

¹ Normally the drafting of the RFP would occur after a public meeting in which the Commission would approve the obligation of the required funds.

**ESTIMATED TIMELINE FOR
COURT REPORTING RFP
AS OF 9/22/95**

<u>STEP</u>	<u>DAY</u>
Advertise in Alaska Administrative Journal	1
Advertise in Anchorage Daily News	1
Letters of Interest Mailed	1
RFP Available	8
Pre-Proposal Conference (if applicable)	16
Mail Out Question Responses	21
Deadline for Submitting Proposals	31
Opening of Proposals (21 days after beg. of ad) *	32
Evaluation Process	32-45
Notice of Intent to Award	48
Grievance Period	49-59
Contract Negotiation	60-66
Execute Contract	67-69
Approval of Contract by Contractor	70-73
Approval of Contract by Department	65-70
Contract Start Date	1/1/98

Competitive Electricity Prices: An Update¹

by
J. Alan Beamon

Throughout the country, States are moving to make their electricity generation markets more competitive. Although the timing will surely vary, most States plan to implement significant changes in the pricing of electricity between now and the first few years of the 21st century. By estimating competitive generation prices based on marginal costs, this paper illustrates that the range of generation prices across the regions of the country can be expected to narrow with competition. However, it also shows that substantial differences in total electricity prices among regions will remain, because of differences in resource availability, the costs of nongeneration (transmission and distribution) services, climate, and taxes.

Background

Historically, electricity prices in the United States have not been set by market forces. Consumers' electricity supply choices have been limited to the utilities franchised to serve their areas. Similarly, electricity suppliers have not been free to pursue customers outside their designated service territories. Utilities have built generation, transmission, and distribution capacity only to serve the needs of the customers in their service territories, and the price of electricity has been set administratively, based on the average cost of producing and delivering power to customers.

The regulatory structure of the U.S. electric power industry evolved from the belief that the supply of electricity was a natural monopoly, and that one supplier could provide services at the lowest cost. For a variety of reasons, both economic and technological, that view has changed. Today, the relationship between consumers and suppliers of electricity is poised for change.² Most States plan to implement significant changes in the procurement and pricing of electricity between now and the first few years of the 21st century. Thus, in the near future, some of the services currently provided by local utilities will be available from other suppliers.

The electricity business is made up of three major functional service components or sectors: generation, transmission, and distribution. The generation sector is the production arm of the business—the power plants where electricity is produced. The transmission sector can be thought of as the interstate highway system of the

business—the large, high-voltage power lines that deliver electricity from power plants to local areas. The distribution sector can be thought of as the local delivery system—the relatively low-voltage power lines that bring power to homes and businesses. While it is expected that most consumers will continue to purchase distribution services from their local utilities and buy transmission services from a centralized pool, generation services are expected to be available from many sources.

For the most part, the prices for transmission and distribution services are expected to continue to be set administratively on the basis of the average cost of service. Some alternative approaches for pricing transmission services are being considered. In contrast, competitive market forces will set generation prices. Buyers and sellers of power will work together, through power pools or one-on-one negotiations, to set the price of electricity. As in all competitive markets, the supplier in the market³ who has the highest costs will determine the price at any level of demand. During most time periods, the generation price of electricity will be set by the operating costs of the most expensive (in terms of operating costs) generating unit needed to meet demand, or what in economics is referred to as the "marginal cost" of production. When consumers' demand for electricity rises (for example, on a hot summer day), the generation price will rise as units with higher operating costs are brought on line. Conversely, on cool spring weekends when air conditioning is not needed and many businesses are closed, prices will be relatively low.

¹This paper updates the work prepared in *Electricity Prices in a Competitive Environment: Marginal Cost Pricing of Generation Services and Financial Status of Electric Utilities*, DOE/EIA-0614 (Washington, DC, August 1997). This paper is based on work prepared for the *Annual Energy Outlook 1998*, DOE/EIA-0383(98) (Washington, DC, December 1997).

²For a discussion of the changing structure of the electricity industry, see L.S. Hyman, *America's Electric Utilities: Past, Present and Future* (Arlington, VA: Public Utilities Reports, Inc., 1994), and Energy Information Administration, *The Changing Structure of the Electric Power Industry: An Update*, DOE/EIA-0562(96) (Washington, DC, December 1996).

³A supplier who is in the market is one who is able to find customers at the prices it is offering. During a low demand period there could be many suppliers who are unable to sell any output and, therefore, will have no impact on the price.

The movement toward competitive pricing of generation has several implications. Generation prices are likely to become more volatile, changing as consumers' needs move up and down across seasons and from hour to hour during the day. For example, as the temperature rises on a hot summer day, the use of air conditioning will increase, and the price of electricity will rise as plants with higher operating costs are used to meet demand. Competitive prices based on marginal costs will also be more sensitive to any factors that affect the operating costs of the marginal generators. For example, if the cost of fuel to marginal generators rises unexpectedly, the impact on prices will be readily apparent. With traditional cost-of-service pricing, these impacts are muted, because the costs for all plants are averaged together.

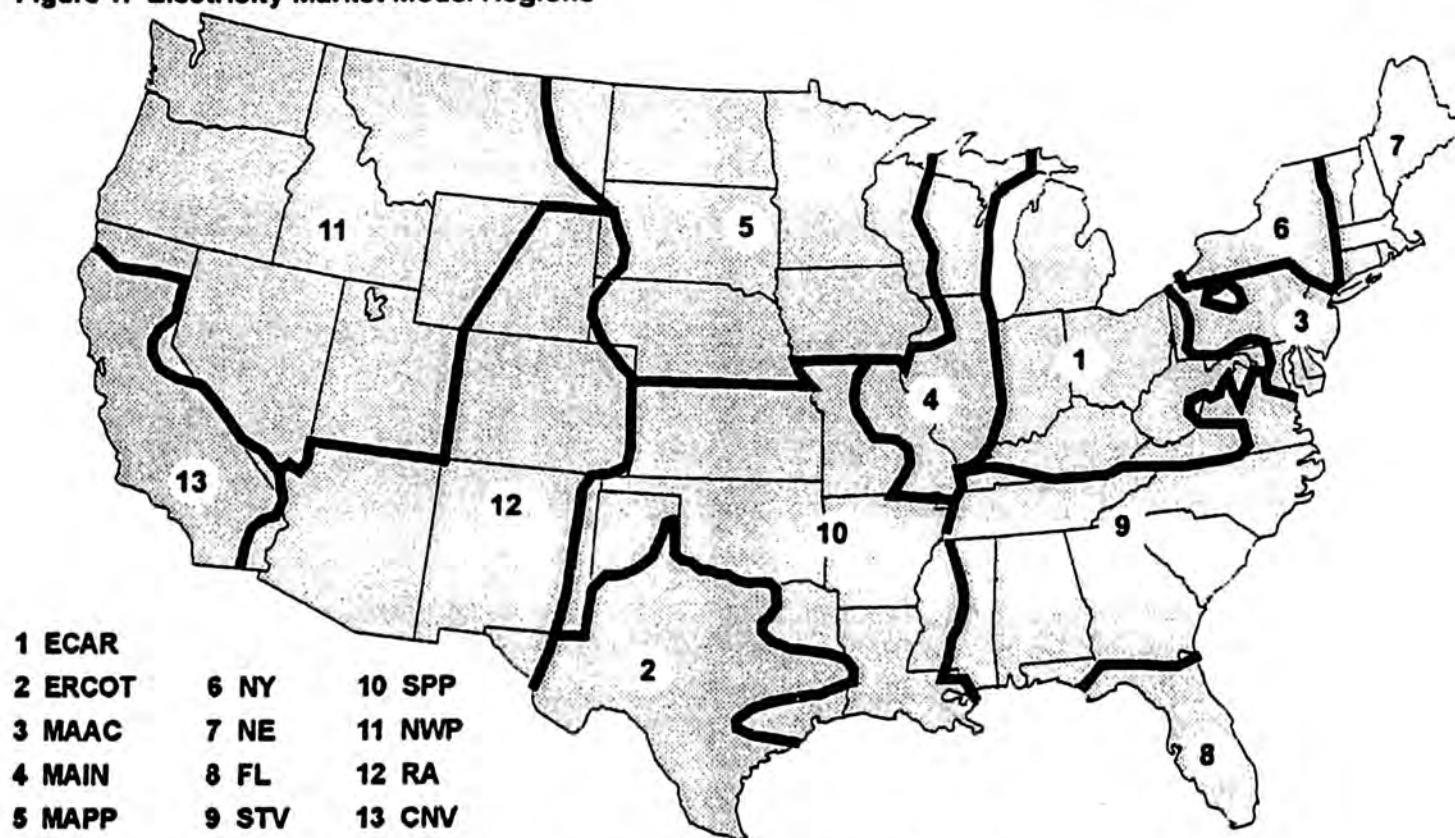
Both of the above characteristics of competitive prices were illustrated by national-level model results in the *Annual Energy Outlook 1998 (AEO98)*.⁴ This report illustrates a third impact of the move to competitive generation pricing—the narrowing of the range of prices across regions of the country. Concentrating on the period 2005 to 2020 (after competition has been phased in), electricity prices are presented regionally for the generation component, the combined transmission and distribution component, and generation sector taxes.

Methodology

To simulate the transition to competitive electricity generation prices, prices based on average costs (cost-of-service pricing) and on marginal costs (competitive pricing) were calculated for each of 13 U.S. electricity supply regions (Figure 1) for the period 1998 through 2008.⁵ An average price for each of the transition years was estimated using a weighted average of the two prices. Initially, in 1998, a 0.90 weight was given to the cost-of-service price, and a 0.10 weight was given to the competitive price. The weights were shifted over time, so that by 2008 the competitive price received a 1.0 weight and the cost-of-service price was no longer used. Transmission and distribution system prices were calculated from average costs throughout the projection period.

The gradual shift toward the competitive generation price was meant to reflect the path being taken by the States. Some States, such as California, are allowing consumers to choose their electricity suppliers (generators) as early as 1998. However, they are also allowing utilities to recover the costs of investments that were made to serve these customers over a certain number of years. Thus, the impacts of unfettered competition in the generation market will not be seen for a few years. In addition, even if consumers are free to choose their suppliers

Figure 1. Electricity Market Model Regions



Source: Energy Information Administration, Office of Integrated Analysis and Forecasting.

⁴See Energy Information Administration, *Annual Energy Outlook 1998*, DOE/EIA-0383(98) (Washington, DC, December 1997), "Electricity Pricing in a Competitive Environment," pp. 20-23.

⁵The Electricity Market Model (EMM) submodule of the National Energy Modeling System (NEMS) represents the supply and demand for electricity in 13 regions based on the regions and selected subregions of the North American Electric Reliability Council (NERC).

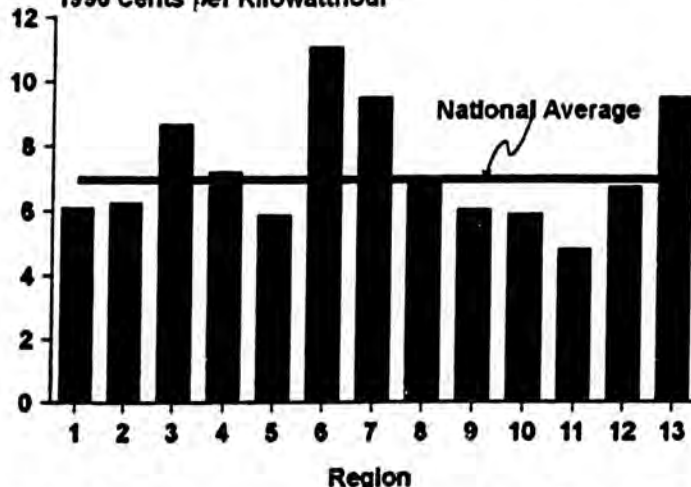
in the next few years, it could take several more years for the new market institutions needed to support competition to evolve fully.

Regional Competitive Electricity Prices

In today's market, average electricity prices vary substantially among different regions of the country (Figure 2). Prices in the highest cost region are nearly 2.3 times (230 percent) the prices in the lowest cost region. Many factors—such as differences in regional fuel availability and prices, labor and construction costs, climate, taxes, and customer mix (residential, commercial, and industrial)—contribute to the differences. For example, access to economical hydroelectric power is a major factor in the relatively low electricity prices seen in the Northwest. Conversely, the lack of low-cost hydroelectric or coal-fired power plants in the New York and New England regions is one factor in their relatively high prices. Still, the range in regional electricity prices is considerably larger than that seen for other energy products. For example, excluding Alaska and Hawaii, average gasoline prices in November 1997 differed by only 39 percent across the States. Similarly, fuel oil prices (excluding taxes) differed by only 29 percent across the States in November 1997.⁶ Even when taxes are added, gasoline prices across the continental United States differ by only 54 percent.

In competitive markets, large regional price differences for a product would be expected to attract the attention of both suppliers and consumers. With the opportunity to make greater profits, low-cost suppliers would want to enter high-price markets. Similarly, consumers—especially those who use large quantities of the product—would move into regions with low prices and out

Figure 2. Regional Electricity Prices, 1996
1996 Cents per Kilowatt-hour



Source: AEO98 National Energy Modeling System, run BASECOMP.D101797A (October 1997).

⁶Energy Information Administration, *Petroleum Marketing Monthly*, DOE/EIA-0380(98/02) (Washington, DC, February 1998).

of regions with high prices. Over time, these forces would tend to narrow the price differences between regions. Absent large transportation and local market costs, which in this analysis are assumed not to be affected by competitive pressure, the "price gap" should be quite narrow in the long run.

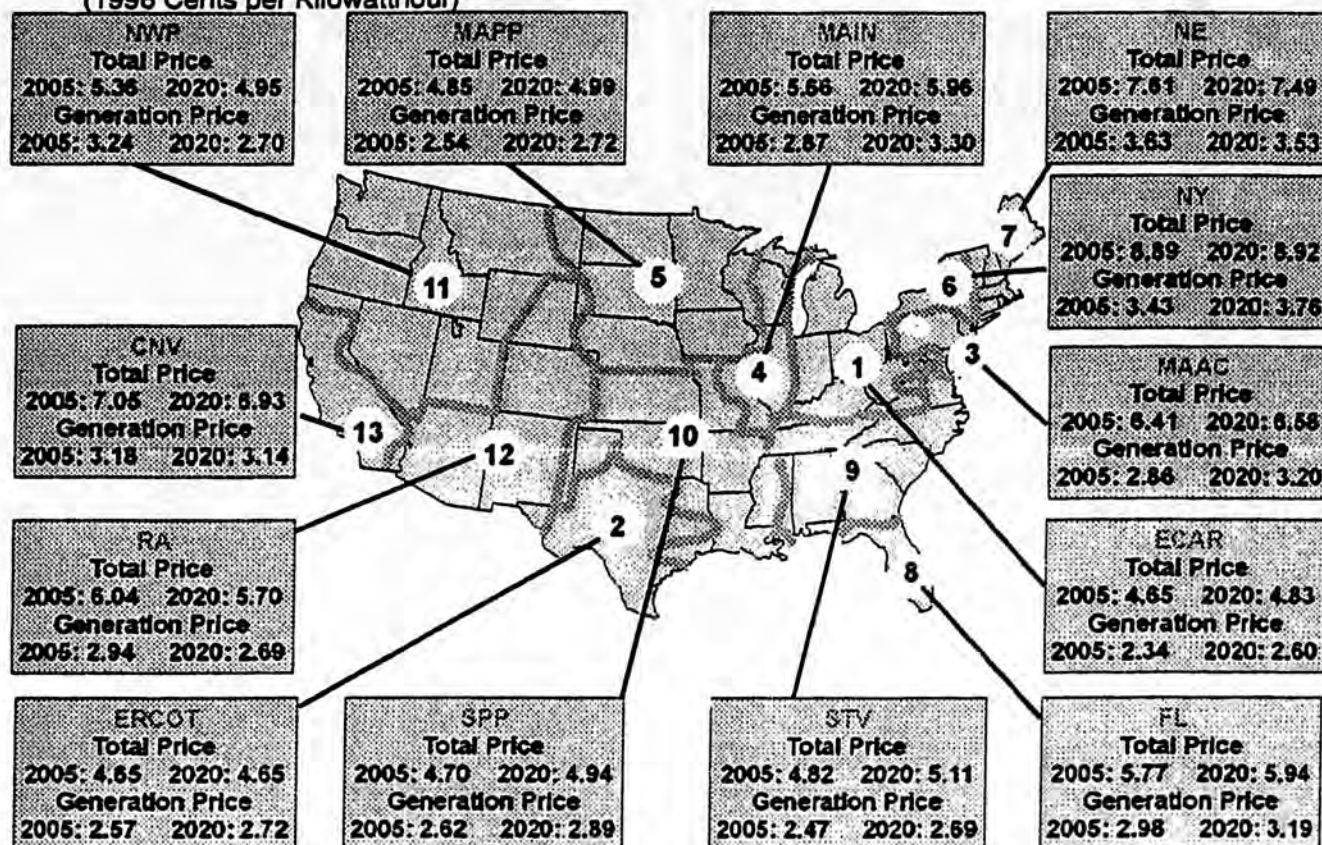
The market forces described above are expected to affect regional electricity prices, especially those for generation services, as competition takes hold. By 2005, the range in the total price of electricity across regions is expected to fall to 4.2 cents, much lower than the 6.3-cent range seen in 1996 (Figure 3). Excluding the New York and New England regions, which have very high non-generation sector prices, the range is much narrower, at just over 2 cents per kilowatt-hour by 2020. The nearly 100-percent regional price gap is still much larger than that seen for gasoline and fuel oil. However, as mentioned for New York and New England, the competitive generation sector is not the source of most of the remaining gap.

In 2005, the range in generation sector prices across the regions is expected to be less than 1.3 cents (Figure 3). By 2020, the range narrows even further to just over 1.1 cents. The variation in generation prices, especially in the early years, is due primarily to the different mix of plants in the regions. The plant types setting the marginal price, in descending order of operating costs, include: high operating cost oil/gas turbines (although many of these plants can burn either oil or natural gas, most use gas) designed to run infrequently; older, inefficient oil/gas steam plants; newer, more efficient oil/gas combined-cycle plants; and coal-fired plants with low fuel costs. As a result, the regions with the lowest generation prices are those dominated by low operating cost existing coal or hydroelectric plants.

In region 1 (ECAR), more than 85 percent of the total existing capacity is coal or nuclear powered. In regions like this, coal-fired plants will set the marginal price during many hours of the year, especially in the early years of the projections, before a large number of new plants are built (Figure 4). Conversely, regions that rely more heavily on older, less efficient oil and gas steam plants will tend to have the highest competitive generation prices. This is true in regions 6 and 7. New York and New England, both of which have large amounts of oil and gas steam capacity. It is possible that these plants may be retired soon after competition takes hold and, thus, that their impact on prices will be lessened.

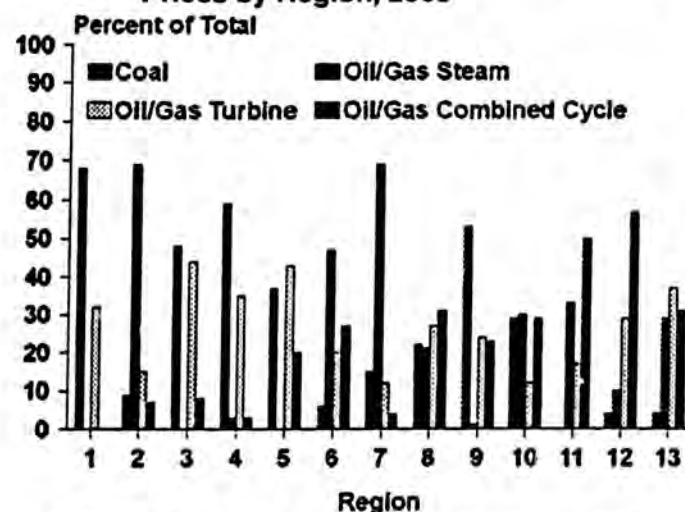
Over time, new gas-fired combustion turbine and combined-cycle plants are expected to dominate new power plant additions in all regions. Such relatively low-cost plants are expected to bring down generation costs in almost all regions, especially where they are relatively high today. As a result, existing plants will not play as

Figure 3. Total Electricity Prices and Generation Prices by Region, 2005 and 2020
(1996 Cents per Kilowatthour)



Source: AEO98 National Energy Modeling System, run BASECOMP.D101797A (October 1997).

Figure 4. Plant Types Setting Marginal Electricity Prices by Region, 2005

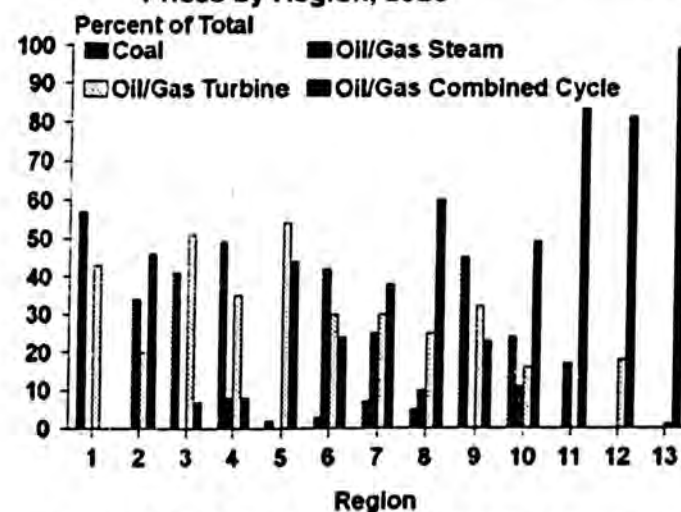


Source: AEO98 National Energy Modeling System, run BASECOMP.D101797A (October 1997).

important a role in setting the marginal price in 2020, and the range in generation sector prices across the regions will narrow further (Figure 5).

As discussed at the national level in AEO98, the competitive generation price will be sensitive to any factors that raise the operating costs of the generators setting the marginal price. For example, if natural gas prices turn

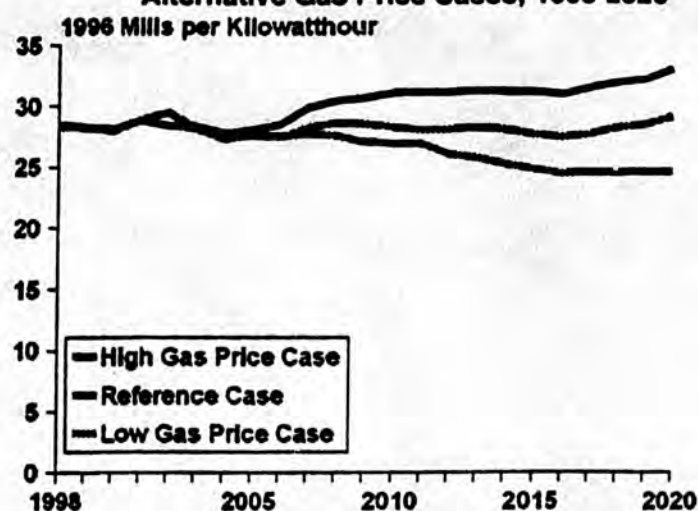
Figure 5. Plant Types Setting Marginal Electricity Prices by Region, 2020



Source: AEO98 National Energy Modeling System, run BASECOMP.D101797A (October 1997).

out to be higher or lower than expected, competitive generation prices will be directly affected. Figure 6 illustrates this point at the national level. When the price of gas delivered to generators is assumed to be 18 percent higher, the competitive generation price is projected to be 13 percent higher in 2020 than in the reference competitive case. Similarly, when the price of gas delivered to generators is 18 percent lower, the competitive

Figure 6. National Average Generation Prices in Alternative Gas Price Cases, 1998-2020



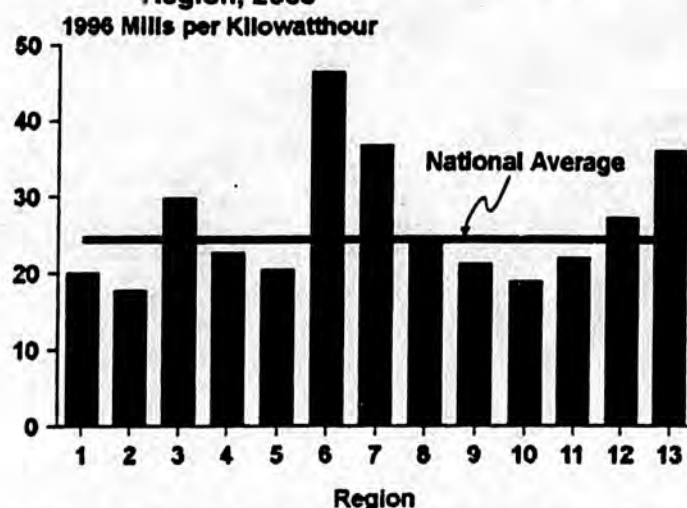
Source: AEO98 National Energy Modeling System, runs BASECOMP.D101797A, LOGCOMP.D101697A, and HOGCOMP.D101697A (October 1997).

generation price is 15 percent lower in 2020 than in the reference competitive case.

Generation sector prices account for 1.3 cents of the 4.2-cent range in regional prices remaining in 2005. Prices for transmission and distribution services (the vast majority of which are for distribution) account for a much larger share. Across the regions, the projected transmission and distribution prices in 2005 range from less than 2 cents per kilowatt-hour in the Texas (ERCOT) and SPP regions (regions 2 and 10), to nearly 5 cents per kilowatt-hour in the New York region (region 6) (Figure 7).

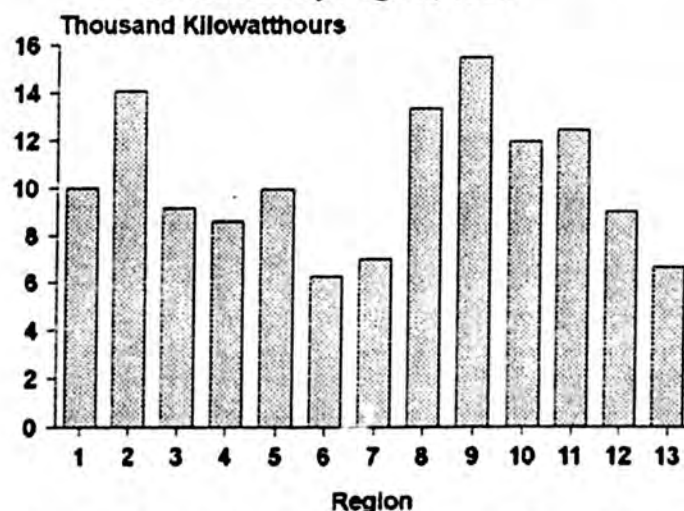
Many factors contribute to the range in transmission and distribution pricing, including regional construction and labor cost differences. One of the most important is the variance in average customer consumption across the regions (Figure 8). Because transmission and distribution system costs consist mainly of the capital costs for wire, poles, substations, and transformers, the per-kilowatt-hour cost is lower where the level of consumption per customer is higher. In other words, in the Southeast, where climate conditions cause customers to use a relatively large amount of electricity for air conditioning, the capital costs of the distribution system can be spread out over the high consumption base. In contrast, in New York, New England, and California, where cooling needs are less pronounced and alternative fuels are available for heating, average customer consumption is relatively low and per-kilowatt-hour transmission and distribution costs are higher, because they are recovered over a much smaller sales base.

Figure 7. Transmission and Distribution Costs by Region, 2005



Source: AEO98 National Energy Modeling System, run BASECOMP.D101797A (October 1997).

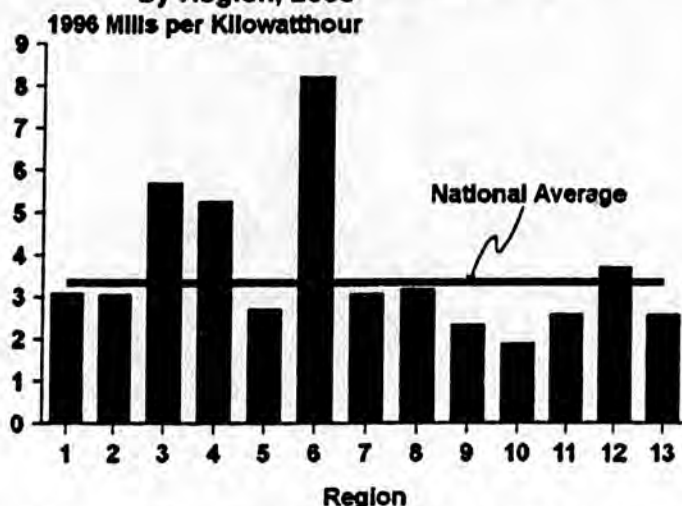
Figure 8. Average Electricity Sales to Residential Customers by Region, 1996



Source: Energy Information Administration, Form EIA-861, "Annual Electric Utility Report" (1996).

Another factor contributing to the remaining price gap among the regions after generation sector competition is phased in are different regional tax levels. As is the case for gasoline, all the States tax their electric utilities differently. In the generation sector, taxes typically add a few mills (tenths of a cent) per kilowatt-hour to the price. Across the regions, however, the level varies from 2 to 8 mills per kilowatt-hour (Figure 9).

Figure 9. Taxes on Electricity Generation by Region, 2005



Source: AEO98 National Energy Modeling System, run BASECOMP.D101797A (October 1997).

Comparisons with Earlier Results

The projected competitive electricity prices in this report are on average 0.5 cents per kilowatt-hour lower in 2005 and beyond than those presented in the August 1997 report.⁷ The reasons include assumptions of lower construction costs and lower operations and maintenance (O&M) costs, as well as improved historical calibration of general and administrative (G&A) expenses. These updates were made during the preparation for AEO98, upon which this analysis is based. The earlier report was based on the *Annual Energy Outlook 1997* (AEO97). With respect to the magnitude of the impacts, the adjustments to G&A expenses had the greatest impact.

Power plant construction costs were significantly lower in AEO98 than those assumed in AEO97. For example, in AEO97 new pulverized coal plants were expected to cost \$1,458 per kilowatt (1996 dollars) or approximately \$583 million for a typical 400-megawatt plant. In AEO98, the same plant was expected to cost only \$432 million, or 26 percent less. Similarly, a new 400-megawatt advanced combined-cycle plant was assumed to cost only \$229 million (\$572 per kilowatt) in AEO98, versus \$253 million in AEO97. The lower cost assumptions reflect the continuing efforts by designers and constructors to develop more economical standardized power plants so that they can remain competitive.

Plant O&M costs can be broken into nonfuel and fuel components. Nonfuel O&M costs include the labor and other services (lubricants, coolants, limestone, rents, etc.) needed to run a plant. Over the past 10 to 15 years, nonfuel O&M costs have declined significantly. Between 1981 and 1995, the nonfuel O&M costs per kilo-

watt-hour of generation at coal-fired plants have declined by 22 percent, or approximately 2 percent annually. Over the same period, the number of employees per megawatt of capacity has fallen by 20 percent. Although further declines are far from certain, analysis of recent data shows that, from plant to plant, the costs still vary significantly, and growing competition is expected to increase the pressure to reduce them. As a result, for both AEO97 and AEO98 it was assumed that nonfuel O&M costs would continue to decline, falling by an additional 25 percent over the next 10 years. The impact of this assumption was greater in AEO98, however, because nonfuel O&M costs were represented for specific plants rather than by plant type as in AEO97.

With respect to fuel costs, the projected average fossil fuel prices to power generators are 5 percent lower in 2005 in AEO98 than they were in AEO97. Lower prices for coal, which accounts for over half of the power generated in the United States, is the major reason. As shown in Figures 4 and 5, in some regions of the country, coal-fired plants are often the marginal plants running, especially in the early years of the projections. At the national level, coal prices to power generators in 2005 were assumed to be 11 percent lower in AEO98 than in AEO97. This difference is maintained throughout the projections. Between 1970 and 1996, average minemouth coal prices in real 1996 dollars declined by \$4.32 per ton, and they are expected to decline by an additional \$5.23 between 1996 and 2020. In AEO98 the assumed decline is more rapid, as the result of a reassessment of coal mining labor productivity and greater penetration of production from Western surface mines that are less expensive to operate. With respect to natural gas, the story is the opposite: projected prices are higher in AEO98 than in AEO97. Throughout the projection period, natural gas prices to power plants are between 10 and 20 percent higher in AEO98.

In the uniform system of accounts used by electric utilities, G&A expenses cover a wide array of cost categories, including employee pensions and benefits, administrative and general salaries, office supplies and expenses, outside services employed, miscellaneous general expenses, and various insurance categories. The majority of these costs are labor related, associated with employee salaries, pensions and benefits. In 1996, investor-owned utilities spent \$13.5 billion on G&A, or 12 percent of their total operating costs. G&A expenses are not reported at the plant level, however, and as a result it is not possible to determine the degree to which they reflect plant operating costs.

In competitive markets, a product supplier will be willing to sell the next unit of output at a price equal to the immediate cost of producing it—what in economics is referred to as the short-run marginal cost. Costs that do

⁷Energy Information Administration, *Electricity Prices in a Competitive Environment: Marginal Cost Pricing of Generation Services and Financial Status of Electric Utilities*, DOE/EIA-0614 (Washington, DC, August 1997).

not vary with output are not included in short-run marginal costs. For example, for fossil power plants the key component of short-run marginal costs is fuel costs. To get one more kilowatt-hour of electricity out, a certain amount of coal, gas, or oil has to be put in.

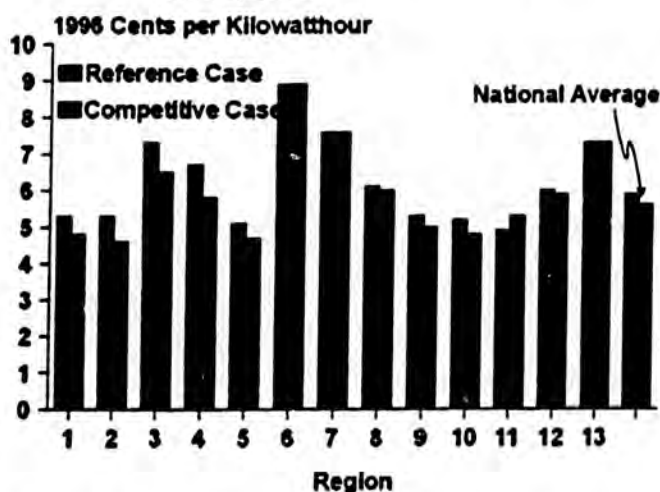
Labor costs for staff working at a plant whether or not it is running at full capacity are not included in short-run marginal costs, because they do not vary with output. However, to the extent that labor costs increase with output (for example, when staffing levels are increased to run a plant at a higher capacity factor), those costs are included in the cost of producing the next kilowatt-hour.

Unfortunately, because the historical data are not uniformly reported at the plant level, and because regulated operation may not be indicative of how a plant is operated in a competitive market, it is not possible to determine what portion of the G&A costs should be included as part of a supplier's bid price (the same is true for non-fuel O&M costs discussed previously). Modeling experiments were carried out with different portions included in competitive electricity prices. From the experiments it was determined that, unless the majority of the G&A costs were included, competitive generation prices would not be high enough to support the construction of new power plants that would be needed as demand grows. In the previous report, model runs were prepared assuming various levels of inclusion of these costs. In this report, as in the moderate response case of the previous report, all the G&A costs were included in marginal generation costs; however, more recent data were used here, and overall G&A costs were reduced significantly. Including these costs added about 0.2 to 0.3 cents per kilowatt-hour to the competitive price.

As in the previous report, competitive markets are expected to lead to lower prices relative to cost-of-service regulated prices in nearly all regions through 2010 (Figure 10). Only in the Northwest, where regulated prices are very low, are competitive prices expected to be higher by a small amount. The differences seen in Figure 10 should not be viewed as the total impact of competition. The reference case in this report is not a "no competition" case but includes the impacts of wholesale market competition that has been occurring for many years. The difference between the two cases shown in the figure should be seen as the impact of moving to competitive, marginal cost pricing of generation services to retail consumers. Also, regions 6, 7, and 13 were treated as fully competitive in the reference case, and they show only minute differences between the cases.

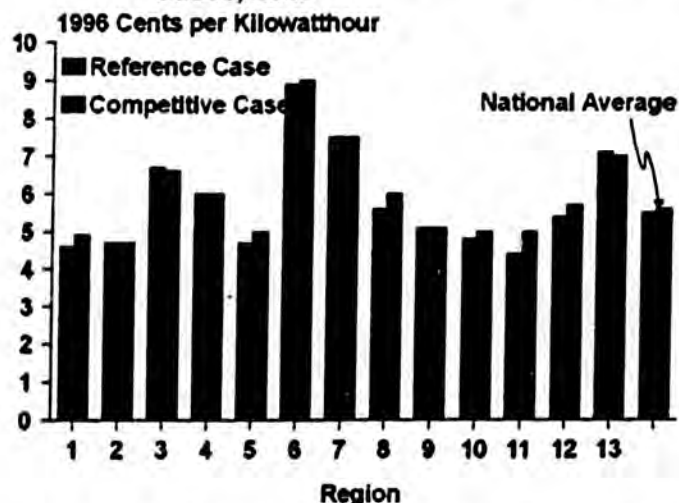
After 2010, the projected competitive prices begin to rise slowly, although in most regions they remain nearly equal to or below reference case prices through 2015. By 2020, several regions have competitive prices slightly above reference case levels (Figure 11). The key to these results is the expected future price of natural gas. These expectations are important because the majority of capacity built to meet growing demand over the next 20 years is expected to be fueled with natural gas. As a result, the impact of natural gas prices on competitive generation prices will grow over time. If natural gas prices turn out to be lower than expected in the AEO98 reference case, competitive generation prices could be lower than or equal to the projected regulated prices in all regions. However, the opposite is also true.

Figure 10. Total Electricity Prices by Region in the Reference and Competitive Generation Cases, 2010



Source: AEO98 National Energy Modeling System, runs BASECOMP.D101797A and AEO98B.D100197A (October 1997).

Figure 11. Total Electricity Prices by Region in the Reference and Competitive Generation Cases, 2020



Source: AEO98 National Energy Modeling System, runs BASECOMP.D101797A and AEO98B.D100197A (October 1997).

Other factors could also change these results. For example, fully competitive retail generation pricing could lead to greater efficiency improvements than were assumed for this analysis. Also, in the Northwest, some analysts expect that the costs associated with mitigating the impact of large hydroelectric facilities on fish populations will grow in the future. Such potential costs were not included in this analysis; if they were, they could narrow or eliminate the gap between regulated and competitive prices.

As another example, a large proportion of the power produced in the Northwest is produced at federally owned facilities. For this report it was assumed that those facilities would sell their power at competitive market-based rates, even if they were higher than regulated rates. On the other hand, regulators in the Northwest together with Federal authorities may choose an alternative approach, such as returning all or a portion of any windfall profits earned by low-cost public utilities to ratepayers.

Finally, this analysis did not assume any improvement in transmission and distribution service costs, which were assumed to be determined by a regulated cost-of-service methodology. Some State deregulation proposals do include alternatives to the cost-of-service pricing approach used historically for transmission and distribution pricing. Where such proposals are adopted,

utilities will have increased incentive to reduce transmission and distribution costs as well as generation costs.

Conclusion

Over the next 10 to 20 years, competitive pressures are expected to narrow the range in electricity prices currently seen across the country, especially prices for generation services. With competitive pricing in the generation sector, by 2005 the range of total electricity prices across regions is expected to decline from the 6.3-cent level seen in 1996 to 4.2 cents. Most of the remaining difference is expected to come from nongeneration sector (primarily transmission and distribution) costs.

Several factors could alter these results. Some cost factors may rise. For example, more resources may be needed to manage the network with a potentially much larger group of suppliers. It is also possible that competitive pressures will lead to greater cost reductions than expected. For example, new technologies may allow suppliers to produce—and customers to consume—electricity more efficiently. The results presented here rest on the assumptions used in preparing the AEO98 model projections. Further refinements and improvements can be expected as additional data become available from newly emerging competitive electricity markets.

DUPLICATE
PM



BLACK & VEATCH_{LLP}

8400 Ward Parkway, P.O. Box No. 8405, Kansas City, Missouri 64114, (913) 458-2000

Alaska Public Utilities Commission
Power Pooling / Central Dispatch Planning Study
Docket U-97-140

463-5415

B&V Project 31799
B&V File 14.0000
July 13, 1998

Alaska Public Utilities Commission
1016 W. 6th Avenue, Suite 400
Anchorage, Alaska 99501

Subject: Comments & Responses to the Interim Report

Dear: Mr. Paul Morrison

Enclosed are Black & Veatch's responses to utility comments regarding the Alaska Power Pooling / Central Dispatch Planning Study Interim Report of June 1998. The document reproduces the comments made by each utility followed by Black & Veatch's responses to each.

Black & Veatch would like to schedule a conference call after the utilities have had a chance to review our responses. We feel a conference call at this point would help finalize any remaining questions or issues regarding the Interim Report and modeling procedures.

Black & Veatch proposes to conduct the conference call on Monday, July 20th. Please give either Myron Rollins at 913-458-7432 or Theresa Jurotich at 913-458-2788 a call to let us know if this date is feasible.

Sincerely yours,

Theresa M. Jurotich

for Myron Rollins
Project Manager

Enclosure

Distribution: Service List for APUC Docket U-97-140

Paul Morrison (APUC)
Lee Thibert (Chugach)
Don Stead (HEA)
Tim McConnell (ML&P)

Mike Yerkes (AEG&T)
Marvin Riddle (GVEA)
Ray Morgan (MEA)

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The following outlines the comments received either verbally or in written format from each of the utilities. Black & Veatch's responses to each, follow the comment.

AEG&T:

- A1) Significant inconsistency in variable O&M rates between the various Utilities (AEG&T included) were noted. One would expect a difference for different generation types but the gas turbine variable rates vary considerably between the utilities even though some are of the same type and manufacture. Rates vary between \$1.79 (CEA) to \$3.00 (AEG&T). Although total O&M costs may be close, I have found that the utilities use some discretion in determining what portions of the O&M costs are fixed and variable. Since variable O&M (not total) will be modeled, it is important that the inconsistencies be eliminated otherwise the model will tend to favor operation of one machine over another based on fictitious costs. I suggest that all gas turbines (on N.G.) use the same variable O&M rate for the purposes of this study. I suggest using the medium value by ML&P of \$2.19/MWh (1996 see table 4-1).

Response: An approximate average value of \$2.00/MWh (1996) will be used and escalated as outlined in the report. This change will effect all units for ML&P and Chugach.

- A2) A similar problem exists with the gas turbine start up and run characteristics. There are some major and minor inconsistencies which should be evaluated and "normalized" for this study. One example is the "required minimum on and off line" item for CEA Beluga Units 3 and 5. The CEA 24 hour requirements (table C-2) are inconsistent with how CEA actually dispatched the units in 1996 and it is out of line with similar units (See ML&P unit 8 hours on table C-1). Such discretionary determinations by individual utilities will distort the outcome of this study. Other items such as start up fuel and costs should be comparable for similar machines for the purposes of this study.

Response: Minimum on and off line times were provided by each utility, however, to levelize discrepancies all simple cycle combustion turbines will have minimum on and off times of 1 hour and combined cycle combustion turbines will have a minimum on time of 2 hours and off time of 6 hours. As for start up fuel and start up costs the values seem to be within reason between Chugach and ML&P. Shut down costs at \$200 will be added for ML&P to make them consistent with Chugach and GVEA.

- A3) I note in Table 4-1 that the costs and ranking are based on fuel and O&M costs for 1996. I assume that this ranging will significantly change in future years as the fuel costs balance between ML&P and CEA changes in future years (table 3-3). Please advise if this is not the case.

Response: Table 4-1 was created solely for informational purposes. POWRPRO initially stacks units by the list at the beginning of the study, but immediately changes it based on unit availability, unit characteristics, and load. POWRPRO employs an extensive algorithm which continually modifies the commitment order to obtain the least cost commitment and dispatch.

- A4) Table 3-4 lists loss equations and coefficients for the major transmission lines. Have these assumptions been compared against actual to ascertain if the error is acceptable? AEG&T believes some discussion would be in order here.

Response: The loss equations and coefficients were provided by Chugach and GVEA. Black & Veatch does not have any way to effectively compare the loss values versus actual. In fact, it is probably unlikely that metering exists in a manner than could be used to measure actual losses.

Chugach:

- C1) From the description of the modeling program in the introduction of *Appendix K: POWRPRO Input Manual*, it is not apparent whether the model performs a single-area or multiple-area unit commitment. Chugach believes that utilizing a four-area model is a reasonable approach, given the future transmission and generation plans put forward by the Railbelt utilities. These areas would include:
- A. Anchorage Bowl (*Chugach, ML&P, MEA, Beluga Plant, Eklunta Hydro*)

B. Kenai Peninsula (*HEA, SES, Bradley Lake, Bernice Lake, Cooper Lake*)

C. Healy (*Healy Plant*)

D. Fairbanks (*GVEA*)

While the draft report does consider three transmission system areas as described in 3.1.4 *Transmission System Assumptions*, Chugach proposes that Healy should be modeled as a separate area due to the presence of generation resources and future transmission installations (northern intertie terminal). We believe the most accurate study results would be obtained by applying true multi-area unit commitment and dispatch in the model.

Response: Unfortunately, we do not have a manual for the multi-area aspect of POWRPRO. However, a brief description of how the multi-area version of POWRPRO will be added to the appendices. With respect to the number of areas modeled, Black & Veatch had already decided, upon further investigation, that creating a separate area around the Healy plant would be a more accurate representation of the Railbelt system. Therefore, Table 3-4 and Appendix A will be changed to reflect the addition of another area.

- C2) Recent studies have indicated significant possible benefits from the installation of a northern-area 40 MW battery energy storage system (BESS). GVEA's plans have considered the installation of a 40 MW BESS, but the draft report does not include such a facility in its planned resources.

Given that there are appreciable benefits possible in reduced spinning reserve requirements, reactive compensation and increased transfer capacity (for the northern intertie), and reduced unit commitment requirements, it seems that the study should include modeling of a northern-area BESS.

Response: In the original data request all utilities were asked to include expansion plans. The 40 MW BESS was not mentioned, therefore it is not discussed in the report and is not planned to be included in the modeling.

- C3) Projected fuel availability, utilization, and prices will be of critical importance in the study results. Depending upon projected fuel prices and the resulting system dispatch, some utilities may incur additional costs due to minimum annual fuel take

obligations under their respective contracts. In a pooling environment, what mechanism(s) would "level the playing field" in this regard?

Response: Black & Veatch feels that the fuel prices should be left as is, along as they are reasonable projections. Upon review of the prices and their components, Black & Veatch has found the commodity prices to be fairly consistent. The difference lies in the transportation component. (See response to H2). If a utility is stuck in a long-term contract which is not as favorable as another utility's then their assets are not going to dispatch first. It seems erroneous to artificially levelize fuel prices. However, if numerous contracts are expected to expire half-way through the study, then fuel prices for similar fuels, should be equalized from that point forward.

C4) Within a centralized dispatch/power pool environment, how would the potential market for spinning reserves be handled? In addition, how would reactive supply and voltage control services (from generation resources) be treated?

Response: Spin would be allocated to each of the four areas in multi-area POWRPRO similarly to their current allocation for the individual systems. Black & Veatch might need more specific information on the spinning reserves for each utility -- down to HEA and MEA and not just ML&P, Chugach, and GVEA to ensure that the right amount of spin is allocated in each area. POWRPRO does not model reactive supply or voltage control. Based on current information, projected spinning reserves for each area are:

Kenai = 13 MW

Anchorage = 73 MW

Healy = 3 MW

Fairbanks = 22 MW

Black & Veatch estimated these values based on current individual spinning requirements and allocated the spin to areas based on MW capacity in the 4 areas. For example, Chugach has approximately 436 MW in the Anchorage area and 192 MW in the Kenai area. If Chugach's total spin is 41 MW, then 28 MW goes towards the Anchorage area and 13 MW towards the Kenai area. However, the potential to reduce spinning reserves in an area may exist based on transmission capacity between the areas and units available.

C5) While the model does consider generation plant outages (planned and forced), it appears that the economic dispatch should consider anticipated transmission outages as well.

Response: The modeling of transmission line outages was not included in Black & Veatch's scope of services. The multi-area version of POWRPRO does not have an automatic algorithm for transmission outages. Normally, transmission line availability is very high and not including transmission outages is not expected to change the results of the study. If transmission outages are significant, Black & Veatch needs to have someone provide the outage data and then we can discuss how they should be modeled.

- C6) There is reason to believe that the Soldotna #1 combustion turbine will be converted to a co-generation facility on the Kenai Peninsula, within the study period.

Response: Although Black & Veatch realizes the potential for the conversion of Soldotna 1 to cogeneration, the conversion was not provided in any of the expansion plans provided by the Railbelt Utilities. In addition, Black & Veatch does not have the new unit characteristics and the dispatch schedule for the cogen facility. As such, Black & Veatch proposes to not include the conversion in the study.

- C7) Based on expected facility retirements and additions beyond 2016, Chugach questions the relevancy of the selected 20 year planning horizon. It would seem that a 25 to 30 year study period would capture events and end-effects beyond the 2016 horizon, which should definitely impact study results.

Response: The RFP and scope stipulate a 20 year planning horizon. Black & Veatch also feels that if extending the planning horizon past a 20 year horizon results in a significant change in the study results, it would be unlikely that utilities would implement changes based on benefits being achieved more than 20 years into the future.

- C8) Text does not include any discussion or description of ML&P's share of Bradley Lake Hydro plant.

Response: ML&P's share is mentioned in Section 2.7 and in Table 3-6. However, a brief discussion has been added in Section 2.2 and their energy take has been added to Appendix B, Table B-4.

C9a) Total percentage shares and associated capacity exceed total plant capability, as stated. Total percentage of shares totals to 101.1% and associated capacities total to 118.4 MW; exceeding the 117 MW stated in the text.

Response: The Bradley Lake Agreement does not spell out how large the unit is nor the percentage ownership of each utility. From RDI, the Winter capacity is 120 MW, the summer is 112 MW. I averaged these to get 117 MW and used the percentages reported by the utilities. Upon further review based on discussions with some of the Railbelt Utilities, the Bradley Lake energy will be increased to 120 MW. However, the percentages should be reviewed by each utility to ensure that the correct capacity is allocated to each.

C9b) Seward percentage share is not shown. Seward 1% share (1.2 MW) is not shown, and is not counted in Chugach's stated share of 30.4% (the text indicates Chugach's percentage includes SES, which is not accurate).

Response: Since SES's share was not provided, an assumption was made. The error will be corrected in the text. However, percentages for other utilities must be too high and review by each is appreciated.

C9c) Chugach's counts SES, MEA, and HEA capacity shares (Pg. 2-5, Para. 1). Text should include mention that Chugach's counts MEA, HEA, and SES shares towards its total system capability (capacity).

Response: Black & Veatch will change this in Section 5 for ML&P, Chugach, and GVEA. Chugach's system capability will also include the Bradley Lake capacity of MEA, HEA, and SES and the Eklutna Lake capacity of MEA.

C10) Chugach 1996 demand incorrect. 1996 demand shown as 407 MW. 1996 estimated peak in the data source submitted (1997 Power Requirements Study, Schedule 9-6) was 383 MW.

Response: Chugach provided an *estimated* peak demand for 1996. Their actual hourly load file for 1996, however, indicated an *actual* peak demand of 407 MW.

C11a) Chugach actual and projected net energy for load does not match data source provided: 1997 Power Requirements Study, Schedule 9-4, Mid-Case.

Response: Schedule 9-4 of Chugach's Power Requirement's Study has a footnote which indicates that HEA's Bradley Lake energy is not included in their Net Energy For Load (NEL). Black & Veatch calculated HEA's Bradley Lake share to be 43,920 MWh's and added that to Chugach's "Total Energy Required" column to arrive at the values shown in Table 3-2 of the interim report. The footnote in Table 3-2 indicating that *all* HEA, MEA, SES, and AEG&T loads were included in Chugach's NEL was meant to explain the difference for years 1997 through 2016. In Table 3-2, for 1996 only, Black & Veatch added in GVEA's non-firm purchases to the NEL of the 1996 actual hourly load file. Chugach's net energy for load was increased in 1996 to reflect their serving GVEA through a non-firm agreement. Upon further review, Black & Veatch will not include GVEA's non-firm energy in Chugach's NEL for 1996 in Table 3-2. However, for the POWRPRO runs, Chugach's NEL will be increased based on their 1997 Power Requirement's Study Schedule 9-7 which forecasts economy sales. Black & Veatch will assume that almost all economy sales are made to GVEA.

C11b) MEA energy in Table 3-2 off by factor of 1000 (is shown in GWh not MWh).

Response: A table provided by MEA had been mislabeled. The correction to Table 3-2 has been made.

C12) Existing Eklutna plant ratings. Should reflect current upgraded ratings of 22 MW per machine, or 38 MW combined operation.

Response: The increase in Eklutna ratings is discussed in Section 2.2. However, Black & Veatch will mention the upgrade again in Section 3.3.2. Based on comment M1, the combined operation will be 40 MW.

C13a) Full load base ratings for Chugach units appear to relate to mixed ambient temperatures. Beluga Units 3 through 6/8 & 7/8 full load heat rates are taken at 30°F, where Beluga Units 1 & 2, Bernice Units, and International Units are taken at 0°F. *Note: this does not affect the dispatch order; the order is the same for all machines at 30°F.*

Response: Black & Veatch calculated the full load average heat rate based on winter full load values and the quadratic fuel burn equation provided by Chugach. A note to the table of quadratic equation coefficients states that the coefficients are derived from January 1990 data.

C13b) GVEA combustion turbine data (North Pole, Zehnder) show differing variable O&M costs for 'same type-same location' units. North Pole Units 1&2 show 1.46 MWh, and 3.20\$/MWh variable O&M costs, respectively. Similarly, Zehnder Units 1 & 2 show 2.06 and 3.15 \$/MWh, respectively. Is there an explanation for the disparity?

Response: At the direction of GVEA, Black & Veatch created those values based on GVEA's 1996 RUS Form 12f. Black & Veatch assumed maintenance expenses were variable O&M and Non-fuel operating expenses were fixed O&M. The report provides a plant maintenance expense on a \$/MWh basis. The variable O&M values stated above are from an attempt to allocate total variable cost to each unit. Upon further evaluation, Black & Veatch agrees that the variable O&M should be on a plant level basis since the CT units within each plant are identical and to reduce any extra error incurred by allocating VOM costs. The new VOM costs for the CT's at Zehnder will be 5.21 \$/MWh and for North Pole will be 4.66 \$/MWh.

C14) What is total system production cost differential in actual vs model? POWRPRO output shows significantly greater dispatch of intermediate/peak units (Beluga 1 & 2, IGT) than actual. This may be due to assuming full load heat rates values at 0°F (see above comment). Though total energy and fuel are relatively equal in comparison, what is the system cost differential between the model results and actual data?

Response: As mentioned in the response to C13a, the heat rate coefficients are from January 1990 and Black & Veatch assumed those readings were taken at approximately the same time. If Chugach knows that these heat rates were taken on different temperature days and can provide more consistent heat rates, those newer heat rates will be used in the study. Also, the units are being derated over the summer months yet the heat rate is based on the coefficients from January. Another reason the peaking units may be running too much in the POWRPRO model is that the model has perfect knowledge of the future loads and will dispatch as economically as possible. In actuality, the dispatcher

cannot really know what the load is going to be and may keep base loaded units running longer before utilizing peaking units.

C15) Chugach's planned LM6000PA in the Anchorage area will not be combined cycle mode upon installation. Current plans call for this unit to go to combined cycle operation in 2018.

Response: The confusion is caused by the table provided by Chugach which shows it as a CCCT even though it is initially installed as an SC. Appendix F and the text in Section 5 have been updated.

C16) Capacity through 2014 is shown and 604.8 MW. In 1996 Chugach's counted capacity was approximately 625 MW. For 1997 through 2016, current long range plans project capacities from 625 MW (1997) to 686 MW (2016). See *Projected Generation Resources*. This provided 146 MW capacity above system peak, plus reserve margin (30%), in 1996. Chugach projects its current plan will provide 4 MW above system peak + reserve margin in 2016, with no margin violations through the period.

Response: Please see response to C9c. The tables will also be updated in Section 5.

C17a) Tables B-1 through B-3: Summer and Winter Max. capacities are inconsistent with Matching Rating Handbook values. Many maximum capacity values in the tables are not consistent with those listed the Alaska Intertie 1994 Machine Rating Handbook. In addition, it is not clear what average summer and winter ambient temperatures are assumed for each utility or area. The report does not state what the related temperatures are, and what derating, if any, is applied for summer operation.

Response: For Chugach (Table B2), Black & Veatch used the numbers provided in file ceaeval2.txt which is the input file for their production cost model. The file lists max and min capacities for each unit and monthly deratings. Black & Veatch averaged the deratings for the summer months to estimate an average summer maximum capacity. Their file states that unit max and mins are at 0° F and deratings are based on the average monthly temperature. The summer maximum values are the derated values. ML&P (Table B1) did not provide a machine rating handbook. They provided minimum and

maximum operating levels in their document request via hand written notes (minimums), tables outlining MW output versus inlet temperature(maximum), and typical summer and winter day output (summer versus winter values). GVEA (Table B3) provided a copy of their machine rating handbook. Black & Veatch took the 60° F value as the summer max capacity and the -30° F value for the winter max. capacity.

C17b) Table B-2: Bernice Lake fuel prices inconsistent with Table 3-3. Bernice Lake fuel price of 2.16 \$/MBtu conflicts with 1996 price of 1.46 \$/MBtu shown in Table 3-3. The correct value (as submitted) is 1.46 \$/MBtu.

Response: The correct value was used in the POWRPRO model, however the value in Appendix B was misstated. Appendix B has been corrected.

C18a) ML&P's 1996 Bradley Lake energy production data not shown. ML&P's energy production data is not listed in the table.

Response: Black & Veatch added ML&P's Bradley Lake and Eklutna energy to Appendix B and Appendix C.

C18b) Bradley Lake variable O&M rates inconsistent. GVEA's Bradley Lake variable O&M rate of 0.35 \$/MWh is inconsistent with CEA/MEA/HEA rates of 2.10 \$/MWh.

Response: The \$2.10/MWh came from Chugach's file cea97.gaf. The variable O&M will be changed to \$2.10/MWh across the board.

C19) Appendix F, Table F-1: Planned Generation Additions: Chugach New Plant. Unit Type is SCCT (simple-cycle combustion turbine). Chugach's proposed new 40.5 MW C.T. will initially be simple cycle, to be converted to combined cycle in 2018, approximately. Fuel burn rates, times to start, and times to cool should be modified to reflect this.

Response: Appendix F has been updated.

C20) Appendix E: POWRPRO Output Files-Benchmark. Results do not agree with Table 4-3: POWRPRO's Benchmark of Chugach. Energy output, fuel usage, heat

rates, and capacity factors differ from those listed in Table 4-3. See *Comparison: Table 4-3 vs. Appendix E*.

Response: To our complete surprise, runs from April made it in Appendix E, instead of the runs from May. Black & Veatch apologizes and the correct POWRPRO output files will be in the next report. The values in Tables 4-2 through 4-4 are correct.

GVEA:

G1) Found section 4.0 confusing to follow.

Response: Black & Veatch's standard format for table referencing and placement is to place the table following the paragraph referencing the table. However, if the table must go to the next page due to size, the text continues uninterrupted so that large gaps are not left in the text. Therefore, the write-up for ML&P precedes the table of data for ML&P, and the same for Chugach and GVEA.

G2) SILOS not mentioned in spinning reserve discussion.

Response: The use of SILOS will be mentioned.

HEA:

H1) Table 3-3 Fuel Price Projections mis-labeled Bernice Lake as Units 1-4.

Response: Table 3-3 has been edited to read Units 2-4.

H2) Do the fuel price projections include transportation costs?

Response: For ML&P, the fuel price does include transportation. For Chugach, Beluga and Bernice prices do not separately include transportation as outlined in their contract with Marathon Oil. However, fuel prices for Soldotna, International, and for new plants do include a transportation component.

H3) In Section 2.7, Bradley Lake is listed as 117 MW instead of 120 MW. (Note that Bradley Lake usually does not run more than 90 MW) HEA does receive a total of 14.4 MW from Bradley Lake or 12 percent. Of the 120 MW capacity, 25 MW are allocated for spinning reserve. Each utility takes the same percentage of spin as capacity. Therefore, HEA has 3 MW of spin available from Bradley Lake. How was the spin treated?

Response: As explained in the response to comment C9a, an average capacity value was used. However, the 120 MW capacity will be used instead. With respect to spin, Bradley Lake spin was not taken out of the spinning reserve requirements for the utilities in POWRPRO. Since Bradley Lake energy is shaved before running POWRPRO, the spinning reserve requirements will be lowered in POWRPRO, except for ML&P who states that they use their gas turbines for spin instead of hydro. Also, since Bradley Lake generally does not utilize more than 90 MW of capability, the size of the unit will be reduced in the peak shaving while still shaving the same amount of energy. The text will be updated to reflect these assumptions.

H4) The scheduling agreement between Chugach, HEA, and AEG&T says that Chugach will use Soldotna 1 and HEA's share of Bradley Lake to serve any HEA load above the 73 MW (or 350,000 MWh) partial requirement outlined in the agreement. How was this modeled?

Response: We did not place any restrictions or requirements on Soldotna because HEA's peak demand did not reach 73 MW in 1996.

MEA:

M1) Eklutna is now rated at 22 MW for each unit, or 40 MW together.

Response: See response to C12. Also, different utilities have advised different capacities for the units combined. Please discuss and provide with an acceptable combined MW capacity.

M2) NEL in Table 3-2 is in the wrong units.

Response: The change has been made.

ML&P:

AM1) In Alaska gas turbines are partially loaded. This causes a big difference in efficiency because heat rates are different at full load versus partial load. Also, the gas turbines are used for spin as opposed to the hydro units because the storage reservoir is so far away. How does Black & Veatch propose to handle this situation?

Response: POWRPRO is a production costing model and will run units as economically as possible. POWRPRO does not have an automatic algorithm that forces individual units to maintain a percentage of their capacity for spinning. Instead, it optimally commits units to provide for the specified spinning capacity and then loads the units based on equal incremental cost and other specific unit constraints such as minimum load and ramp rate.

AM2) ML&P would like the hydro versus thermal scheduling clarified better. Hydro does have a lot of storage, but does not really run and should not be base loaded.

Response: Hydro capacity is modeled by using it in a peak shaving mode limited by its capacity and energy generated. See response to H3 for changes in the Interim Report.

Statement of
Dr. Peter Fox-Penner
before the
Joint Committee on Restructuring
Legislature of the State of Alaska
on behalf of the
Alaska Rural Electrical Cooperative Association
Anchorage, Alaska
August 18, 1998

Biographical note

Dr. Fox-Penner is an economist and utility policy expert and former Principal Deputy Assistant Secretary at the U.S. Department of Energy. He is a principal and Washington Office Director of *The Brattle Group*. He is the author of numerous articles and publications, including Electric Utility Restructuring: A Guide to the Competitive Era (Public Utility Reports, Vienna, VA, 1997)

Chairman Sharp, Chairman Rokeberg, and Distinguished Members of the Joint Committee:

It is an honor to appear here in the Alaska statehouse on behalf of the Alaska Rural Electrical Cooperative Association (ARECA). Two years ago I had the privilege of representing the U.S. Department of Energy here, and Alaska appears to me just as remarkable today as it did two years ago.

For the past twenty years, including my three years at the U.S. Department of Energy, I have spent most of my time involved in electric utility research or practice. During this period, I have seen competition in electric markets blossom from an idea on the bookshelves of my economics professors to the dominant policy prescription in the U.S. electric industry.

On balance, this is a positive development. Greater competition will do much to lower electric prices, bring new services to consumers, improve the use of natural resources, and other benefits. However, everywhere we introduce more competition into the electric industry we are learning that this effort is far more complicated, and its results less predictable, than we anticipated. It is extremely difficult to take an industry that has a complex, highly interdependent vertical and horizontal structure that functions well under price regulation and transition it to a de-integrated industry that functions well without it. Given the enormous state and regional differences in and around the industry, it is also not a surprise that we are also finding enormous resistance to a "one size fits all" electric competition policy. In any case, we probably lack the requisite knowledge to develop one even if the political obstacles could be overcome.

As an economic expert, I believe this means that *specific* policies towards the introduction of electric competition should be based on a careful consideration of the technical, institutional, economic, and public policy aspects of the area in which competition might be introduced. As I have not conducted such detailed studies for this state, my comments must be considered preliminary. In a sense, you might say my comments today are based on the fundamentals of the Alaska industry, which I do understand, and my widespread experience elsewhere.

Today I suggest to you that "the fundamentals" suggest that Alaska is not an appropriate place to pursue the model of electric restructuring the rest of the U.S. is moving towards for the time being. To explain this conclusion, let me first describe the most common elements of retail electric competition under development in the continental U.S. -- the "common" or "lower 48" model:

- First, the common model is predicated on a federally-regulated open-access grid. This requires extensive federal oversight, computerized posting of transmission capacity in real time, and other elements required by the Federal Energy Regulatory Commission's (FERC's) Order 888. Recently, this is giving way to a more extensive and complex set of open-access policies involving independent system operators (ISOs) and/or fully independent transmission companies, as well as regional reliability organizations likely to be partly self-regulated and partly FERC-regulated. This regulatory and institutional infrastructure is intended to enable fair and robust wholesale and retail competition.

- The second element of the common U.S. model is price deregulation of generation and choice of generation supply for retail customers, generally on a statewide basis. This creates a group of price-unregulated sellers and intermediaries, who buy and resell generation at negotiated prices.
- The third element is continued state regulation or customer ownership of distribution systems, with an extensive system of state regulations governing distribution rates, universal service, seller licensing, siting, environmental protection, energy efficiency, renewable energy, provider-of-last resort, stranded costs, and other state-jurisdictional aspects of electric service.

Incidentally, it is something of a misnomer to call this common model deregulation, as most aspects of the market remain regulated. But it is fair to call the generation portion price-deregulated, and this is the keystone of retail choice in the common model.

Absent further study, it is impossible to see how this model makes sense for all of Alaska right now. There are three main considerations that lead me to this preliminary conclusion.

First, Alaska has a relatively small, and certainly not a statewide, transmission system. As a matter of engineering economics, it is likely to be costly or impossible for more than one or two generators to compete now to serve many Alaska customers. If so, then during periods immediately following deregulation, customers will not enjoy the benefits of competition, but rather will be at the mercy of one or two sellers. Although the resulting high prices are sure to spur the entry of new competitors if there are no barriers to entry, this will take time. I would be surprised if this legislature would want to subject Alaska electric consumers to electric supplies at prices well above competitive levels, even for short periods of time.

Apart from the physical inability of multiple sellers to compete, Alaska will need to establish rules for intrastate open access and gain experience implementing these rules. This is not an easy or rapid task, but it is a precondition for effective and fair competition here just as it is in the rest of the nation. This is a particularly important task, even absent retail competition, as I understand that some generation suppliers provide all of the present supplies to several distribution utilities. With or without retail access, wholesale transmission access and pricing policies for "transmission-dependent" or single-supplier distributor utilities must be carefully established.

My second reason for finding the common model inapplicable has to do with the short-term tradeoffs between economic efficiency and other objectives attached to modern electricity supply. As CSHCR 34 eloquently states, electricity is viewed today as an essential service. The resolution suggests that affordable access to electricity is essential for the health, safety, and livelihood of virtually all Alaskans, and is an essential element of the state's economic infrastructure.

This is a universal observation by state legislatures, whether or not retail restructuring is underway in their state. In practical terms, this means that legislatures have directed those who implement retail choice to do so while still providing for universal service, affordable access by all customer classes, public benefits such as energy efficiency and renewable energy, environmental protection, and other considerations outside the realm of narrow economic efficiency.

In other states, providing these "public goods" is proving to require considerable ongoing regulation, new market institutions, and administrative costs. While I do not question whether the benefits exceed the costs, and strongly support public benefits, I believe that providing similar benefits for Alaskans will be particularly difficult, and will impose proportionately greater burdens on those who would implement and supervise a retail market here.

Permit me give an example. Under retail choice, it is necessary to provide a "supplier of last resort" who will continue to sell power to customers who fail to choose any supplier whatsoever at the onset of competition. Last-resort providers may also be necessary to provide for the needs of low-income or delinquent customers, who cannot live without power even if they are having trouble paying their bill.

With a statewide electric grid, the loads of all these customers can be aggregated and provided by one or more state-sanctioned sellers. In Alaska, with many remote independent systems, a last-resort supplier would have to be created for each community, perhaps using the generation in place today. It will require considerable effort and oversight to create and regulate last-resort providers in the roughly 175 separate communities in the state with isolated electric systems.

Many of the public or consumer protection benefits are likely to follow this pattern in Alaska. Determining and providing for stranded cost recovery, market power monitoring or transitional mitigation, consumer education, supplier licensing, and the suite of so-called "public benefit" programs will pose significant challenges in this enormous state. I do not mean to suggest that Alaska is not up to this task, merely that it will require a level of effort and perhaps political division even larger than already-large efforts common in the lower 48.

This leads to the third reason why the lower-48 model may not be appropriate for your state. Presently, Alaska as a whole benefits from the fact that its electric system is predominantly integrated, customer-owned, and lightly regulated. While competition will undoubtedly lower some of the costs of electric supply, it will increase other costs, at least initially, in order to establish workable competition in many parts of the state. Regulatory oversight will increase, additional transmission and distribution lines will probably be necessary, taxes may increase, and so on.

In summary, the lower-48 state model is not well-suited to Alaska, and should not be adopted without a careful examination of the likely costs and benefits of implementing this model in an economically and politically acceptable manner. It is possible that Alaska may be the exception that proves the rule, i.e. that competition is beneficial in most but not all electricity markets.

While I cannot endorse the common model for retail competition at present, I emphasize that there are probably many important but different ways the state of Alaska can harness the mighty engine of competition to improve electricity service and lower costs right now. Without the benefit of detailed study, I urge you to consider policies such as the following:

First, ensure that competitive bidding and outsourcing is used to the maximum extent possible when new power plants are built and operated. As the committee undoubtedly understands, retail competition forces prices down when consumers shop for the lowest delivered price of power. But retail customers aren't the only buyers who can use competition to this effect. Those who buy and operate new powerplants should use competitive bidding to get the lowest-cost power from these

plants whenever it is feasible and cost-effective.

Similarly, I think the state should experiment aggressively with distributed generation(DG) technologies, including the enactment of policies that allow it to gain a strong foothold. This is one area in which your state can create a model of electric competition different than, and in some ways ahead of, the lower 48. DG technologies may be cost-effective in remote parts of Alaska long before they are cost-effective in the rest of the U.S. Unlike power plant competition, DG requires a much smaller transmission infrastructure, so it is inherently suited to Alaska. Also, natural gas is inexpensive in the main distribution areas, and where fuel oil is the only source highly efficient DG technologies are proportionately more valuable.

Finally, I hope the committee will recognize that some infrastructure-enhancing policies which may not sound glamorous or even pro-competitive may provide for better, cheaper, and more competitive electric supplies down the road. I understand that the state is studying a power pool, and if such a pool is revealed to be economic it should be pursued. Increased access to natural gas and increased transmission interconnection, where reasonable in cost, should help Alaska's energy future regardless of the specific timetable for retail electric choice. Similarly, research, development, and demonstration of energy efficiency and DG technologies suited to this unique state may provide the biggest payoff of all.

In closing, I urge the committee not to bind itself to a complex and probably inappropriate, or at least premature, approach to competition in Alaska's electric industry. I endorse greater study of the subject, particularly a full analysis of the expected costs and benefits when appropriate public aspects of the industry are factored into an implementation scheme. I do not oppose a retail choice pilot in the railbelt, although I caution that any such pilot should be carefully structured and evaluated, and is no substitute for a thorough analysis of retail choice throughout the state. Finally, I urge the committee to look to other means of promoting competition and lowering the costs of electric supply in Alaska, including increased experimentation with distributed generation.

Thank you very much for allowing me to appear before this distinguished committee.

Alaska Electric Utility Restructuring

Joint Committee on Electric Utility Restructuring

Alaska State Legislature

HCR No. 34



Donn T. Wonnell, *Counsel for*
Municipal Light & Power
Municipality of Anchorage
August 18, 1998

Alaska Electric Utility Restructuring

- The Need for a Sequential Transition

A Recommended Legislative Course



The Need for a Sequential Framework

1. Realization of consumer benefits

Identifying and effecting economies

Establishing sustainable markets

Ensuring nondiscrimination

Ensuring universal service

Availability

Reliability



The Need for a Sequential Team

2. The Avoidance of Serious Harm

Unique Alaskan conditions

No margin for error

No intertie to lower-48

No significant independent generation

No shareholders

and implications..."



The Need for a Sequential Framework

3. Absence of building blocks

No study of State economic impact

Incomplete power pooling study

APUC U-97-140

Absence of wholesale competition

Unaddressed operations issues

"lock-up" contract barriers

Unrealized potential of benefits



Recommended Course

1. Establish parameters

Specify guiding principles

Mandate a sequential approach

Study Economic Impacts

Stage 1: Power Pooling

Stage 2: Wholesale Competition

Stage 3: Retail Competition

milestones, control pace

regulation



Recommended Course

2. Instruct and empower the APUC

Consolidation of proceedings

Sequential inquiries

Reports to Legislature

Budgetary support

Public Commission participation



Alaska Electric Utility Restructuring

Joint Committee on Electric Utility Restructuring
Alaska State Legislature
HCR No. 34



Donn T. Wonnell, *Counsel for*
Municipal Light & Power
Municipality of Anchorage
August 18, 1998

**Remarks of Donn T. Wonnell
Counsel for Municipal Light & Power
Municipality of Anchorage**

**Before the
Joint Committee on Electric Utility Restructuring
Alaska State Legislature
(HCR No. 34)**

August 18, 1998

Introduction

- ML&P previously testified in the Committee's hearings held on August 6, 1998.¹ In that presentation, ML&P addressed five significant issues affecting electric restructuring in this state:
 1. **Basic Principles:** A statement of underlying requirements which any restructuring activity should take into account;
 2. **Industry Restructuring Outside:** An outline highlighting the most significant aspects and assumptions attending the evolution of electric industry restructuring in the lower-48;
 3. **Alaska is Different:** An analysis comparing certain conditions and factors in Alaska to those in the lower-48;
 4. **Additional Problems:** A discussion of three of the many additional matters implicated by electric restructuring; and
 5. **Recommendations:** A listing of specific issues and directions which the Committee and the Legislature may wish to consider.

In the current hearings, ML&P wishes to build upon those comments by focusing on two considerations central to the Committee's further deliberations in this matter:

- A. **The Need for a Sequential Transition:** A discussion of the reasons necessitating a transition from existing market structures toward competitive ones in verifiable stages; and
- B. **A Recommended Legislative Course:** A consideration of the actions which the Committee can recommend to the Legislature for adoption in the coming session.

ML&P respectfully offers these observations in an effort to provide the Committee with useful guidance as it seeks to deal effectively and successfully with electric restructuring issues on behalf of consumers throughout the State.

¹ A copy of the written presentation and accompanying graphics may be obtained from Ms. Lori K. Kell, Public Information Officer, Municipal Light & Power, 1200 East 1st Avenue, Anchorage, AK 99501-1685 (907/263-5277).

A. The Need for a Sequential Transition.

- As ML&P previously noted, the scope of electric restructuring issues is extremely broad. The Legislature in its Resolution creating and defining the work of this Committee took particular note that "...electric utility restructuring is a highly complex issue, carrying with it profound implications for all classes of electrical consumers..."
- Such a highly complex issue should be addressed in defined segments, lest the implementation of an overly broad and untested policy both (i) fail to meet consumer needs and expectations and (ii) result in unintended consequences of potentially critical magnitude. Among the considerations underscoring this need for a reasoned, sequential approach are those described in the following paragraphs.

1. Realization of consumers benefits. Consumers benefit when the availability of goods and services increases and the price of goods and services decreases. Competition, properly structured, can be one way of achieving these goals. But so can regulatory and utility identification of economic efficiencies available but not yet realized in the existing industry structure. The APUC power pooling study already in progress exemplifies this point. This study is a logical first step likely to produce measurable gains for consumers in terms of economic dispatch and coordinated generation planning. Competitive markets may derive from this initial step, but are not required to ascertain and to secure the consumer benefits available from enhanced pooling arrangements.

ML&P reaffirms its view that competition in any market (generation, wholesale, or retail) is warranted only where sustainable and where it produces demonstrable benefits to consumers, and not merely to various of the market participants. Windfall benefits obtained by one consumer group at the expense of another constitute demonstrable detriments, rather than benefits. This is especially true where imbalances creating the windfall also result in price increases for some consumers (who may be unable to afford service) or in degradation in the availability or quality of service offered to particular customer classes or locales.

2. The avoidance of serious harm. The unique conditions attending the generation and delivery of electric energy in Alaska bear serious contemplation. The total railbelt market consumption of electric energy is less than the output of a single standard, economically optimal generation plant in the lower-48. Virtually all such generation in Alaska comes from consumer-owned entities which are regulated utilities. Further, the existing arrangements and facilities for interties between the utility systems, while a significant improvement over the past, are inherently limited in the context of proposed competitive markets and associated energy wheeling.

Equally significant, the railbelt system is wholly isolated from the lower-48 network. Unlike the Alaskan telecommunications, airline, and trucking industries, the Alaska electric industry cannot participate in the lower-48 marketplace. On one level, this limits the availability of market participants and, therefore, the plausibility of competitive mechanisms operating in this State. More profoundly, this isolation means that Alaska is on its own. Policies which are misdirected or which miscarry cannot be remedied by recourse to lower-48 generation sources or power exchange markets. The margin for error in public policy is therefore reduced substantially.

3. The absence of market building blocks. Competition in the lower-48 did not spring full-blown from a single legislative enactment. It evolved in a series of stages that interleaved technological, economic, and regulatory changes. This evolutionary process permitted policy-makers the

opportunity to observe causes and effects over time, thereby permitting mid-course corrections as the emerging empirical evidence warranted.

Alaska is at the very inception of that process. No comprehensive study of the role of electricity in the State economy and the possible effects of changes in the existing market upon this economy exists. The APUC has commenced the initial study of railbelt pooling and the potential for consumer benefit associated with limited changes (as noted above). But that study is not due to be completed until Fall, and additional time thereafter will be required to review and debate the findings thereof.

Most critically, local retail competition (where it is being attempted elsewhere) invariably rests on the foundation of wholesale wheeling competition. There is no wholesale competition in Alaska, nor any of the competitive market mechanisms in place by which to initiate such competition. Current wholesale power sales in the State are characterized by bilateral contracts, generally long term, between two regulated utility entities. The structural elements elsewhere found necessary to create functioning wholesale markets – defined principles of “comparable access,” independent system operators, real-time information systems, power exchanges or other “spot” market mechanisms, codes of conduct – do not exist here. Without evaluation and definition first, the implementation of local retail competition would amount to a blind gamble, presenting a considerable risk to consumer welfare.

- In sum, the Committee has ample reason to conclude that electric restructuring in Alaska requires further consideration, in a logical and sequential way. Neither the Legislature nor the APUC is writing on a blank slate. The Municipality of Anchorage and the cooperatively owned electric utility associations have invested substantial sums in the existing facilities and systems. The economies of each service territory, and the State as a whole, depend upon those facilities and systems. To move from existing conditions, which demonstrably serve consumer interest and the public convenience and necessity, to a new and untested market structure requires a calculated transition. Utilizing a transitional approach will minimize the chance that in seeking new benefits through change, policy makers will inadvertently lose existing consumer benefits without adequate offsets.

B. A Recommended Legislative Course.

To minimize that possibility, ML&P respectfully suggests the Committee consider and recommend to the Legislature a course built upon two plans of action: (i) establishment of policy parameters and (ii) direction to the APUC. The former reflects the Legislature's historical role of setting out broad guidelines governing agency conduct. Unlike the extensive micromanagement of the California Legislature reflected in AB 1890, the Legislature will better serve consumers by establishing the fundamental rules that will move the State responsibly toward restructuring. The latter action both instructs and empowers the APUC to conduct the more particularized fact-finding and analysis which is absolutely essential to securing consumer benefit with minimum consumer risk.

1. Establish policy parameters.

- **Specify guiding principles.** The Legislature should adopt the basic principles which will guide the inquiry into and pursuit of electric market restructuring. ML&P has previously recommended four such principles:

Competitive markets should be developed and competitive principles applied wherever sustainable and wherever the public interest is demonstrably and equitably served thereby.

Change must be synonymous with improvement.

Change must not result in discrimination.

Alaskan issues require Alaskan solutions.

Explication and adoption of such principles provides the basic guidance affecting the participation and conduct of all parties in this process. Without a clear assertion of such principles, subsequent process may dissolve in confusion or, worse, result in determinations which fall short of public needs and legislative intentions.

- **Mandate a sequential approach.** The Committee is keenly aware that not all participants in this process want to begin at the beginning. In order not merely to keep track of, but to keep a hold over the evolution of this critical industry, a clear expression of legislative direction in this matter is essential. The Legislature should direct a staged roll-out for the pursuit of restructuring, proceeding in the following order:

Study economic impacts from statewide, regional, and local perspectives.

Stage 1: Evaluate and implement as warranted power pooling in the railbelt.

Stage 2: Evaluate and implement as warranted wholesale wheeling competition.

Stage 3: Evaluate and implement as warranted local retail wheeling competition.

At each stage, a thorough examination of the issues, alternatives, costs and benefits should be undertaken. If change is warranted, the changes should be implemented in a controlled fashion. The result of such changes should be carefully studied, both for corrective action associated with the implementation and to determine whether an appropriate basis exists for moving to the next stage. If such a basis exists, then the cycle should be repeated for that next stage.

- **Set milestones and control the pace of restructuring.** There is little empirical experience with competition at any level within the lower-48. As recent press reports verify, the competitive experience at both the wholesale and the retail level has been less than an undiluted success. Power shortages and severe cost spikes have already appeared in the lower-48 wholesale market. Several companies have become insolvent; others have lost substantial sums of money. In California, major and minor competitors have done less well than anticipated. Some have abandoned the market. Indeed, a movement to reverse the legislatively created competitive local market has surfaced there.

The unique characteristics of the Alaskan market, identified above, suggest that Alaska cannot sustain a back-and-fill approach to restructuring. The Legislature can avoid the mistakes of the lower-48 by establishing milestones, in terms of both dates and events, to maintain control over the evolution of restructuring. Changes should be undertaken where warranted by facts and analysis, rather than slogans and speculation. By so controlling the pace of restructuring, the

Legislature may minimize the risk that it will have to undo things later, assuming they can be undone at all.

- **Reserve Judgment.** ML&P believes the Legislature will serve consumers best by rendering a verdict after the factual evidence is in. Until it has secured a sufficient understanding of the potential causes and effects of the various proposals now urged upon it, the Legislature would be acting blindly on hope, rather than with foresight based on fact.

2. Instruct and empower the APUC. The Legislature should direct the APUC to find the facts, evaluate alternatives, and implement courses consistent with the Legislature's directions. This direction could include periodic Commission reports to the Legislature concerning milestone achievements or proposed new initiatives to be undertaken. That agency has the historical role and the expertise necessary to carry out each indicated transitional stage in an effective manner. The Legislature should also consider the agency's needs for resources and legal authority, when and as demonstrated by the Commission. More particularly, the Legislature could direct the following actions:

- **Consolidate existing proceedings concerning restructuring into a comprehensive docket.** This would promote efficiency and conservation of agency resources, as well as those of the participants. It would also promote the likelihood of consistent and comprehensive findings.
- **Require the full participation of all Commissioners in the proceedings.** The subject here is sufficiently important to warrant a review and decision by the full panel of the Commission. Use of administrative hearing officers or three-Commissioner panels to explore particular subject areas would be appropriate as circumstances warrant. But each stage should be pursued under the aegis of, and final determinations should be made by, the full Commission.
- **Proceed sequentially, utilizing both the guidelines and sequential stages established by the Legislature.** A sequential transition, discussed above, will permit orderly administrative processes. It will also ensure maximum control by the Legislature, as desired, over the evolution of restructuring in the State.
- **Render periodic reports to the Legislature.** Commission reports to the Legislature serve not only to inform, but as well to signal stages in the transitional process. The Legislature need not bind itself to act on any given report, but at least would have the opportunity and the information to timely do so.

In conclusion, ML&P notes again that electricity affects health, education, and the economy in Alaska 24 hours a day, 365 days a year. Safety, reliability and availability are critical issues, easily impacted by the law of unintended consequences. Alaskans currently enjoy safe, reliable, and available power and have not yet experienced the market-created shortages that have already begun to dot the lower-48 marketplace. By pursuing the course recommended here, for the reasons discussed here and in ML&P's previous testimony, the Legislature can best ensure that Alaskan consumers will have the opportunity to secure new benefits without sacrificing the existing ones.



ELECTRIC UTILITY INDUSTRY RESTRUCTURING IN ALASKA

DISCUSSION PAPER #1

OVERVIEW AND ISSUES TO CONSIDER



**Alaska Rural Electric Cooperative Association
ARECA**

**703 W. Tudor Rd. #200
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August 18, 1998**



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RESTRUCTURING – THE NATIONAL VIEW

Understanding the terms of the discussion

The terms restructuring and deregulation are generally being used to describe organizational and regulatory changes that make it possible for power suppliers and energy service providers to compete for retail customers. This new structure would replace the current system of regulated monopolies, where one utility is provided both the right and obligation to serve all of the consumers in a particular area.

A key element of restructuring is the "unbundling" within and among utilities of the three primary activities necessary to provide electric service - generation, transmission, and distribution. Transmission and distribution utilities would become "common carriers" over which the end-user can purchase from a power supplier, who might be a generator of electricity or a power marketer that buys and sells electricity. Instead of one bill reflecting "bundled" service as now provided by their local utility, consumers would receive one or more bills detailing the costs involved from the different entities involved in providing electric service.

In the discussion occurring nationally, the term "deregulation" is a misnomer. The sale of energy from generation is the only major segment of the industry really being targeted for rate deregulation and retail competition. Transmission and distribution functions are expected to remain regulated monopolies for the foreseeable future, in order to prevent reliability problems. "Deregulation" may actually increase regulation. New regulations are being developed to specify the rules to allow access across transmission and distribution systems for delivery of the energy sold from the generation function. Despite the move toward retail competition, there will still be a need for regulation of the generation function to assure adequate supply planning and protect consumers from vagaries of the marketplace.

Hence, it is clear that the discussion is not about creating free market competition. Few would argue that a "free market" approach would provide the necessary protections to assure that consumers will be able to obtain the basic necessity of electricity at reasonable price and reliability. Rather, the discussion is about whether regulatory structures to promote limited competition within a highly regulated industry would benefit consumers.

The current system was designed for efficiency

In the right circumstances, a competitive marketplace can increase the efficiency of competitors and decrease costs to consumers. However, the existing regulatory structure for the industry was created because competition wasn't accomplishing this goal. Competition had created chaos and unnecessarily high costs. Duplication of facilities to deliver electricity to consumers was inefficient. Larger generators were more efficient, producing lower cost per unit of electricity sold. To prevent costly duplication and take advantage of economies of scale, it was deemed beneficial to the consumer to have one entity serve an area and regulate that entity to ensure consumers received a fair price.

Competition has been a part of this system as well, primarily in the wholesale generation market, where power producers vie to sell electricity to distribution utilities. While discussing whether it is time to resurrect the competitive marketplace for retail customers, it should be noted that the existing system has worked well. It has helped, not hindered, the industry from pursuing and incorporating advances in generation technology and other efficiency improvements. The real (inflation-adjusted) cost of electricity to consumers in Alaska has followed the national downward trend. In fact, we should be proud of the continuing efficiency efforts of Alaska's utilities. According to the National Rural Electric Cooperative Association (NRECA), cooperatives serving rural Alaska decreased residential rates (in real terms) by



40 percent when comparing 1996 rates to 1980 rates, while the electricity rates in the U.S. as a whole decreased just 14 percent.

Financing efficiency improvements has been made easier by the guaranteed revenue stream of exclusive service territories. It has helped Alaska's utilities convince lenders to provide money for improvements; this has been especially important in areas where the economic feasibility of providing electricity is questionable.

So, the discussion is not how to fix a system that is broken; it is rather about whether changing the structure of the industry will further decrease costs and improve service to consumers.

Industry developments provided new competition potential

Development of a nationwide interconnected transmission grid, decreasing costs of new generation, and the separation of functions for the nation's utilities have created the potential that proponents see for effective retail competition in the Lower 48 states.

Transmission

High voltage transmission lines are used to move bulk electricity from a generating plant to a substation where the voltage is stepped down for distribution to and use by consumers. The total miles of AC transmission line (of 230 Kilovolts and higher rating) in the U.S. nearly doubled between 1970 and 1990 and is more than five times greater than in 1960.

The transmission grid is a key factor in the equation of creating an effective marketplace. It allows the means by which multiple competing power suppliers can deliver energy. In reality, energy cannot be effectively "shipped" from one end of the country to another. The loss of electricity in transit would be too expensive. In a simple view, the transmission system is a continuously energized loop into which energy is fed to maintain proper voltage as electricity is drawn out and used at different places.

Most consumers in the U.S. are connected into one of three regional areas of interconnection, one in the eastern half of the country (from the edge of Colorado east), one in the western half, and Texas. Most of the approximately 14,000 generating units that produce the 3.1 trillion kilowatt-hours of electricity used by U.S. consumers each year feed energy into these grids.

Generation

While the transmission grid may help create a competitive marketplace, the savings predicted by those promoting retail competition are expected to come primarily from increasing efficiency in the generation sector of the industry, which now accounts for about two-thirds of the total cost of delivering electricity to consumers. Seventy-two percent of the 745,000 megawatts of generation capacity in the U.S. is owned by the approximately 220 investor-owned utilities. It is thought that encouraging competition among these profit-motivated companies will result both in the efficient use of the most cost-effective generation on the grid and the development of low-cost new generation that will displace older, more expensive, generation. The trend in the Lower 48 states is towards greater use of natural gas turbines for electricity production; natural gas is already the main fuel used for electricity production in the interconnected Railbelt region of Alaska.

Some analysts are predicting that advances in small-scale dispersed generation technologies may, in the future, reduce reliance on transmission systems to deliver cost-effective power to some areas.



Industry Structure

The current discussion of "restructuring" the industry would continue a process that has been underway in the Lower 48 states for some time. Nearly two-thirds of the utilities in the U.S. have no generating capacity; they are distribution utilities only, purchasing power from wholesale suppliers. These wholesale suppliers have usually been utilities that sell their unused excess power, generation and transmission utilities specifically established for that purpose, or independent power producers who only produce power.

The government is fostering competition

The U.S. government has been taking steps to foster competition among power producers and provide incentives for more efficient generation. There have been two major actions by Congress:

PURPA

After a period of rate increases in the 1970's, Congress acted in 1978 to foster generation competition by passing the Public Utilities Regulatory Policy Act (PURPA), which promoted independent power production. The perceived success of independent power generation is one factor contributing to the momentum toward greater competition in the industry.

EPAct

The Energy Policy Act of 1992 (EPAct) expanded wholesale competition, and resulted in orders by the Federal Energy Regulatory Commission (FERC) establishing rules that have opened access to transmission lines for sale of wholesale energy.

Restructuring Legislation

Congress has been considering a number of bills related to electric utility industry restructuring. These initiatives will not be detailed in this paper. Most, however, recognize the value of continuing to allow states to decide the regulatory framework that works best in their areas for meeting the needs of retail consumers. Most of these plans, while pushing retail competition, allow states and non-regulated utilities to choose whether or not to participate in restructuring for retail competition. Regardless of the choice states will make, it is important to be analyzing the options now.

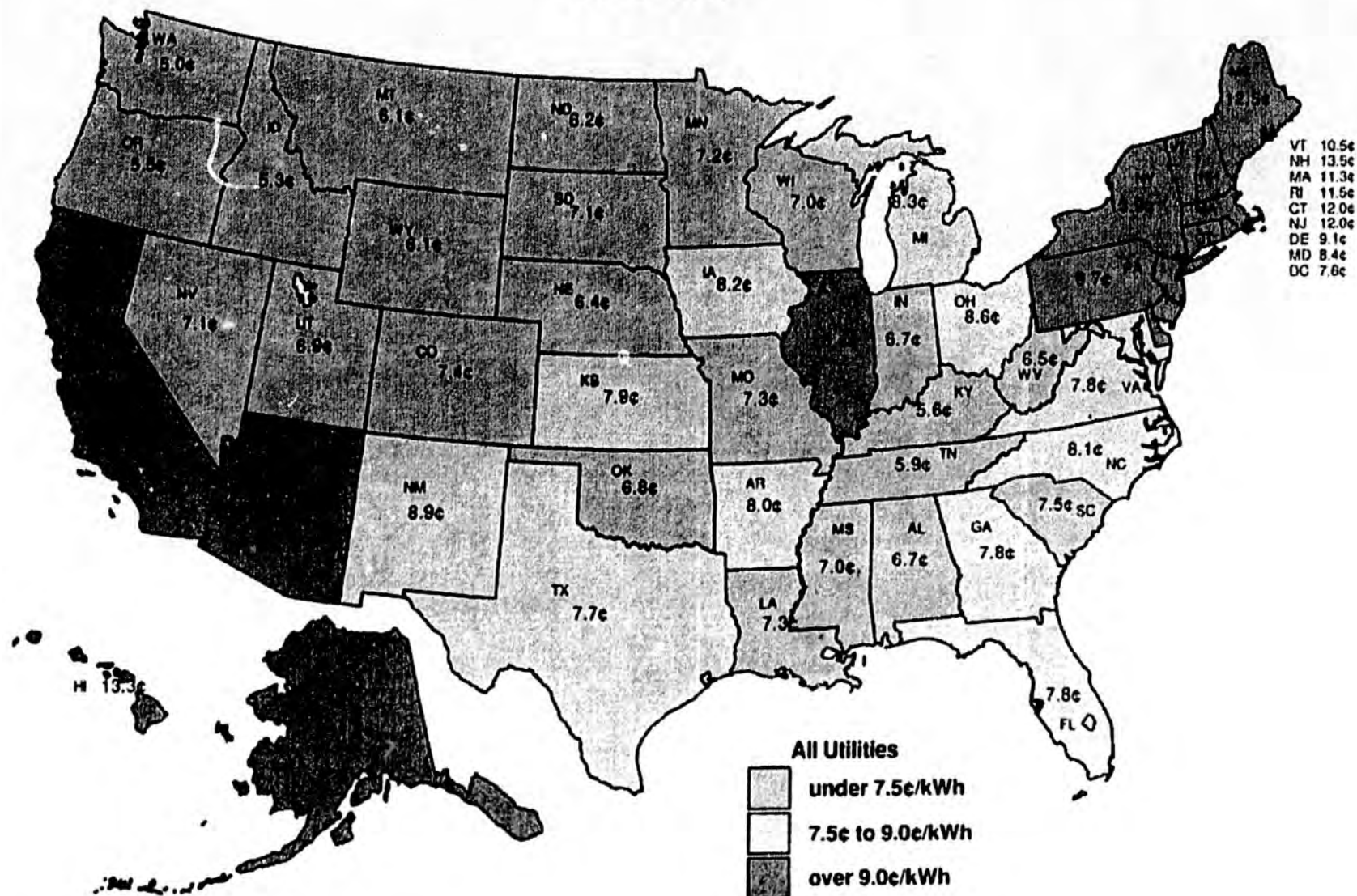
Proponents predict savings

Proponents of restructuring argue that retail competition will create huge savings. Consumers purchased \$212 billion in electricity nationwide in 1996. The Department of Energy (DOE) estimates about a 10 percent drop in rates with the Clinton Administration's restructuring plan. DOE claims retail competition will save consumers at least \$20 billion a year on their electric bills, pegging the direct savings for a family of four at \$104 per year. It calculates potential government savings at \$2 billion per year.

It is important to recognize that restructuring may result in cost-shifting among classes of consumers (residential, commercial, industrial) even if it does offer cost-savings. This cost-shifting may also occur regionally.

A major push for restructuring has come from those with the most to gain. Large power users in areas with high electricity rates want to be able to shop for cheaper power produced elsewhere. The map on the next page shows a comparison of average rates across the country. The states with the highest rates generally correspond to those that have moved quickly to pursue retail competition. Decision-

Residential Rates cents per kWh



67% of co-ops have higher rates than IOUs they compete with.
Co-ops do not typically provide service in relatively high rate states, eg Calif. and New England.
Source: 1995 EIA data



makers in some of the states with lower rates fear increased rates as competition results in sale of their low-cost energy elsewhere. While rates in Alaska, when averaged together, put us among the higher rate states, the lack of interconnection eliminates the opportunity for tapping the lower-cost power in other states.

Ancillary benefits sought with competition

While cost reduction is the primary goal of retail competition, restructuring may open the door for a burst of activity in development of ancillary energy services for electricity consumers. Restructuring may eliminate the need for some regulatory hurdles that have restricted development of such services. The hurdles have come from the need to be sure that consumers are not charged in the rate base for unnecessary services. Competition and the removal of regulatory restrictions may result in a growth of new energy management and other services that consumers may choose to purchase to assist them in managing their energy use.

States are exploring retail competition

Most states in the country have begun exploring the issue of retail competition, and some have moved to implement restructuring, usually after years of developing a plan. As of July, 1998:

- 14 states have enacted restructuring legislation: California (9/96); Illinois (11/97); Maine (5/97); Massachusetts (11/97); Montana (5/97); Nevada (7/97); New Hampshire (5/96); Oklahoma (4/97); Pennsylvania (12/96); Rhode Island (8/96); Connecticut, Virginia and West Virginia (4/98) and Arizona (5/98).
- 6 state public utility commissions have issued comprehensive restructuring orders: Arizona; Maryland; Michigan; New Jersey; New York; and Vermont.
- 26 states, including Alaska, have active legislative and/or regulatory processes underway to study restructuring and propose implementing legislation.
- 5 states, including the District of Columbia, have undertaken little preliminary activity to date.

While the basic principles of unbundling the industry functions and allowing choice of energy supplier are similar in the restructuring efforts, many of the details differ. There are important differences in who is required to participate and who is allowed to opt out of retail competition. Pilot projects generally have involved a small percentage of consumers. While some have reported success, there is strong disagreement among analysts as to whether the pilot projects provide an accurate picture of how true competition would work and whether the savings reported are real. There are also reports of significant consumer confusion.

RESTRUCTURING IN ALASKA

Deciding whether restructuring the electric utility industry for retail competition in Alaska would be good for consumers will be a complex task. The issue is very simple, are the benefits worth the costs? However, identifying the real benefits and costs of restructuring will not be easy. A decision grounded in reality rather than ideology will require a detailed analysis that has not yet been done.

Given the national debate and pending federal legislation, it is good that Alaska is addressing the issue of electric utility industry restructuring. Due in part to our isolation from the Lower 48 system, we may have a greater ability to design changes that meet our particular needs. The goal for public policy-makers should identify the best overall regulatory structure that allows industry to function efficiently in the effort to provide lower-cost reliable service to Alaska consumers as a whole. Restructuring for retail competition is only one option, and like other options that have been proposed, such as power pooling of generation resources, should be studied carefully. It is especially important to consider unique aspects of Alaska's electricity delivery systems as we assess restructuring costs and benefits.

Alaska's systems are different

When looking at the issue of restructuring, it is important to keep in mind that Alaska has distinct differences relative to the economic and technical models being discussed nationally in the restructuring debate. These special features include small market size, lack of interconnection, and consumer and public ownership of infrastructure.

Small Market Size(s)

The size of the potential markets in Alaska is very small, relative to the markets being discussed in the restructuring debate. Alaska, in fact, must be seen as having many distinct markets, due to the lack of interconnection. A key question here is whether the market(s) is(are) large enough that introducing competition would result in lower cost, reliable service. Will these markets draw - not just some - but enough competition to effect the goals of transitioning to a competitive structure?

The following statistics highlight the small size of the Alaska market(s), and the need to assess market potential. Numbers are rounded, not exact. While Alaska is not separated out from the U.S. total, most of the total listed is on the interconnected grid in the Lower 48.

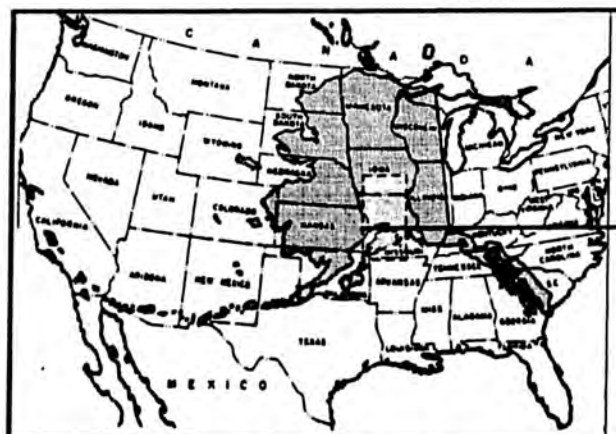
Item	U.S.	Alaska
Miles of transmission line	>119,000 (230 kv and above)	1,800 (most less than 230 kv)
# of consumers	118 million	250,000
Generation Capacity	776,000 MW	2,700 MW

Lack of Interconnection

Alaska's transmission systems are not interconnected with other states, and most of the communities in the state are not interconnected with each other. This exacerbates the problem of small market size; in some communities the market may be 100 consumers or less. The risk is great for these communities that market forces alone may not result in continued universal affordable service.

The Interconnected Area - Railbelt Generation and Transmission

Most of Alaska's consumers live in the interconnected area of the state, and receive electric service through the transmission system generally referred to as the Railbelt grid. This grid is limited due to the lack of multiple lines. Except for transmission lines that bring power from individual hydro-electric projects to isolated communities in other areas, the Railbelt has almost all of the transmission line in the state. The map below shows the relatively small distance this covers, compared to the transmission lines that span the country coast to coast.



Alaska's Railbelt Area

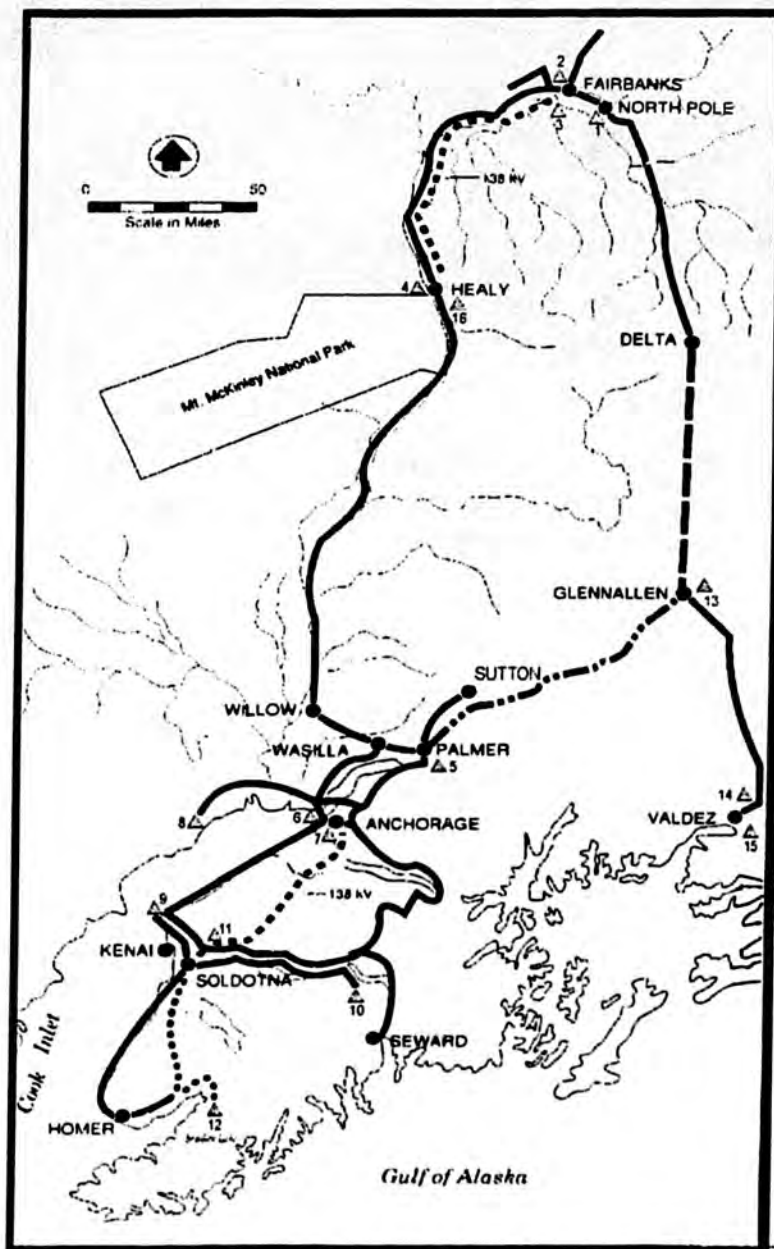
There are 15 non-military generating plants that are now linked to and capable of providing power to this grid. These plants are owned by three cooperatives, two municipalities and the State of Alaska. The existing generation capacity is expected to be sufficient for many years to come. The load is now about 700 MW and there is about 1300 MW of capacity.

While the rest of the nation is converting to more efficient natural gas, in Alaska's major populated area, the industry has long been reliant on what is considered an emerging major fuel source elsewhere. More than 60 percent of the electricity used in Alaska is produced using natural gas, compared to nine percent nationwide.

Rates among Railbelt utilities are similar:

	Residential ¢/KWH	All Class ¢/KWH
<u>U.S. Average</u>	8.4	7.6
<u>Alaska*</u>	11.2	10.1
CEA	9.5	8.4
ML&P	9.8	8.3
GVEA	9.8	8.8
Rural	>40	

* Chugach Electric Association (CEA); Anchorage Municipal Light and Power (ML&P); Golden Valley Electric Association (GVEA).



Railbelt Generation and Transmission Systems

- Community
- △ Generation Station
- 2 Generation Station Identification Number
- Existing Transmission Lines
- Bradley Lake Transmission Lines
- Proposed Northern & Southern Transmission Lines
- .-.- Proposed Sutton/Glennallen Intertie
- Proposed Glennallen to Delta Intertie

1. Oil Fired Generation -- 121.8 mW -- Golden Valley Electric Association -- North Pole
2. Oil Fired Generation -- 40.6 mW -- Usibelli Coal Mine Inc. -- Fairbanks
3. Coal Fired Generation -- 28.6 mW -- Golden Valley Electric Association -- Fairbanks
4. Oil Fired Generation -- 51 mW -- Golden Valley Electric Association -- Fairbanks
5. Coal Fired Generation -- 25 mW -- Golden Valley Electric Association -- Healy
6. Hydroelectric Generation -- 30 mW -- Jointly owned by MEA, ML&P & CEA -- Eklutna
7. Natural Gas Generation -- 330 mW -- Anchorage Municipal Light & Power -- Anchorage
8. Natural Gas Generation -- 49.4 mW -- Chugach Electric Association -- Anchorage
9. Natural Gas Generation -- 360 mW -- Chugach Electric Association -- Beluga
10. Natural Gas Generation -- 81.7 mW -- Chugach Electric Association -- Bernice Lake
11. Hydroelectric Generation -- 17.4 mW -- Chugach Electric Association -- Cooper Lake
12. Natural Gas Generation -- 38.5 mW -- Alaska Electric Generation & Transmission -- Soldotna
13. Hydroelectric Generation -- 90 mW -- Alaska Power Authority (State) -- Bradley Lake
14. Oil Fired Generation -- 10.4 mW -- Copper Valley Electric Association -- Glennallen
15. Oil Fired Generation -- 7.2 mW -- Copper Valley Electric Association -- Valdez
16. Hydroelectric Generation -- 12 mW -- Alaska Power Authority (State) -- Solomon Gulch
17. Coal Fired Generation -- 50 MW -- Alaska Power Authority (under construction) -- Healy

The Non-Interconnected Area - Four Dam Pool and PCE Communities

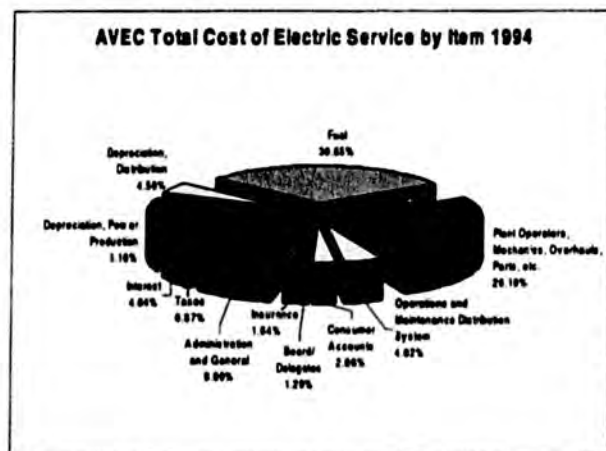
The area outside the Railbelt is generally not interconnected, though there are some small intra-regional connections. For instance, Valdez and Glennallen are interconnected. Most of the communities in the non-interconnected area rely on one main power source or plant, though larger communities may have several plants. Rates for power provided to communities from the state's Four Dam pool projects are set by a long-standing contract with the state. Other generation for these and other communities was typically developed by and is owned by the local utility.

In the nearly 200 small communities off the grid, there is usually only one main power plant. Diesel generation remains the most cost-effective method of generating electricity in most of these communities. Great strides have been made to increase the efficiency of diesel generators. Rates vary tremendously in these communities, depending largely on the cost of buying and getting fuel to the communities and the potential economies of scale provided by the customer use of electricity. Competition already exists in these communities in the form of the option of self-generation by large power users. Loss of even a single large account, such as a school or cannery can significantly increase costs to other consumers, as the economies of scale of both generation and service are affected and fixed costs are spread among the remaining customers.

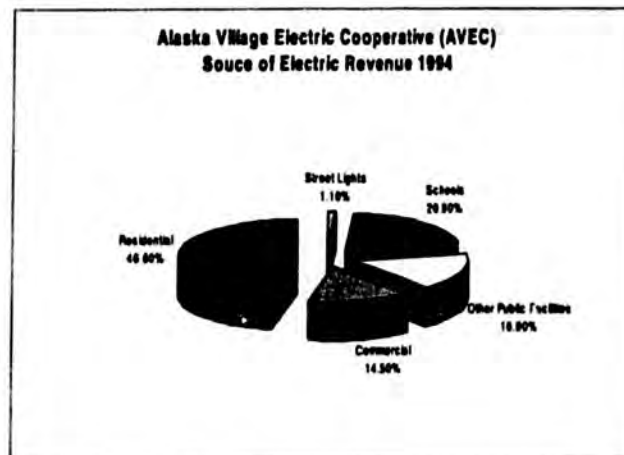


175 isolated rural communities are eligible to participate in the Power Cost Equalization program.

AVEC Total Cost of Electric Service by Item 1994

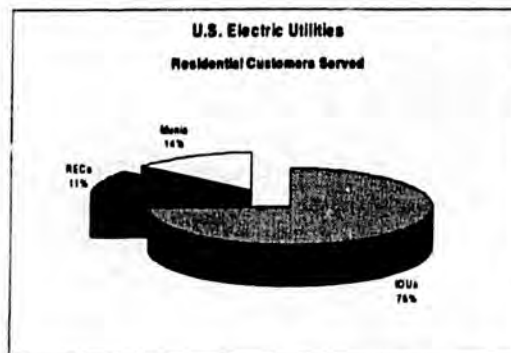
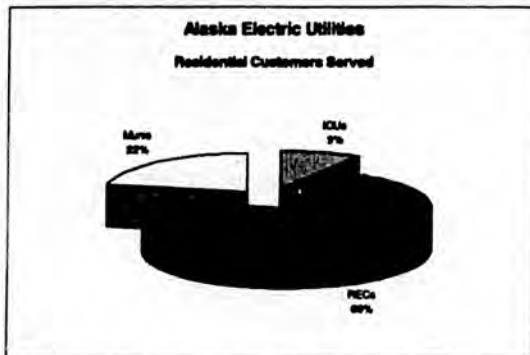


**Alaska Village Electric Cooperative (AVEC)
Source of Electric Revenue 1994**

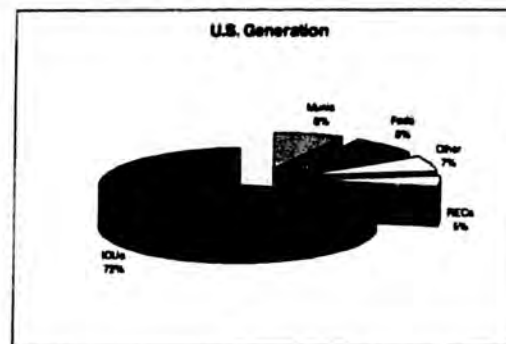
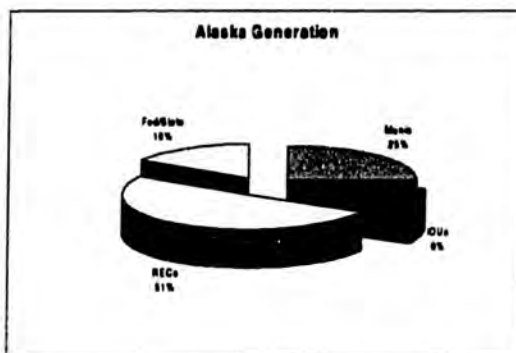


Consumer and Publicly Owned Infrastructure

Consumers have an unusual stake in the restructuring debate in Alaska -- hundreds of millions of dollars. They own most of the assets and most of the utilities. Important issues will need to be addressed about how restructuring could affect consumer equity in and consumer control of utility actions. Alaska has the highest percentage of the population (approximately 69%) served by consumer-owned cooperative utilities (RECs) of any state in the nation. Most of the rest of our electricity consumers are served by publicly-owned power systems (MUNIS). Relatively few are served by investor-owned utilities (IOUs).



Altogether, more than 90 percent of residential consumers receive electricity from a utility they own and more than 90 percent of the electricity generated each year is produced by these utilities. All of the generation and transmission infrastructure in the interconnected area of the state (the Railbelt) is consumer or publicly-owned. Almost all of the infrastructure in the rest of the state is as well, though there are a few private hydroelectric projects and a number of communities with private diesel generation plants and distribution lines.



Another way to look at this is that consumers own most of the equity in Alaska's utilities — hundreds of millions of dollars in value. Consumers get equity credited to them as capital credits, which are eventually returned to them. Capital credit (equity) payments are issued every year by cooperative utilities. Setting wheels in motion that could devalue consumers' equity could take money directly out of their pockets. An assessment of restructuring should include how it would affect the ability of consumers to retain the value of their investments and continue to receive the other benefits of ownership that they now receive.

Most consumers now have a direct voice in their utilities. Consumer-members of cooperatives elect directors, vote on bylaws and voice their opinions about utility policies at annual meetings each year. Voters elect assemblies or community boards that oversee the operation of municipally-owned utilities. This direct consumer control has helped guide utilities and provided incentives for efficiency not available in a system dominated by investor-owned utilities. It has provided strong incentives for rate reductions and incorporation of community values in the operation of local utilities.



ISSUES TO ADDRESS

What follows is a summary of some of the important issues that need to be addressed if Alaska is to implement restructuring for retail competition. Many of the issues are interrelated.

Potential for Effective Competition/Monopoly Power

Industry leaders in Alaska disagree about whether an effective competitive retail market can be created in Alaska. An independent economic analysis would be prudent before enormous resources are invested in attempting changes that may not yield desired results. Those raising concerns argue that competition may simply create monopolies that regulators can do less to control in the interests of consumers than they can under the existing regulatory system.

Effective competition will require at least the following:

- It should be technically and economically feasible for a variety of suppliers to provide the service;
- It should be economically beneficial for multiple rivals to compete to provide this service.
- Generation, transmission and distribution functions now vertically integrated for most Alaska utilities would need to be unbundled.

Unbundling

How will unbundling of Alaska's generation, transmission and distribution services be accomplished? Alaska's electric utility is more vertically integrated than the utility system in the lower 48. Only about one-third of the 3,100 utilities in the Lower 48 have generation capacity. Most utilities in Alaska produce the power they sell. Can or should divestiture of generation assets be required or would functional (accounting) unbundling serve to provide a fair competitive marketplace?

Market Power

Consolidation of market power among supplying companies can effectively stunt competitive pressures. A restructured system should prevent such market power.

Stranded Consumer Investment

Stranded costs or stranded investment, as discussed in the national discussion should be seen in Alaska as stranded consumer investment, since consumers, not shareholders, own nearly all of the assets.

Nationally, the primary "stranded costs" of restructuring are expected to be the value of generation assets invested in under the current regulatory system which prove to be less efficient as new, lower-cost generation comes on line and causes unused capacity/mothballing of old systems. These costs may be in contracts, not necessarily in the form of actual generation assets.

They are considered part of the "transitional costs" of moving to an industry structure that encourages more efficient generation. Because the investment was essentially required of utilities under the regulatory system being replaced, it is viewed by many as unfair to burden these utilities with these costs. The question becomes, who pays - shareholders, bondholders, departing consumers, entrant suppliers? In Alaska, it must be remembered that there is not currently much of a distinction between shareholder and consumer.



The potential for stranded costs also calls up the question of whether competition is the least-cost method - to consumers in Alaska - of transitioning the industry to more efficient generation. This issue is of particular concern in rural communities. Increasing use of new dispersed generation technologies, as they become more cost-effective, may be beneficial. But public policy-makers should be concerned about the potential overall cost to consumers of duplicating generation facilities in a small community instead of scheduling cost-effective efficiency transitions through utility operations.

Cost-Shifting

Differences in market power can result in cost-shifting among classes of consumers. This may or may not be desired, but should be anticipated and mitigated where not desired. In Alaska, cost-shifting could also take the effect of shifting costs between regions or communities, particularly within the Railbelt. Without safeguards, the least attractive consumers (residential and small business) may be denied access to the lowest-cost power and improved customer service benefits.

Regulatory Costs

Compared to other states, Alaska is relatively deregulated now, due to the dominance of consumer and publicly-owned utilities, whereby consumers have more direct control, and less need for intense regulatory control of utilities. Transitioning to a competitive environment may result in tremendous increased regulatory costs. These should be identified and considered as part of a cost-benefit analysis of the value of restructuring.

Tax Issues

Alaska's consumers now enjoy tremendous financial benefits from the consumer-owned non-profit status of cooperatives and the ability of municipalities to issue tax-exempt bonds. National legislation may eclipse Alaska's opportunity to protect these benefits, but some versions of restructuring might require reissuance of bonds and loss of tax benefits only if utilities participate in competition. Alaska may have the opportunity to protect these benefits by declining to restructure for retail competition. If so, the potential financial loss to consumers of these tax benefits should be considered a cost of restructuring in any cost-benefit analysis.

The tax benefits of nonprofit status and tax-exempt revenue bonds are primarily federal tax benefits. Alaska's consumer-owned utilities pay state and local property taxes. An analysis of restructuring should include consideration of potential property tax consequences for Alaskan communities due to changing valuation of utility assets. The potential for increased taxes should be another important part of the analysis.

Wholesale Energy & other Existing Contracts

Restructuring should address whether utilities will have to honor existing contracts and/or how to transition to a fair competitive structure considering existing contracts. Some utilities receive some or all of their energy requirements from other utilities. Such utilities typically have wholesale "all-requirements" type contracts with the provider. In the view of some, these contracts were entered into during a time when the industry was defined with a specific set of operating rules and requirements. Industry restructuring will change those rules. Hence, according to these participants, restructuring should allow for an open reexamination of the wholesale contracts. Others, however, dispute this view. A restructuring of the industry should include assessment of this issue.



Coordinating Mechanisms

Who will control and operate the transmission system? Many areas are exploring development of Independent System Operators (ISOs) for this purpose. Also at issue is how power supply contracts will occur. Two different models include the POOLCO, where a power pool purchases power from bidding generator operators in order to meet demand, and Bilateral Contracting, where contracts occur between parties. In either case, some process must be developed for coordinating demand and purchase to assure availability of capacity to meet consumer demand.

Reliability and Power Supply Planning

One of the great concerns about moving to a competitive industry is how to assure that effective reliability and long-term capacity planning occur.

Licensing Providers

All energy providers licensed to compete in any retail wheeling program should meet the same standards as electric utilities. The electric system is designed to meet standards involving reliability, power quality and safety. Although most consumer-owned utilities in Alaska are not interconnected, it has been suggested by some that dispersed generation and related technologies could provide benefits. There may be such benefits. But it is essential that if alternative power suppliers are connected to the electric system, they must meet the same service and quality requirements and standards as utilities.

Universal Service/Consumer Protection

All consumers must have universal access to affordable service. Customer choice through retail competition limits or eliminates many customer protections. Any plan for restructuring must address the need to ensure that all consumers have access to affordable electricity.

Provider/Supplier of Last Resort/Obligation to Serve

To assure universal service, a provider of last resort must be identified for those consumers who either do not choose or are unable to access the market due to limited market power. The role of "supplier of last resort" must be clearly defined. Retail wheeling gives customers choice of power supplier. As usually defined, retail wheeling also gives power suppliers the option to serve or not serve consumers. Because of Alaska's limited generation and transmission facilities, and because of its unique environment, there is a need to define a power supplier of last resort and an associated mechanism for revenue recovery.



PERSPECTIVE OF THE CONSUMER-OWNED UTILITIES

While many utility leaders continue to study the issue and develop opinions about the value of restructuring, managers of the consumer-owned utilities have identified items they believe deserve special attention as we begin the debate about restructuring.

■ Alaska's unique features must be considered:

Small market size

Lack of Interconnection

Consumer-ownership

- Uniform standards must be developed and applied to all energy providers.
- Exclusive distribution service areas must be maintained to prevent duplication of facilities and protection of the consumer.
- Universal access to affordable electric service should remain a primary goal.
- The role of "supplier of last resort" must be clearly defined.
- Stranded costs must be addressed.
- The issue of wholesale contracts must be addressed.
- Any proposed pilot program must be carefully planned.



PRINCIPLES TO GUIDE THE DISCUSSION

Industry restructuring is a complex issue and it will be helpful if stakeholders and policy-makers can agree to a set of principles to serve as guides to making decisions on the many different issues that will arise. Two basic guiding principles that may seem self-evident is that any action should benefit all consumers and that any system developed is fair to those asked to participate. Beyond that, we offer here some of the sets of principles that have been adopted by others to help the committee consider principles it may want to use to help inform its consideration of restructuring issues.

National Rural Electric Cooperative Association Membership Resolution

- All classes of consumers must be treated equitably
- If stranded costs are to be recovered, they should be recovered in a competitively neutral manner, without placing undue burden on residential and small business customers.
- All energy providers — not just utilities— must be subject to the same standards as utilities.
- All consumers must have universal access to affordable electric service.
- Reliability and safety must not be jeopardized.
- Exclusive distribution service areas must be maintained to avoid duplication of electrical facilities.
- There must be a transition and educational period before full consumer choice is implemented.

National Association of Regulatory Utility Commissioners

- Assign states the responsibility for determining "the extent of and pace for expanding choice for customers under their regulatory oversight."
- Maintain universal service at reasonable rates, as well as the safety, reliability, quality and sustainability of electric service.
- Protect customers from anti-competitive behavior and other malfeasances.
- Ensure that all customer classes benefit from restructuring.
- Preserve or improve the quality of the environment.
- Provide that stranded investment that results from existing regulatory and legal requirements should be addressed in a fair and reasonable manner by the states.



THE NEXT STEP--A COMPREHENSIVE STUDY

Assessing the value of restructuring for Alaska is a major task. ARECA supports the idea that the state should conduct a study, after consultation with stakeholders on the scope of the study, to evaluate whether retail competition would be in the public interest in Alaska. The study should focus primarily on whether effective competition can be developed, and analyze the costs and benefits for consumers, given Alaska's particular situation.

While competition is a popular idea, policy-makers should look at the broad scope of tools they have available for working with the industry to improve efficiency, reduce costs and stimulate innovation in serving Alaska's electricity consumers. We should be prepared both to embrace restructuring if adequate study reveals sure benefits and a fair system, and we should also stand ready to reject restructuring if it is not proven the best way to provide improved benefits to consumers.





SOURCES

Significant sources for materials used in this paper include:

Energy Information Administration (EIA) statistics

National Rural Electric Cooperative Association statistics

Alaska Electric Power Statistics, 1960-1995, Twenty-first Edition, ASCC & State of Alaska

Electric Utility Restructuring: A Guide to the Competitive Era, by Peter Fox-Penner.

