

ALASKA LEGISLATURE SPECIAL COMMITTEE/SUBJECT FILES 8672

2671 SCOMM 120 HOUSE SPEC.COMM. UTILITY RESTRUCTURING, 1999-2000

Public Policy Issues	California	Montana	Nevada	Illinois
Application of Consumer Protection rules to Generation Suppliers	Current PUC rules do not apply, but PUC must adopt rules to implement minimum standards re privacy, disconnection or discontinuance of service; change in providers; written notices; billing; meter integrity; customer deposits; and additional protections.	PUC has authority to adopt rules, but no requirement that current utility rules apply to suppliers; distribution companies must continue to apply current consumer protection rules.	No requirement that current consumer protection rules apply to alternative sellers.	Suppliers must comply with current statutory requirements imposed on public utilities to the extent applicable.

Public Policy Issues	California	Montana	Nevada	Illinois
Disclosures	All providers must provide written notices of price, terms and conditions of service prior to its commencement of service; notice shall include price expressed in a "...format which makes it possible for residential and small commercial customers to compare and select among similar products and services on a standard basis"; PUC must require disclosure of total price of electricity on cents per kWh basis; itemization of all services and charges; separate disclosure of all recurring and nonrecurring charges; description of right to rescind within 3 days. Bills must conform to a standardized bill format to be established by the PUC.	All bills must include distribution and trans. charges; supply charges; competitive transition charges; universal system benefit charges and such other disclosures as required by PSC rule.	PUC authorized to adopt minimum standards for the form and content of all disclosures, explanations or sales information disseminated by alternative sellers, "...to ensure that the person provides adequate, accurate and understandable information about the service which enables a customers to make an informed decision relating to the source and type of electric service purchased."	Marketing information must "contain information that adequately discloses the prices, terms and conditions of the products or services" offered by the supplier. ICC authorized to adopt a uniform disclosure form. Written information must be provided to customers prior to switch.

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	S.B. 1304 requires suppliers to disclose fuel mix to customers; CA Energy Comm. to develop rules.			Suppliers must substantiate claims to ICC and customers upon request re technologies or fuel types. Suppliers must disclose fuel mix and air emissions quarterly to customers and ICC will post infor. on their website. Supplier bills must itemize products and services and their prices; annual statement that discloses the average monthly price and terms and conditions.
Disconnection for Failure to Pay Supplier/Nonregulated Charges	Utilities prohibited from disconnecting customer for failure to pay competitive charges owed to providers; notice of discontinuance by provider authorized.	PSC must by rule establish the procedures "relating to how and when an electricity supplier may discontinue service to a customer because of the customer's nonpayment and the procedures relating to reconnection..." (Sec. 26(2)).	No discussion.	No specific discussion, but if supplier issues a single bill that includes delivery services, the utility retains the right to disconnect the customers "if it does not receive payment for its tariffed services."

Public Policy Issues	California	Montana	Nevada	Illinois
Unfair Marketing Practices/Slamming	Legislation adopts specific anti-slamming requirements for small commercial and residential customers: residential switch orders must be confirmed by an independent third-party verification company unless customer calls current supplier directly. Violators liable to previous provider in an amount equal to all charges paid by the customer after the violation. PUC must maintain a "do-not-call list of res. and sm. commercial customers.	Customers must provide written authorization for change in electricity supplier; the Transition Advisory Committee must report by 2000 on need, if any, for additional consumer protection, including protection from abusive or anti-competitive practices.	PUC regulations to ensure that there is a "reliable confirmation of the customer's intent" to switch suppliers.	Suppliers must obtain "verifiable authorization from a customer" prior to a switch. Reference to state Consumer Fraud and Deceptive Business Practices Act which is amended to require written authorization on letter of agency. Both utilities and suppliers must maintain customer call centers and notify customers how to reach such centers; ICC can establish reporting requirements for such centers. Amendments to Consumer Fraud Act to define "electric service fraud" and est. max. penalty of \$50,000 and regulate billing and collection practices of suppliers.

Public Policy Issues	California	Montana	Nevada	Illinois
Regulation of Supplier Contract Terms	PUC authorized to adopt specific consumer protection regulations specified above and additional protection standards "...which are in the public interest."	See above.	No specific discussion.	No specific discussion.
Credit/Discrimination	If a provider denies an application to serve a residential customer, must provide a written notice of explanation of denial within 30 days of request. Must disclose right to request such notice at time service is denied.	See above.	No specific discussion.	As part of licensing application, suppliers must declare their service area and type of customers served. Suppliers may limit the overall size or availability of service offering with notice to the ICC. Suppliers specifically prohibited from denying service based on race, gender or income or to deny service based on locality or to establish unreasonable difference in prices, terms based on locality.

Public Policy Issues	California	Montana	Nevada	Illinois
Consumer Education	Electric utilities, "in conjunction with the commission," must devise and implement a customer education program which provides customers with information necessary to help them make appropriate choices as to their electric service. PUC must approve program. Extensive program subsequently approved with budget of approximately \$80 m.	Distribution companies required to educate customers about customer choice so that customers may make an informed choice.	Prior to commencement of direct access, PUC must conduct a educational program for customers; up to \$500,000 authorized. Purposes of program: inform customers of changes and availability of alternative sellers; inform customers of disclosure requirements; provide assistance to customers in understanding and using the information to make reasonably informed choices.	ICC to implement and maintain a consumer education program; working group to develop package of printed materials subject to ICC approval; recommendations re variety of communication methods, including mass media; list of key topics for materials; utilities must mail the materials; suppliers must provide same to new customers; special appropriation for funding.
Dispute Resolution	PUC must accept, compile and attempt to informally resolve customer complaints with providers; investigations authorized based on complaint patterns; PUC may award reparations to customers; providers cannot discontinue service to customers for disputed amounts if complaint pending and amt. deposited in escrow account.	Legislation calls for continuation of "provision of a process for investigating and resolving complaints."	A division of consumer complaint resolution established within the PUC; authorized to receive and investigate complaints against alternative sellers and conduct investigations of service practices of utilities and alternative sellers.	ICC has complaint jurisdiction over suppliers re violation of statutory minimums, terms of contract with customer or delivery tariff.

Public Policy Issues	California	Montana	Nevada	Illinois
Privacy	Existing California privacy legislation applicable to suppliers; all release of data by D&T utilities to suppliers and marketers prohibited unless customer gives written consent; D&T utilities required to offer customers usage information 2X per year without fee; suppliers can get name, address, telephone #, account# and metered usage infor. with consent.	No specific provision.	No discussion.	Utilities must supply to customer or its authorized agent (supplier) the customer's billing and usage data at request of customer or with verifiable authorization. Fee may be required. Utility may provide generic information for a fee as well.
Commission Enforcement	PUC may deny applications for registration; PUC provided with enforcement tools that exist for utilities for use against providers; license suspension or revocation; access to books and records for investigations; PUC can prosecute under existing authority for civil and criminal penalties. AG jurisdiction and	PUC can revoke license for false information, slamming, failure to provide adequate electricity supply for MT customers or commits fraud or deceptive practice; assess fines (not less than \$100 or more than \$1,000) for violation of rules and slamming.	PUC authorized to revoke license; seek penalties; enforcement by Attorney General. New bureau of consumer protection in office of AG created as public advocate.	ICC can issue cease and desist order, penalties, seek revocation of certificate. Legislation creates the Consumer Utilities Unit in the AG's office to represent the public in all ICC proceedings re electric service.

Public Policy Issues	California	Montana	Nevada	Illinois
	enforcement authority preserved. Consumers specifically authorized to recover actual damages, attorney's fees and court costs, and exemplary damages; equitable relief in court.			
Consumer Aggregation; Cooperatives	Customers entitled to aggregate their electric loads on a voluntary basis; customers must provide positive written declaration to leave current utility and select an aggregator; both private and public (municipal) aggregation authorized.	No specific discussion.	No discussion.	Utilities required to allow aggregation for any voluntary grouping of customers for both energy and delivery services.

Source: "Comparison of Consumer Protection Provisions in State Legislation on Retail Electric Competition," Barbara R. Alexander
<http://www.spratley.com/leap/stuff/1998.05.00.00.comparison-of-consumer-protection-provisions-in-state-legislation-on-retail-electric-competition.html>

TABLE 7.7
Stakeholder Identified Impacts and Views Regarding Universal Service

Description of Stakeholder	Impact of Retail Competition Identified	Views Concerning Universal Service
Municipal Utility	Re: obligation to serve: Utility may already have obliged capacity used by the departing customer	Restructuring legislation should include language to clarify that a utility is under no obligation to provide tariffed sales to retail wheeling customers who discontinue sales and then return. Customers should have to make an affirmative choice to switch electric providers rather than unknowingly or forcibly being transferred to another provider.
Rural Electric Cooperative	Customers who are the least profitable to serve may be disadvantaged if energy marketers are allowed to "cherry pick" the most profitable customers.	A restructured electric utility industry should provide adequate safeguards to assure affordable electric service to residential customers and that the utility providing the service can stay in business.
Rural Electric Cooperative	Affordable service will be affected for most consumers as only a few will be in a position to take advantage of choice suppliers.	The incumbent utility should be given the first opportunity to be the provider of last resort—perhaps a universal service fund to support high service cost areas. All customers should be accommodated.
Investor Owned Utility	A portion of a utility's customer may not, for various reasons, choose any marketer.	[Customers who do not choose] should have the option of being placed on a default service that would be provided either by the utility's non-regulated marketing affiliate, or by some other third party selected by the APUC.
Independent Power Producer	Programs such as low-income energy assistance, consumer education and information programs, today funded by electric utilities, may require new funding mechanism.	Non-bypassable System Benefit Charge could be used to retain pre-existing programs at current funding levels. If a consensus can be reached on funding levels, the SBC could be used to increase funding. One step would be to mandate either no rate increase about current levels or a predetermined and guaranteed minimum price savings for all residential and small commercial customers – via the SBC or allowed to take effect on or before choice date for larger customers. The local monopoly will ensure universal service through "Standard Offer" service provided by one or more ESPs selected through competitive bid process or by default provider.

Description of Stakeholder	Impact of Retail Competition Identified	Views Concerning Universal Service
Labor Representative	Deregulated electric power companies may not be obligated or motivated to serve customers needing electricity in remote areas or in regions suffering economic trouble.	Electricity is a necessity, and methods will have to be found to assure that these customers still have electric power companies to serve them at reasonable prices. Universal access must be preserved, because electricity is a necessary service. Electrical service must remain reliable, safe and efficient. There must be assurances that there will be sufficient operating reserves for crisis situations.
Consumer Advocate	Electricity is almost universally available in our society because costs have been shared by all utility customer classes. Restructuring undermines that arrangement by forcing customers to shop for their own power.	Specific programs must be created to ensure services to all people, with particular attention to preventing service cut-offs, discounts for households in need, and low-income weatherization.

TABLE 7.8
Legal and Regulatory Roadmap of Universal Service Provisions in Alaska

Source	Relevant Language	Economic Costs	Economic Benefits	Remarks
STATUTES				
AS 42.05.141	APUC "may do all things necessary and proper" including regulation, investigation, ratemaking, regulation of service, require reports.	Cost of regulation.	Provides customers with assurances of oversight, accountability.	General grant of authority.
AS 42.05.221	Requires utilities to hold certificates.	Cost of regulation, compliance.	Provides customers with assurances of oversight, accountability. Allows review of competence to serve.	Policy question about whether similar precondition should apply to marketers.
AS 42.05.241	Certificate holders must be fit, willing and able. APUC may attach conditions to certificate.	Cost of compliance, regulation.	Reduces costs by ensuring economic viability of provider.	Policy question about whether similar precondition should apply to marketers.
AS 42.05.254	Provides for regulatory cost charge.	Not to exceed .8 percent of gross revenues.	Ensures adequately funded oversight agency. Spreads costs uniformly.	Similar to a systems benefit charge for the purpose of regulation.
AS 42.05.271	Authorizes modification, suspension or revocation of certificates.	Cost of regulation.	Protects customers from inadequate providers.	Policy question about whether similar precondition should apply to marketers.
AS 42.05.291	Requires utilities to maintain adequate, efficient, safe services & facilities. Commission may modify.	Cost of compliance, regulatory oversight.	Ensures uniform service quality.	Policy question about whether similar precondition should apply to marketers.
AS 42.05.301	Prohibits unreasonable discrimination in service.	Cost of maintaining uniform services, compliance, oversight.	Protects customers, universality of service.	Competition is about "fair discrimination." Standard may be too strict in competitive markets.

Source	Relevant Language	Economic Costs	Economic Benefits	Remarks
AS 42.05.330, 340, 350	Commission may prescribe standards for measurement, testing.	Cost of compliance, maintaining equipment, oversight.	Helps ensure fairness in service, adherence to service quality standards.	Policy question about whether similar precondition should apply to marketers.
AS 42.05.361, 371	Requires tariffs for services, adherence to tariffs.	Cost of approval, compliance, oversight.	Ensures fair, public terms of service.	Principal must be adapted under competition to enable customers to understand terms and conditions.
AS 42.05.381	Requires just and reasonable rates.	Largest source of regulatory costs.	Provides regulatory oversight and public interest review of rates.	Competition contemplates market-based rates. Potential for unfair discrimination.
AS 42.05.391	Prohibits unreasonable discrimination in rates.	Cost of maintaining uniform services, compliance, oversight.	Provides benefits of averaged and uniform rates.	Competition is about "fair discrimination." Standard may be too strict in competitive markets.
AS 42.05.411	Requires notice of rate changes.	Cost of delay, compliance, oversight.	Provides public notice of price changes.	Competitive markets require transparent prices. Must be adapted to competitive environment.
AS 42.05.511	Authorizes APUC to investigate and act upon management practices, including staffing patterns and pay scales for practices that adversely affect cost or quality of service.	Cost of oversight, compliance. Imposes limits on management discretion.	Ensures utilities maintain adequate staff and capability.	In competitive markets, bad management is rewarded with lost profits and/or market share. Essential nature of electric service may justify some adaptation to competitive markets.
RULES				
3 AAC 50.300	Establishes requirements for information to be provided to customers.	Cost of compliance.	Provides customers with information about prices and terms of service.	Competitive markets require transparent prices. Must be adapted to competitive environment.

Source	Relevant Language	Economic Costs	Economic Benefits	Remarks
3 AAC 52.400-500	Rules applicable to electric utility service, including service connection, deposit requirements, meter reading, bill information, deferred payment agreements, disconnection, line extension, quality of service, safety standards, maintenance standards, etc.	Costs of compliance.	Broad range of obligations on utilities ensure universal service, customer protections.	Policy decisions about which, if any, provisions will be applicable to competitive market participants.

TABLE 7.9
Universal Service Policy Options Available in Alaska

Policy Option	Method of Implementation	Advantages	Disadvantages
APUC initiates regulatory process to define universal service concepts and institute appropriate programs for regulated public utilities.	APUC investigation and rulemaking.	Can be initiated in advance of legislation for regulated public utilities.	Does not automatically transfer to restructured environment.
Establish state-wide definition of universal service to include access to an affordable block of basic, reliable and quality services for all customers.	Legislation. Requires differential treatment for Railbelt and rural Alaska.	Ensures comprehensive approach to universal service issues. Provides flexible baseline. Establishes services and service quality platform for future improvement.	Broadly defined universal service obligations could impose additional costs that are significant, especially for smaller utilities and service providers.
Create state or market-wide universal service support fund through non-discriminatory system benefits charge.	Legislation authorizing collection of charge and providing for program design and fund disbursement.	Ensures funding is in place to meet obligations. Market impacts are non-discriminatory. Charge can be structured as a condition of competitive entry for opt-in entities.	Funding requirements may offset savings potential, and may not be distributed uniformly.
Establish broadly worded obligations on competitive market participants to "ensure universal service," without specific funding or program prescriptions.	Legislation.	Provides maximum flexibility to market participants to meet customer needs. Avoids additional system-wide costs. Allows markets to decide level of services and protections.	Limits policy response to post-hoc remedies. May lead to gap in levels of services and service quality among and within customer classes.
Performance-based regulation (PBR) for distribution utilities incorporating universal service and service quality standards.	Legislation to establish applicability to all competing entities. Regulation by APUC to establish standards and revenue mechanisms.	Focuses regulation on distribution entity likely to remain regulated. Uses incentive-based approach to minimize costs and create competitive "postage stamp" cost for use of distribution system.	PBR mechanisms subject to gaming (especially as relates to 'Z' factors). Lack of regulatory experience and precedent.

Policy Option	Method of Implementation	Advantages	Disadvantages
Establish registration and service practice requirements for all market retailers; including requirements to ensure financial solvency, technical reliability. Standardize information requirements (e.g. billing). Establish customer protection rules.	Legislation to establish applicability to all competitors. Regulation by APUC to establish standards.	Establishes level playing field of business qualifications and practices.	Regulatory requirements will impose costs on market participants, may have the effect of creating barriers to entry and enhancing market power of incumbents.
Encourage cooperative activities and programs between electricity service providers and community service providers to maximize efficiency of program execution and administration.	Legislation to establish standards and assign local jurisdictional responsibilities. Regulation and Memoranda of Understanding between agencies to guide activities and programs.	Builds on extant agency expertise. Avoids inefficient duplication of functions and programs.	May create conflicts over program priorities at agencies with multiple missions.
Allow locally controlled utilities to continue to use existing governance mechanisms to establish terms and conditions of universal service provisions.	Create "opt-in" mechanism for municipal and cooperative electric utilities in any legislation.	Reduces customer confusion, retains existing mechanisms, allows form of democratic representation for policy decisions.	Exception could swallow the rule. Local policy dictated by local majority. Leads to inconsistency across state. May create inconsistent burdens on competitors.

TABLE 7.10**Ranking of Major Alaska Cities for Consumer Prices**

(Number indicates rank among all US cities, lower ranking number indicates higher costs in category – 3rd Quarter 1997)

City	Total Monthly Energy Cost	Ranking – Compared to All Major US Cities						
		Utilities	All Items Index	Grocery Items	Housing	Transportation	Health Care	Misc. Goods & Services
Anchorage	\$92	233	8	5	19	28	2	5
Fairbanks	\$183	7	7	6	16	14	3	8
Juneau	\$174	4	4	3	5	11	4	4
Kodiak	\$190	2	2	1	8	8	6	1

Source: <http://www.labor.state.ak.us/trends/jun98.pdf>

TABLE 7.11
Affordability Indicators

Region	Weighted Average Electricity Revenue/kWh	Cost to Average Customer
Railbelt Utilities	\$0.103/kWh	\$830/yr \$69/mo 1.55% of weighted average median household income (\$53,439) 3.98+% of low income household income (\$20,880)
All Alaska Utilities	\$0.123//kWh	\$987/yr \$82/mo 2.34% of median household income (\$42,255) 4.72+% of low income household income (\$20,880)
US Average	\$0.084/kWh	\$844/yr \$70/mo 2.41% of median household income (\$35,082) 5.1+% of low income household income (\$16,700)

TABLE 7.12
1999 US Department of Health & Human Services Poverty Guidelines

Size of Family Unit	48 Contiguous States & D.C.	Alaska	Hawaii
1	\$ 8,240	\$10,320	\$ 9,490
2	11,060	13,840	12,730
3	13,880	17,360	15,970
4	16,700	20,880	19,210
5	19,520	24,400	22,450
6	22,340	27,920	25,690
7	25,160	31,440	28,930
8	27,980	34,960	32,170
For each additional person, add	2,820	3,520	3,240

SOURCE: *Federal Register*, Vol. 64, No. 52, March 18, 1999, pp. 13428-13430.

TABLE 7.13**Example Price Impacts of Public Purpose Program Options**

(In Alaska in 1997, a charge of 1 mill on electricity sold in the Railbelt will collect approximately \$3.7 million/yr. total funds, and cost the average residential customer \$0.67/mo. A charge of 1 mill on electricity sold throughout Alaska will collect approximately \$4.8 million/yr. total funds, and cost the average residential customer \$0.69/mo.)

Program Option	Total Cost/Duration	Average kWh Cost	Cost Impact on Average Residential Customer	MW Impact
Renewable Energy				
Renewable Portfolio Standard – Clinton Administration Proposal	\$2.1 to \$10.6 million/yr. – 15 yr.	\$0.005 to \$0.025/kWh (range of premium costs)	\$0.30 to \$1.40/mo	121 MW added
Energy Efficiency				
Energy Efficiency – (Using Connecticut, Illinois laws)	\$14.5 million/yr.	\$0.003/kWh	\$2.04/mo	N/A
Low Income				
Dedicated Fund for Low Income Energy Assistance (0.5% & 1.0% of revenues)	\$2.44 million/yr. @ 0.5% rev. \$4.88 million/yr. @ 1% rev.	\$0.0005/kWh @ 0.5% \$0.0010/kWh @ 1%	\$0.35/mo @ 0.5% \$0.70/mo @ 1.0%	N/A
Energy Research & Development				
Energy Research & Development – (Using California law - .4 mill/kWh)	\$1.94 million/yr. – 3 yr.	\$0.0004/kWh	\$0.27/mo	N/A

TABLE 7.14
Alternative Conceptualizations of Affordability

Concept	Relation to kWh Consumption or Funding	Costs	Advantages	Disadvantages
Pure market approach – prices set by competition, demand responds to prices with high coefficient of elasticity.	Consumption determined by market.	No direct implementation cost. Indirect costs associated with higher uncollectables and inability of some customers to obtain sufficient services.	Requires no direct funding or implementation mechanism.	Likely to create severe hardships for many customers. Inconsistent with concept of electricity as an essential service.
Voluntary contribution approach – customers and charitable institutions may contribute funds to a program or pool for distribution to needy customers.	Amount of energy subsidized directly tied to amount of available funding.	Management and disbursement costs. No other direct costs. Indirect costs associated with higher uncollectables, as this method will significantly reduce current budgets.	Does not impose affordability support costs directly on electricity markets.	Significantly reduces available budget. May increase uncollectable expenses. Decreased budgets may cause significant hardships.
Energy assistance and supporting agency funding for bill assistance. May include bill payment programs.	Not tied to kWh cost, but to bill levels, ability to pay, poverty level, and household demographics.	Funding collected from SBC, from general revenue appropriations, or other sources. Administrative and oversight costs.	Makes use of broad menu of approaches to address affordability problems. Does not directly subsidize electricity costs.	Current funding sources are declining, and may require supplementation. Requires administrative coordination.
Cost of service-based rate setting for intra-class rates.	Rate set for statistically determined first block of consumption, e.g. first 200 kWh/month.	Regulatory and compliance cost of detailed cost of service study.	Detailed study may reveal economic justification for reduced rates under cost-causation principles. May reveal competitive opportunity to serve low use customers.	Administrative and regulatory costs. Policy judgments necessary to create appropriate categories.

Concept	Relation to kWh Consumption or Funding	Costs	Advantages	Disadvantages
Benefit charge-funded rate discounts.	Rate discounts for certain customers, may be limited to certain consumption levels. E.g. 20% discount from basic residential rate for customers at or below 150% federal poverty level.	Requires System Benefit Charge funded from electricity usage.	Creates stable funding source. Simplifies administration – suppliers would collect from the fund based on sales. Properly structured, SBC is non-discriminatory.	Strong incentive to avoid charges. Administrative system required. Once set, funding level may be difficult to adjust. Reduces overall magnitude of savings. Not specifically targeted to extent of need.
Affordable block of basic services based on consumption requirements (universal service model).	Discounts applied to first block of consumption, sized to be sufficient to address basic electricity needs. Includes services such as weatherization, credit counseling, etc.	Requires System Benefit Charge or other mechanism to fund discounts.	Focuses discounts on most important needs. Avoids incentive to consume excess through price signals. Integrates subsidy and non-subsidy mechanisms.	Requires calculation of needs and administration. May need regular updating. Administration costs.

TABLE 7.15
Potential Negative Impacts of Retail Access on Affordability

Impact	Likely Effects	Remedial Action	Statutory Changes Required
Legislated rate reductions for residential customers reduce opportunity for competitive market entry.	Artificially low rates set by legislative decree may reduce incentive for competitors to enter market. Legislated reductions may be the only benefits available to residential customers.	Ensure that market structure creates fair opportunity for new suppliers and marketers to enter. Allocate joint and common costs in a manner to encourage competitive entry.	Regulatory authority exists to conduct cost allocation proceeding. For market wide actions, legislation required.
Competitively induced price reductions fail to extend to residential sector.	Small size and relative cost to serve residential customers may make them unattractive in competitive markets.	Create default provider or last resort options. Create policy and mechanisms to facilitate aggregation. Ensure market structure creates incentive for market entry. Encourage customer aggregation. (Note: To the extent preexisting aggregation inherent in current system is preserved, it may act as a barrier to competitive entry.)	Backstop & aggregation provisions, funding mechanisms requires legislation.
Energy savings, weatherization and emergency assistance programs decline or disappear.	Extra costs associated with funding and conducting such programs may be unacceptable to profit-seeking marketers. Large customers use political power to avoid supporting programs through rates. Programs and funding reduced or eliminated.	Establish mechanisms to ensure continued viability of programs. Establish non-discriminatory funding mechanism to continue programs (e.g. SBC), that draws on broadest possible base of consumption. Consider public purpose exit fees.	Legislation required to create administration and collection mechanisms.
Reduced regulation results in unfair marketing practices, customer confusion, and lost savings opportunities.	Residential and small commercial customers, unaccustomed to shopping for electric service, fall victim to unscrupulous market practices, purchasing unneeded services and options.	Establish customer protection rules and assign or create agency responsibility for oversight and enforcement. Create standardized information format requirements.	Legislation and appropriation required to establish oversight and rulemaking authority, and to apply rules to all participating marketers.
Market results in cost shifting to residential customers.	Relatively weaker market power in residential and small commercial customers may result in disproportionate share of costs being shifted to small customer rates.	Conduct comprehensive cost allocation proceeding. Establish rate caps or other mechanisms to prevent cost shifting.	Legislation required to extend regulatory or cost-cap requirements beyond regulated utilities.

Impact	Likely Effects	Remedial Action	Statutory Changes Required
Rate de-averaging results in long-term price increases for expensive-to-serve customers.	Increasing segmentation of customer classes negates historical benefits of system-wide cost averaging.	If market fails to deliver savings over the long term, institute affirmative cost shifting mechanism, such as SBC or taxes to fund price supports.	Legislation required to create funding & distribution mechanism. (Note: Essentially, this amounts to a return to regulation.)

TABLE 7.16
Stakeholder Identified Impacts and Views Relating to Affordability of Distribution Service

Description of Stakeholder	Impact of Retail Competition Identified	Views Concerning Affordability
Labor Representative	Valuable community-based programs currently funded by local power companies are likely to disappear. Electric prices may increase due to profiteering, temporary shortages and the shifting of costs from large industrial users to small commercial and residential energy users.	Most educated observers claim that customer choice will be of little or no value to residential consumers or small businesses in terms of the price of electricity. The price of electricity in a competitive market must remain stable for all classes of customers, and the quality of power must remain high. Societal and community programs should not be abandoned as local government revenues decline due to utilities paying less tax.
Municipal Utility	Residential consumers, low income consumers, fixed income consumers and small agricultural consumers are the likely losers if the present system of regulation is thrown out.	The basic notion of equity and fairness will wither away under restructuring for those consumers least likely to "wheel and deal" in the new environment. Local choice and control must not be jeopardized by restructuring, in order to assure that utility decisions best reflect the desires of customers.
Municipal Utility	Restructuring is not deregulation; more regulation will be required in a restructured environment.	There must be strong measures to protect consumers from fraudulent advertising and fraudulent practices.
Consumer Advocate	For the average consumer to benefit from deregulation of electricity, policy makers must have a clear set of goals and be guided by specific principles.	A clear public policy to ensure affordability must be put in place; policies must also ensure that people with low incomes or who live in high-cost areas be able to afford service. Specific programs must be created to ensure services to all people, with particular attention to preventing service cut-offs, discounts for households in need, and low-income weatherization.
Consumer Advocate	Retail prices may rise due to the potential of creating an unregulated monopoly.	Current pricing to consumers should be capped until true competition is fully established.
Several Utilities	Regulatory or other mechanisms and obligations relating to default or universal service, or to control prices to residential customers may create competitive discrimination against providers of these benefits.	Any obligations established in lieu of traditional obligation to serve must be non-discriminatory in effect. E.g. SBC must apply uniformly across the market and providers. Exit fees or charges may be necessary to compensate for investments made on behalf of default service customers.

Description of Stakeholder	Impact of Retail Competition Identified	Views Concerning Affordability
IPPs, Marketers, Some Utilities	Retail competition will stimulate cost-saving market innovations and incent increasing reliance on low cost resources and technologies. In a properly structured market, these benefits will flow naturally to all customers.	Current regulatory system constrains innovation and investment in lower-cost systems and services. Marketers' pursuit of profitability will lead to savings, creative service offerings, and rapid transformation of generation stock to most efficient generators. Any mechanism to correct for short-term affordability problems must be non-discriminatory in impact and carefully shaped and targeted.

TABLE 7.17
Options to Ensure Affordability of Distribution Service in Alaska

Policy Option	Method of Implementation	Advantages	Disadvantages
Every utility or retail electric provider must provide a discounted rate (20%) to any household whose members receive food stamps or medical assistance and any customer with an income at or below 125% of the federal poverty guideline.	System benefits charge	Focuses funding effort on most-needy customers.	A direct subsidy could encourage wasteful consumption of electricity. Amount of subsidy undefined.
Discounted rates (as above) but limited to a fixed first block of consumption or a block sufficient to provide lighting, refrigeration, heating, and cooling as determined based on 10-yr. average in service area.	System benefits charge. PUC determines minimum block.	Focuses efforts on most needy customers. Avoid incentive for excess consumption.	Requires ongoing regulation. Amount of subsidy undefined.
Market approach	Allow market prices to determine consumption based on individual customer benefits.	Transitions full system to market-based pricing. More rapidly reveals market inefficiencies so that they can be addressed by competitors.	If implemented too rapidly, could cause severe dislocation and hardship. Some market imperfections may never be addressed. Incumbent advantage/market power-related advantages may create insurmountable barriers to aggregation, entry, or other theoretical solutions.

Policy Option	Method of Implementation	Advantages	Disadvantages
Competitive auction for default service provider.	APUC or other agency established periodic solicitation and award of right to provide default service to one or more providers, according to specified terms and conditions. Oversight may include performance based structures, such as "revenue per customer" based profit mechanisms. Service provider may be eligible for revenue supplements from high cost assistance pool funded by SBC or other mechanism.	Creates competitive market incentive for provider to meet default service requirements. May reduce subsidy requirements. Can be adapted to reflect competitive value of incumbency. Orients providers to specific performance objectives aligned with policy goals.	Requires administrative oversight. Revenue supplement mechanisms require collection and disbursement features. To date, no entities other than incumbents are established to compete to provide service. Pool of served customers may to be enlarged to create economic market size. Grant of right to serve may have act as a barrier to competitive entry by alternate providers. System could devolve into today's status quo.

TABLE 7.18

Policy Recommendations to Protect Residential Customers – Consumers Union & Consumer Federation of America*"The Residential Ratepayer Economics of Electric Utility Restructuring: Balancing All the Costs and Benefits," Consumers Union and Consumer Federation of America, July 1998*

Minimize Transaction Costs	Minimize or Reduce Price Discrimination	Minimize Potential Impacts of Market Power	Minimize the Impact of Recovery of Uneconomic Costs
1. Facilitate the aggregation of small customers, especially municipal aggregation, which will reduce overhead.	5. Prohibit shifting costs from high volume to low volume customers.	10. Require vertical divestiture – separate ownership of generation from ownership of transmission and distribution facilities. "Functional unbundling" is insufficient to control market power.	17. Require shareholders to bear their share of stranded costs.
2. Allow the integration function to be performed by the system operator with benefits credited to the customers who do not elect suppliers.	6. Prohibit cherry picking; require service providers to serve all customers in their chosen service territory.	11. If vertical divestiture is not required, provide extensive authority to prevent abuse of affiliate transactions including imposition of affiliate transaction rules and an affiliate code of conduct.	18. Ensure that any stranded costs that are recovered are paid for equitably by all customer classes, allocated by usage of stranded assets.
3. Ensure that costs associated with transactions, including additional facility and management costs are borne by the parties engaging in the transactions.	7. Ensure that residential customers bear no more than a reasonable share of network facilities and other joint and common costs incurred to serve all customers.	12. Regulators must have the authority to ensure non-discriminatory access to the transmission and distribution system. Non-discriminatory access must include the imposition of "just and reasonable" rates for access.	19. Prohibit securitization of stranded costs because it locks in recover of costs without an opportunity to "true-up" for over-recovery.
4. Retain regulatory oversight over the metering and billing process.	8. Allocate uneconomic costs based on electricity usage (kWh consumed), not other formulae that shift excess costs onto residential customers.	13. Regulators must have the authority to monitor and investigate market conditions. The regulatory authority must include the ability to gather evidence, hold a hearing and order corrective action, including penalties and restitution.	20. Prohibit the shifting of costs from generation assets to the transmission and distribution system as a method of stranded cost recovery. This method shifts costs on to residential and small commercial customers and away from large industrial customers and shareholders.

Minimize Transaction Costs	Minimize or Reduce Price Discrimination	Minimize Potential Impacts of Market Power	Minimize the Impact of Recovery of Uneconomic Costs
	9. Prohibit the transfer of costs from generation assets to transmission and distribution assets as a way to collect stranded costs because such transfers allow large industrial customers to further avoid stranded costs, since they do not use the distribution system.	14. In a highly concentrated generation market, regulators must have the option of imposing price ceilings, conditions or limitations on sales and/or the ordering of divestiture.	
		15. Regulators must have the authority to apply any condition or limitation on a merger or acquisition within its jurisdiction, to the extent that the regulator finds it necessary to protect ratepayers, promote competition, or prevent anti-competitive actions.	
		16. Prohibit electric service providers from coercing or inducing their customers toward the purchase of non-regulated goods and services from affiliated companies.	

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costs

Stranded Investment

Issue

The move toward open and competitive markets for electric power raises the possibility that many utility investments might currently be overvalued relative to new market determined values, or may not be recoverable at all. "Uneconomic" investments which could become "stranded" in the transition to competitive markets fall into two broad categories:

- **Stranded Assets.** Stranded assets include *ratebase assets* such as investments in power plants, wholesale power contracts, and transmission and distribution facilities whose fixed costs may not be recoverable from sales revenues; and *regulatory assets*, such as deferred cost accounts, that may be uneconomic to recover in rates,
- **Stranded Liabilities.** Stranded liabilities are contractual obligations to purchase fuel or power with terms above market prices. The above market, or "uneconomic," portion of fuel and purchased power contracts may become stranded.

Implications

The critical and most visible factor affecting transition costs is the gap between the current regulated prices to retail customers and the potentially lower "unregulated" prices in new competitive markets. In the regulated world, "just and reasonable" rates are set in such a way to ensure recovery of prudently incurred costs. In a competitive market, prices will not be set by average "bundled" costs, but by the equilibrium in the power markets. Because competitive market prices may have little or no relation to the historical average embedded costs of utilities, this raises the possibility that many utility assets and liabilities may be valued lower in the marketplace than currently on the books.

Stranded Generating and Transmission Assets Stranded generating assets are capital investments that were put in the ratebase with the expectation of cost recovery over a regulatory determined amortization period. These investment decisions were made, and approved, based on a portfolio theory that assumes that the average cost of alternative power supply sources is the most effective way to mitigate fuel price risk and keep rates reasonable and stable over time. It implies, however, that the savings from lower incremental cost generating plants are used to offset higher cost generators. In a competitive market, the value of

higher marginal cost plants will be determined in the market, not in relation to the value it has as part of a diversified portfolio.

The problem of high capital costs on the books and low prices for power in the market is most serious for newer, capital intensive plants. Faced with competition, many utilities may have to write down the book value of capital-intensive plants and forego recovery of some portion of the fixed costs in order to continue operating the plant. In certain cases, the market price of power may not be high enough to even recover the variable costs of certain plants and management may be faced with the decision of closing such plants. This would expose the entire undepreciated book value of the plant to loss.

Stranded Regulatory Assets In the regulated world, the timing of cost recovery is a policy decision. Utilities sometimes create large deferred accounts, such as previously flowed-through tax benefits and fuel cost balancing accounts, with the regulatory promise that they will be amortized and the costs recovered at a future date. Deferred accounts, which appear on the balance sheet, play a key role in managing the time profile of cost recovery for the purposes of rate stabilization. This gives rise to the notion of "regulatory assets" on the books – agreed amounts for incurred costs that will be carried on the books and recovered in future rate cases. As cost pressures rise, however, it will become increasingly difficult to recover these costs through rates and, as a result, the book value of these regulatory assets could potentially become stranded.

Stranded Power Purchase Contracts One aspect of the transition to more open and competitive markets for electric power not widely noted is the pivotal role of power purchase arrangements. More than 40 percent of electric power generation in the US is sold in the bulk power markets before it is resold to end-users in the retail markets. The portion above market prices, or the "uneconomic" portion of these purchases, could be "stranded" in the transition to more competitive markets.

Power purchases are an increasingly important part of electric utilities' supply portfolio. As cost concerns in the industry mount, power suppliers to the utility industry will come under growing and intense pressure to renegotiate lucrative power purchase contracts, and could face the loss of significant potential revenue. The amount of markdown constitutes a transition cost, or "stranded liability," for those who will have to absorb responsibility for the loss. A growing body of evidence suggests that this trend is already well underway.

Stranded Fuel Supply Contracts Although fuel supply expense is generally regarded as a variable production cost, there are a number of reasons to question the conventional wisdom. Over 80% of fuel purchases by utilities are purchased under long-term contracts.

The regulatory movement toward increased competition in the electric power industry will favor electricity generators with the lowest, short-term marginal costs. If the bottom line is competitively-priced power, only utilities with competitively priced fuel contracts will be able to compete effectively.

Utilities with long term fuel contracts above prevailing market prices will be under strong economic pressure to either buy-down or write-down the uneconomic portion of those contracts. Fuel suppliers holding contracts above prevailing market prices will be under growing and intense pressure from utilities to renegotiate the terms and conditions. The amount of markdown constitutes a transition cost, or "stranded investment," for those who will have to absorb responsibility for the loss.

The experience of the North American natural gas industry over the past decade should serve as a sober warning to anyone who believes that contractual obligations to purchase fuel at prices in excess of competitive market prices are inviolable. Indeed, the "take-or-pay" contract losses in the gas industry resulted in writedowns of approximately \$20 billion, of which producers absorbed roughly one-half, end-users a bit over one-quarter, and pipelines and local distribution companies the rest.

Classification Framework For Different Valuation Approaches

The classification of methodologies for calculating stranded costs is from Baxter and Hirst, 1995. It consists of three categories, each with two elements: administrative versus market valuation; ex ante versus ex post valuation; and bottom-up versus top-down valuation.

Administrative valuation methods use forecasting, modeling, or other analytical techniques to determine the market and regulated value of utility assets and obligations. Market valuation uses auctions, sales, or asset spin-offs to determine the market value of assets (analysis may then be needed to compare market and regulated values). Ex ante methods are used before industry restructuring proposals are implemented. Ex post methods are used after these proposals are implemented. Bottom-up methods value assets individually while top-down methods value asset portfolios.

The classification framework defines eight general valuation approaches. Eight options are described in Table 8.1 that present the strengths and weaknesses of each. A shared strength of administrative approaches is that they include all relevant categories of assets and liabilities, although valuation of regulatory assets is done independently of other assets. Use of administrative approaches, however, may also

require additional regulatory action to encourage utility mitigation of transition costs. Many regulators will not wish to allow utilities to continue to operate as if full recovery of all embedded costs is guaranteed.

Market valuation approaches that use asset auctions or sales provide a clear indicator of value at the time of the sale.¹ The timing of the sale will affect the market value; ex ante market valuation will yield different results than ex post market valuation. Time is also an important consideration for market valuation approaches that rely on asset spin-offs to affiliated companies. In these cases, the stock price is one indicator of market value, but determining the appropriate time(s) to observe stock price may be difficult and contentious. Market valuation approaches also have the added benefit of addressing the market power concerns tied to several restructuring proposals.

Unfortunately, not all assets potentially contributing to transition costs have market value. Regulatory assets are a prime example. Other assets, such as hydropower facilities, have productive value, but concerns with future liability or transfer of ownership or operating licenses may inhibit market interest.

The distinction between ex ante and ex post options is time. All four general ex ante approaches could also be implemented ex post with appropriate changes to assumptions or procedures. The key strength of ex ante approaches is that they provide an early estimate of transition costs. As a result, suppliers and consumers can plan for the industry transition with these costs clearly established. The cost of acquiring this early certainty is the risk of being wrong. Ex ante administrative approaches that rely on a single estimate or single forecast of market price create potentially large risks for shareholders and ratepayers. Such approaches are untenable and suffer from the misuse of analysis and models as substitutes for, rather than guides to, decision making that contributed to many utilities' currently high embedded costs. Whether administrative or market valuation approaches are used, the difficult problem of anticipating the market response to a still undetermined industry and regulatory structure must be faced with ex ante methods. The important advantage of ex post options is that they resolve the uncertainty problem by delaying valuation until after industry restructuring is underway and a mature electricity market develops. Delaying valuation to this extent is unreasonable, however. Standard accounting practices and the financial markets may compel utilities to

¹The financial management field makes two important distinctions in the definition of asset value (see, for example, Weston and Brigham 1978). The amount realized from an asset sold separately from the organization that has been using it is known as the liquidity value. If an asset is sold as an operating business, the amount paid is called the going-concern value of the asset. Asset value as determined through sale or auction will thus be affected by whether the asset alone or the accompanying organization is included as part of the sale.

write off or mark down certain assets well before a competitive market matures.

Bottom-up options result in market values being assigned to individual assets. This feature addresses important accounting concerns; standard accounting practice requires that changes to book values be made for specific assets. In contrast, top-down approaches value overall changes to a portfolio of assets. Administrative bottom-up options also provide a wealth of information about the profitability of different assets or insights about the behavior of future markets. This detail and insight comes at the price of data intensiveness, computational complexity, and the attendant administrative difficulties associated with litigating numerous assumptions. Administrative top-down approaches are easier to understand and implement. The opposite may be true for market approaches. Individual asset sales may be simpler to administer than asset portfolios or packages. Yet asset portfolios may make less desirable assets more marketable.

No single type of valuation approach is without a substantial weakness when the objective is to provide transition cost estimates that regulators authorize utilities to recover. For this important objective, combinations of these general approaches will be needed or solutions must be developed to address the substantial weaknesses of any preferred approach.

Alaska

Estimates of stranded costs from the modeling are presented in Section 11.

TABLE 8.1
Assessing Different General Approaches to Estimating Transition Costs

Approach	Strengths	Weaknesses
Administrative valuation, ex: ante, top down	Provides "up-front" estimate of TC Includes all categories of assets and liabilities in estimates (regulatory assets require separate treatment) Detailed analysis linking TC to specific assets (which reduces accounting concerns by linking TC to changes in book values of specific assets) May provide endogenous price forecast (utility and market) through market simulation May capture dynamic response of suppliers and customers to changing market conditions	Data and computationally intensive Careful data preparation essential (e.g., danger of double-counting costs) May be difficult to understand (many assumptions and complex relationships) Agreeing on appropriate assumptions will be difficult Response of market to restructuring may be difficult to predict Reliance on forecast creates risks for utilities and ratepayers
Administrative valuation, ex ante, bottom up	Provides "up-front" estimate of TC Includes all categories of assets and liabilities in estimates (regulatory assets require separate treatment) Requires little data and simple calculations (few assumptions and simple relationships) Fewer assumptions to litigate	Aggregate analysis does not link TC to specific assets (but TC can be linked to categories of assets) Relies on exogenous price forecast (utility and market) Does not capture dynamic response of suppliers and customers to changing market conditions Reliance on forecast creates risks for utilities and ratepayers

Approach	Strengths	Weaknesses
Administrative valuation, ex post, bottom up	Initial conditions known (restructuring proposal approved) Market response observed Includes all categories of assets and liabilities in estimates (regulatory assets require separate treatment) Detailed analysis linking TC to specific assets (which reduces accounting concerns by linking TC to changes in book values of specific assets)	Does not provide "up-front" estimate of TC Delays valuation until market maturity achieved (probable conflict with accounting practice) Developing market price indices may be difficult
Administrative valuation, ex post, top down	Initial conditions known (restructuring proposal approved) Market response observed Includes all categories of assets and liabilities in estimates (regulatory assets require separate treatment) Requires little data and simple calculations (simple relationships)	Does not provide "up-front" estimate of TC Delays valuation until market maturity achieved Aggregate analysis does not link TC to specific assets (but TC can be linked to categories of assets)
Market valuation, ex ante, bottom up	Provides "up-front" estimate of TC Provides clear indicator of market price at time of sale Clear changes in value of specific assets May resolve market power concerns	Regulatory and market uncertainty will affect market value Does not address power-purchase contracts and regulatory assets Assets contributing to TC are less marketable Ownership of certain assets (hydro, nuclear) may be difficult to transfer

Approach	Strengths	Weaknesses
Market valuation, ex ante, top down	Provides "up-front" estimate of TC Provides clear indicator of market price at time of sale Possible to package less desirable assets with more desirable assets May resolve market power concerns	Regulatory and market uncertainty will affect market value Does not address Power-purchase contracts and regulatory assets Assets contributing to TC are less marketable Ownership of certain assets (hydro, nuclear) may be difficult to transfer May not provide clear changes in value of specific assets
Market valuation, ex post, bottom up	Regulatory and market uncertainty reduced Provides clear indicator of market price at time of sale Clear changes in value of specific assets May resolve market power concerns	Does not provide "up-front" estimate of TC Delays valuation until market maturity achieved (probable conflict with accounting practice) Does not address power-purchase contracts and regulatory assets Assets contributing to TC are less marketable Ownership of certain assets (hydro, nuclear) may be difficult to transfer
Market valuation, ex post, top down	Regulatory and market uncertainty reduced Provides clear indicator of market price at time of sale Possible to package less desirable assets with more desirable assets May resolve market power concerns	Does not provide "up-front" estimate of TC Does not address power-purchase contracts and regulatory assets Assets contributing to TC are less marketable Ownership of certain assets (hydro, nuclear) may be difficult to transfer May not provide clear changes in value of specific assets

Source: Baxter & Hirst, 1995

TAXES
&
FEES

Taxes

Issue

As one of the largest industries in the State, the electric utility industry can have a significant impact on the tax base of state and local governments. The current structure of taxes, fees, payments in lieu of taxes, and other revenue items related to the sale of electricity is based on a long history of a regulated marketplace. Any significant change in the structure of the industry, and/or in the number and character of companies and entities engaged in the supply of electricity products and services could have a significant impact on the tax base of the state and municipal authorities. Restructuring will likely bring about a shift in the amount and the distribution of tax and fee revenues. There is a broad range of options that might be considered in response to these changes. Some argue that no changes should be made, others say that only slight modifications will be needed, and others would argue that this is an opportunity to significantly alter the tax and fee system to accomplish certain public policy goals.

Alaska Dynamic

The electric utility industry in Alaska is composed of several different types of entities including investor owned utilities, cooperative utilities, municipal utilities, federal agencies, non-utility generators, Native Americans, and state agencies. Each of these groups has different histories, finances, tax obligations, regulation and governing structure that may require varied treatment within restructuring legislation. Public power, in the form of municipal and cooperative utilities, dominates the Alaska electricity landscape.

Taxing policy is complicated. Tax policy is especially impacted by electric utility restructuring because of the potential to affect the functioning of competitive markets. Because investor-owned, cooperative and municipal utilities have different tax burdens, they face different tax rates per unit of product sold. These differences could translate into differences in costs. In competitive markets characterized by slim profit margins, these differences could become important. The difference in taxation of financing is also often cited as a factor impacting the potential competitiveness of markets. Finally, public power representatives point to the impact on the Treasury of deferred taxes, investment tax credits, tax-free pollution control bonds, and lost

corporate and individual taxes on these amounts as evidence that investor-owned utilities receive even larger taxpayer subsidies.

In addition, restructuring could fundamentally change the tax base. For example, to the extent an out-of-city electricity provider wins market share from an incumbent provider, the allocation of shared tax revenues could significantly affect municipal budgets.

Implications

Studies over the years suggest that retail demand for electricity within a single market area is relatively inelastic and therefore does not reflect changes in industry structure. However, because of the sheer size of the electricity industry, even small changes in the business could have dramatic impacts in local areas. For example, if competition were to lead to the closure of a power plant prior to the end of its useful life, a local community that collects property tax based on the value of the facility could be severely impacted. If Alaska were to implement an across-the-board rate reduction, as some other states have done, total taxable revenues would not be as seriously impacted as in those states because of the absence of an income tax in Alaska.

Another potentially significant differentiation could arise relating to for-profit marketers. These entities would not be subject to the electric cooperative tax on kilowatt-hours sold, nor would they necessarily own physical plant. However, these businesses would likely be subject to federal income tax and the Alaska Corporate Net Income Tax. As a result, it may be difficult to determine whether they would enjoy a tax advantage over electric cooperatives in some cases.

Solutions proposed or adopted in other states can have both advantages and disadvantages. For example, addressing municipal revenue shortfalls caused by reduced generation-based taxes with wires charges on retail distribution can shift tax impacts to residential and small business customers and away from larger customers that take power at the transmission level. In addition, stranded cost recovery schemes can also have a significant impact on the ad valorem value of utility assets.

Policy makers may consider a range of options and tools in attempting to address the tax implications of restructuring. These include:

- sales and use taxes
- exemptions
- franchise fees
- income taxes
- property taxes

- property valuation methodologies
- assessment ratios
- other incentives

These policy decisions could all have a direct impact on equity, market efficiency, and administrative costs, and may raise legal and statutory issues. Other issues include a shift in tax revenues from local governments to the state, a shift in tax revenues among communities, or an overall decline in local sales and tax revenues.

Assessment

The majority of stakeholders are unclear about the tax implications of restructuring but share a deep concern that any tax revenue impacts on state and local governments must be well understood and adequately addressed in any restructuring legislation. The effect of the revenue loss or shifting will vary depending on taxing structure.

Key Questions

- What is the most effective means to create a revenue neutral position amongst government entities (state and local jurisdictions, among communities, etc.) in a restructured electric industry?
- What tax laws or rules must be changed to establish a level playing field for all electricity providers in a competitive marketplace?
- What role should the state play in attempting to mitigate the tax revenue impacts on local governments?
- To what extent should tax laws and tax incentives be used to encourage or support a specific industry, economic sector, or regions in the state?
- As a matter of public policy, there are also a number of other questions. These include: what is the most desirable type of tax or fee; who pays the tax; how does it impacts economic activity; what is the revenue potential; what is the nexus; what is the true "incidence" of the tax (who actually pays); and how does it effect Alaska's economic development potential?

List of Accompanying Tables & Figures

Current Tax, Fee and Other Revenue Collection	
Mechanisms	Table 9.1
State of Alaska EIA-412 Tax Data.....	Table 9.2
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Potential Impacts of Retail Access on Taxes, Fees, and	
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Overview of Issues

In Alaska the main categories of taxes and fees related to the generation, distribution, and transmission of electricity include corporate net income tax, property taxes, sales taxes, and the electric cooperative tax.

According to the Alaska Department of Revenue, the Corporation Net Income Tax (AS 43.20) is levied on net income of corporations that have nexus and derive income from sources within Alaska. Corporations compute their tax liability based on federal taxable income with Alaska adjustments. Corporate tax rates are graduated from 1 percent to 9.4 percent in \$10,000 increments of Alaska taxable income. The maximum rate of 9.4 percent applies to income over \$90,000.

The Alaska Division of Trade and Development describes other taxes affecting general business as follows:

Corporation Franchise Tax: Biennial tax of \$100 for domestic corporations and \$200 for foreign corporations, in addition to a \$50 biennial business license fee.

Sales and Use Tax: Several boroughs and cities impose a sales and use tax of up to 6 percent on retail sales and certain locally-provided personal services; neither Anchorage nor Fairbanks levies a retail sales tax. There are no state sales, income, gross receipts, or inventory taxes.

Property Tax: Real and personal property is taxed by nearly all home-rule and first-class boroughs and cities. The tax is levied primarily on real estate but in some communities, personal property represents a substantial portion of the tax base; property is assessed at an average of 82 percent valuation with rates ranging from 0 to 21.71 mills. The State does not have a property tax except on oil and gas properties.

Resource Tax: Specific resource taxes are levied on fishing and fish processing industries, ranging from one to five percent of the resource's value. Specific resource taxes also apply to oil and gas production. Specific consumer taxes are levied on motor fuel, tobacco, alcoholic

beverages, insurance gross premiums, coin-operated devices, and electrical and telephone cooperatives.

Other types of taxes and fees include federal income taxes (for-profit entities) and regulatory fees (paid to offset the cost of regulation). Current Alaska tax, fee, and other revenue collection mechanisms are summarized in Table 9.1.

These fees and taxes occur at various levels of government (federal, state, county, municipal, other taxing districts), and not every level of government imposes the same set of taxes and fees nor the same rate of taxation.

The legal authority for taxes and fees derives from the US Constitution, the State constitution, statutory provisions, and rules of agencies such as the Public Utilities Commission and the Department of Revenue.

Under the US Constitution, the Due Process clause of the 14th Amendment provides that a state cannot deprive anyone of life, liberty, or property without the due process of law. This has been interpreted to mean that there must be nexus, or some minimum link between the state and the entity being taxed. Typically, it has been held that there must be some level of physical presence in the taxing state before a tax can be justified. However, defining 'physical presence' continues to be a contentious issue. The Alaska Corporate Net Income Tax applies to businesses with a nexus to the state.

The 14th Amendment also provides that no state shall deny persons equal protection under the law. It prohibits discrimination among taxpayers within the same class, but it does not prohibit states from treating one class differently than another. Discriminatory taxation is permitted if the discrimination is reasonably related to a state purpose. Notwithstanding this language, states enjoy broad discretion to tax persons and activities within their boundaries.

Alaska statutes provide for the Corporate Net Income Tax and the Electrical Cooperative Tax, described above.

Articles IX and X of the Alaska Constitution and Title 29 of the Alaska Statutes establish the legal framework for municipal taxation in Alaska.

- The Alaska Constitution permits delegation of the state's taxation power to local governments, but limits delegation of that power to only cities and boroughs. (Article X, Section 2)
- The constitution limitation that "no tax shall be levied... except for a public purpose..." applies to both state and municipal taxation. (Article IX, Section 6)
- Home rule municipalities are granted broad governmental powers by the Alaska Constitution, but the constitution also provides that

"...standards for appraisal of all property assessed by the State or its political subdivisions shall be prescribed by law..." (Article IX, Section 3)

- General law municipalities are granted the right by state statute to levy a tax or special assessment and impose a lien for its enforcement. (AS 29.35.010)
- Both home rule and general law municipalities are subject to limitations on their taxing powers found in Chapter 29.45 of the Alaska Statutes. Section 29.45.010 authorizes cities, boroughs and unified municipalities to levy a property tax. If a tax is levied on real or personal property, it must be assessed, levied and collected as provided in Chapter 29.45. This chapter also authorizes the implementation of sales and use taxes.
- Based on Article X, Section I of the Alaska Constitution which provides that "...a liberal construction shall be given to the powers of local government...", it is assumed, although not expressly stated in statute, that all real and personal property is taxable unless it is specifically exempted from property taxation.

It is also assumed that a municipality may impose severance taxes, as has been done by the Denali and Kodiak Island Boroughs.

Revenue Impacts

Data on electric utility industry specific taxes reveals that some \$1.557 million in revenue was generated through shared taxes on electricity sales by electric cooperatives. One third of those revenues relate to sales within the Municipality of Anchorage. Another third is paid for sales in the 8 boroughs, and the balance in other smaller cities. Of this total, all but \$60,000 was returned to the municipalities in which the cooperatives operated. Because these taxes are based on sales, they are not expected to change significantly under restructuring, except to the extent that entities not taxed win significant market share. This may justify legislative changes to ensure that the shared tax base is not adversely impacted.

The Alaska Corporate Net Income Tax generated \$253 million in 1998. Of this amount, \$55 million was collected from non-oil and gas businesses. The corporate net income tax is the single largest source of revenues of Alaska general revenue. Due to the high percentage of electric utilities that do not pay federal income tax, this tax does not impact the cost of electricity significantly, except to the extent that oil and gas taxes flow through the cost of fuel. Since many new competitors in a retail competition market are likely to be for-profit entities, this tax will impact their cost of doing business in Alaska.

Local governments also collected \$423 million in non-oil and gas property taxes in 1998. An additional \$234 million was collected from oil and gas properties, of which some proportion is reflected in the price of natural gas and diesel fuel. Because disaggregated data is not available, it cannot be determined how much of these revenue derives from electric utility plant. Under retail competition changes in the value of generating plants could be especially significant for local governments that impose property taxes. Because of the size of these facilities, impacts on individual taxing authorities could be significant. And in situations where the power plant output is transmitted long distances, property tax decreases would not be offset directly by reduced rates.

Some 78 boroughs and cities have exercised their authority to impose sales taxes. These taxes produced some \$112 million in revenues in 1998. Complete disaggregated data was not available with which to determine the electric utility share. Tables 9.2 and 9.3 list available data on tax and fee payments from EIA form 412 and RUS files.

Table 9.4 summarizes potential impacts of retail competition on taxes, fees, and other revenue mechanisms.

Policy Options

The range of policy options to address the many different possible impacts of retail competition is broad and diverse, but generally fall into three categories:

- Do nothing. This is the simplest to state and the simplest to implement. However, this assumes that the current tax/fee scheme (developed in a regulated environment) is also the most appropriate in a restructured marketplace. In a competitive marketplace, there will be different winners and losers. It will be difficult for policy makers to ignore the fiscal impacts and the people, businesses, and organizations impacted by the new marketplace structure.
- Establish a "revenue neutral" policy. The goal is to provide local governments an equal level of revenues from the electric utility industry – in essence to make local and state government entities indifferent in terms of revenues to the effects of restructuring. Depending on the degree of retail competition, this implies options ranging from a slight adjustment in tax or fee rates to major policy changes to counter the loss of local revenue.
- Establish a fair competitive environment. The goal is to create a level playing field for all electricity providers. This is a complex task as policy makers attempt to balance tax and fee burdens, property tax valuations, use taxes, the contributing role of federal and state tax incentives, depreciation methods, renewable energy

issues, and so on. It also implies major revisions in tax and fee policies.

Options available for levying alternative taxes under retail competition are summarized in Table 9.5. Policy options available in Alaska are contained in Table 9.6.

Redefining the Public Power Bond Market

On January 16, 1997, the US Treasury Department issued final tax rules covering the definition of private activity bonds for the electric utility industry. However, it reserved for future determination issues concerning the ability of public power systems to acquire privately held electric assets. This action underscores the complexity of the problems facing public power today. The practical implications of these rules could raise questions about whether public power will be able to compete effectively in the competitive electric power marketplace.

In the tax bill, Congress established significant new restrictions on how public power systems could use their tax-exempt financing authority. Some members of Congress were concerned that some projects financed by state and local agencies - for example, the use of tax exempt industrial development bonds to finance construction of fast food restaurants, golf courses, and industrial complexes - in effect allowed taxable entities to benefit from their tax exempt status. Public power systems were grouped together with all other tax exempt issuers.

The current tax code limits the maximum amount of "private use" activity that can be funded using tax exempt bonds to no more than 10 percent of the proceeds of a bond issue. But there is also an absolute cap of not more than \$15 million in private use activity "per project." A public power system that exceeds the limits could face draconian penalties requiring investors to pay taxes on tax exempt bonds.

In some cases the rules are more flexible than those they replace. For example, they allow remedial action to overcome any private use impact even if a change in conditions occurs within five years after the bonds are issued. They allow the use of disposition proceeds to require an equivalent amount of nonqualified bonds on the next call date, and eliminate the need for a tender offer, which appeared to be required in several IRS private rulings. The rules also add some limitations. Most significantly they limit the use of defeasance as a remedy for bond issues that become private activity bonds to those bonds that are callable within 10.5 years from the issue date. That restriction might have the effect of discouraging future bond sales of noncallable securities and thus raise overall issuance costs to compensate for the uncertainty.

Public power systems are discovering that tax exempt project financing, long considered a substantial competitive advantage, may now begin to impose substantial limitations on their ability to effectively compete in a restructured electric generation segment. The tax laws restrict the "private use" of such tax exempt-funded generation assets. Public power utilities may find this financing tool a disadvantage if:

- changes in Treasury regulation place additional limitations on the ability of a public power system to sell temporarily excess generating capacity of energy except to another tax exempt entity,
- these limits restrict the ability of public power to create or participate in strategic alliances with other taxable utilities or businesses, or
- participation by public power in larger regional or national markets risks the tax exempt status of its underlying debt structure.

This problem would strike hardest those public power systems and their joint-action project finance agencies with investments in electric generation projects. Changes in the tax status of this tax exempt project financing would dramatically raise the cost of capital, erode credit rating, and subject the public power systems to lawsuits from bondholders with unexpected tax liabilities and lower-valued bonds.

Public power must fight this battle in a political environment in which the Edison Electric Institute, the trade and lobbying organization for the investor-owned utilities, will almost certainly object to any change in statutes or regulations that don't simultaneously address some of their own tax dilemmas.

TABLE 9.1
Current Tax, Fee, and Other Revenue Collection Mechanisms

Provision	Type of Collection	Assessing Jurisdiction	Value of Revenues
Electric Cooperative Tax	The utility collects from the consumer and remits to taxing authority. Tax revenues are shared with municipalities and other local government.	State, but nearly all funds are shared with local jurisdictions.	\$1.557 million collected in 1998, \$1.492 million shared with local government.
Corporate Net Income Tax	Collected by the state, deposited in general revenues. The largest source of general revenue funds – over 80 percent derived from oil & gas industries.	State.	\$253 collected in 1998. \$55 million from non-oil & gas.
Sales & Use Taxes	No state sales tax. Some local authorities impose taxes up to 6 percent.	78 boroughs, cities. None in Anchorage or Fairbanks. No state sales tax.	\$112 million statewide.
Property taxes	Remitted by owner of the property. (Municipally owned utilities do not pay.)	12 boroughs, 13 cities. No state property tax.	\$423 million in 1998 (non-oil & gas – all taxed property)
Federal Income tax	Paid by IOU's, IPP's, and marketers to IRS. Cooperative and municipal utilities do not pay.	Federal	Not available

TABLE 9.2

*State of Alaska**EIA-412 Tax Data*

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Note: "0" means no tax/fee paid or no data available.

Item	ANCHORAGE				
	ALASKA ENERGY AUTHORITY	ALASKA POWER ADMINISTRATION	MUNICIPAL LIGHT & POWER	FAIRBANKS MUNICIPAL UTILITIES SYSTEM	KETCHIKAN PUBLIC UTILITIES
Taxes Other Than Inc Taxes-Utility Operating Inc	0	0	3472531	0	290844
Income Taxes-Utility Operating Inc	0	0	0	0	0
Taxes and Tax Equivalents	0	0	3472531	0	290844
Taxes Other Than Inc Taxes-Other Inc and Deduction	0	0	0	0	0
Income Taxes-Other Inc and Deductions	0	0	0	0	0
Taxes Applicable to Other Income and Deductions	0	0	0	0	0
Transfers from Retained Earnings-State or Local	0	0	0	0	0
Other Transfers from Retained Earnings	0	0	0	0	0
Total Taxes and Transfers	0	0	3472531	0	290844
Cont To:Free/Below Cost Electric Service	0	0	0	0	0
Cont To:Use of Electric Dept Employees	0	0	0	0	0
Cont To:Use of Electric Dept Vehicles & Oth Equip	0	0	0	0	0
Cont To:Materials and Supplies	0	0	0	0	0
Total Contributions To State & Local Government	0	0	0	0	0
Cont By:Free/Below Cost Services	0	0	0	0	0
Cont By:Use of State or Local Employees	0	0	0	0	0
Cont By:Use of Vehicles & Oth Equip	0	0	0	0	0
Cont By:Materials and Supplies	0	0	0	0	0
Total Contributions From State & Local Government	0	0	0	0	0
Net Contributions & Services by Elec Utility	0	0	0	0	0

TABLE 9.3

State of Alaska

RUS Tax Data

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NOTE: Utilities that do not use RUS financing services do not report data. In some cases, an entry of "0" may mean no data is available.

Company	State	Region	Id No	Tax Expense- Property and Gross	
				Receipts	Tax Expense- Other
ALASKA ELECTRIC G & T COOP INC	AK	PAC	00288	0	0
ALASKA VILLAGE ELECTRIC COOP INC	AK	PAC	00221	23733	135693
CHUGACH ELECTRIC ASSOCIATION INC	AK	PAC	03522	0	0
COPPER VALLEY ELECTRIC ASSOC INC	AK	PAC	04329	37376	0
CORDOVA ELECTRIC COOP INC	AK	PAC	40215	11117	0
GOLDEN VALLEY ELECTRIC ASSOCIATION INC	AK	PAC	07353	420910	1043672
HOMER ELECTRIC ASSOCIATION INC	AK	PAC	19558	208659	0
KODIAK ELECTRIC ASSOCIATION INC	AK	PAC	10433	58842	193883
KOTZEBUE ELECTRIC ASSOCIATION INC	AK	PAC	10451	0	5178
MATANUSKA ELECTRIC ASSOCIATION INC	AK	PAC	11824	0	0
METLAKATLA POWER & LIGHT	AK	PAC	12385	0	0
NAKNEK ELECTRIC ASSOC INC	AK	PAC	13201	10155	0
NUSHAGAK ELECTRIC COOP INC	AK	PAC	13870	0	8243
TLINGIT-HAIDA REGIONAL ELECTRIC AUTHORITY	AK	PAC	18963	0	0

TABLE 9.4
Potential Impacts of Retail Access on Taxes, Fees, and Other Revenue Sources

Impact	Likely Effects	Remedial Action	Statutory Changes Required
Tax/fee revenue streams could decline. (Refer to more specific scenarios listed below)	Greatest impact at local level; less so at state level. (Refer to specific scenarios listed below)	Strategies include: 1) do nothing, 2) reconfigure tax/fee scheme at local level, and/or 3) devise state schemes to mitigate some impacts.	Depends on specific strategy employed. (Refer to specific scenarios below.)
Tax/fee revenues could increase in certain areas.	Efficient, low-cost power plants could increase in value.	None required.	None.
High cost power plants may lose value or be shut down.	Significant revenue loss to local jurisdictions; may impair ability to maintain level of general obligation funding (bonds).	1) Revise tax scheme at local level, 2) seek remedial action at state level, 3) do nothing	Depends on specific strategy employed.
Lower electricity prices result in lower sales tax, franchise fee collections, etc.	Impacts local and state government budgets through lower revenues (but also some savings in lower electricity costs.)	Ranges from none to revise tax/fee scheme to mitigate some or all of impacts.	Depends on specific strategy employed.
"Unbundling" of generation, transmission and distribution businesses may occur.	Generation business will become more competitive while transmission and distribution businesses may remain regulated. Cost allocation, transfer pricing, and affiliate rules become important.	State may want to address rules to ensure fair and competitive marketplace for market participants.	Depends on specific issues addressed.
Restructuring may jeopardize tax exempt financing status.	A municipally-owned utility may have to allow third-parties to use distribution system but this could endanger tax exempt financing status	Legal and statutory changes required.	Yes.
Uneven tax/fee burdens may favor one type of electricity provider over others.	In regulated environment this has little impact, but under retail competition, relative tax burden may favor one class of competitors over others.	If goal is level playing field, then changes to tax/fee and legal structure may be required.	Yes.

Impact	Likely Effects	Remedial Action	Statutory Changes Required
Locating new plants will partly depend on relative tax/fee structure.	Companies considering building new generating plants will consider relative tax/fee burdens in making location decision.	Depends on state and local governments economic development, environmental stances.	Depends on goals and what is needed to implement them.
New players, such as Power Marketeers enter market.	These players may not have much physical presence in Alaska which has impacts on state/local revenue streams.	None may be required, but nexus issues may be considered if policy goal is to capture revenue potential.	No action may be taken, but if goal is to capture revenue potential then nexus, interstate commerce, and constitutional issues have to be considered.

TABLE 9.5
Options Available for Levying Alternative Taxes under Retail Access

Option	Key Elements	Point of Taxation	Remarks
Gross receipts tax	Applied to gross revenues of utility and paid by utility directly (but typically passed to consumer through higher rates).	Utility	Local.
Consumption tax	Tax on consumption of an item by the consumer. May be based on unit of the commodity or purchase price.	Consumer	May be regressive.
Commodity tax	Tax on the delivery of a commodity (kWh) to end consumer.	Typically on company making final delivery to consumer (i.e., the utility).	
Property tax	Tax on value of real/personal property	Owner of property	Currently used in Alaska but its role and use may be modified under retail competition.
Franchise fees	Based on service agreement between local government and utility for specific service territory; paid in lieu of business licenses/ permits; fee based on revenues	Utility	Must be adapted for use under retail competition to account for multiple, and non-resident, service providers.
Sales tax	Based on retail sales price of item purchased or used.	Consumer (collected and remitted by utility) and utility (for own purchased items).	Currently used in Alaska at the local level. Its use may be modified under retail competition.

Option	Key Elements	Point of Taxation	Remarks
Use tax	Counterpart to sales tax except levied on items purchased out of state and not subjected to local sales tax	Consumer of good/service.	May require adaptation to retail competition environment.
Payments in lieu of tax	Payment to local jurisdiction by municipally-owned utility.	Municipally-owned utility.	Payment may be calculated by formula, by contract, or on annual basis. Use may be modified under retail competition.
Regulatory fee	Fee paid by regulated utilities to fund portion of utility commission's budget. Based on revenue.	Utility	Use may be modified under retail competition.
Income Tax	Paid on income.	On individuals and for-profit entities.	Limited to corporations in Alaska. Electric cooperatives treated separately.

TABLE 9.6
Options to Address Tax, Fee, and Other Revenue Issues in Alaska

Policy Option	Method of Implementation	Advantages	Disadvantages
Do Nothing	None required.	No regulatory or statutory changes needed.	The current tax/fee schemes are based on decades-old regulatory environment. A shift to retail competition creates different winners and losers, and the effected stakeholders will seek mitigation through public policy action and other means.
Establish "revenue neutral" tax/fee scheme.	Requires action at local and state levels.	Local and state entities maintain current revenue levels.	May negate potential economic benefit of lower prices, more efficient marketplace, etc.
Adopt plan that results in even playing field for all electricity providers	Requires action at local and state levels.	All providers in comparable competitive positions vis-a-vis taxes/fees.	Will require significant changes in tax/fee structure. Different classes of consumers may suffer relative to current position.
Institute plan where out-of-state sellers of electricity have comparable tax/fee burden as in-state providers.	May require shift to energy consumption tax, wires/distribution fees, etc.	Out-of-state entities (which may relatively little physical presence in Alaska) could not have competitive advantage over in-state providers.	Constitutional, interstate commerce, and other legal issues would have to be resolved.
Under retail competition there may be relative shift of revenues from local government to state government. Adopt plan to mitigate impact.	Adopt changes in local tax/fee schemes, such as, electric consumption fee or broad-based energy consumption fee, and/or seek state-level tax/fee that is apportioned to local governments.	Redresses "imbalance" between local governments and state government revenues.	Cumbersome to implement (at local level). Will not provide net benefit to buyers of electricity.
As a public policy goal, implement policies that favor one or more sectors.	Establish policies at state level.	Meets public policy goal of encouraging or assisting such sectors as renewable energy, not-for-profit community organizations, lower income residents, etc.	Inherently favors one group over others. Politically sensitive issue.

Policy Option	Method of Implementation	Advantages	Disadvantages
Under "unbundling" scenario (generation, transmission, distribution separate into different businesses), one or more functions may no longer be regulated. Establish policies to ensure assets are valued on same basis for assessment purposes.	Establish policies at state level; valuation and assessment may occur centrally or locally following state guidelines.	Ensures that regulated and unregulated utility assets are treated the same for valuation and assessment purposes.	Requires coordination between state and local assessment authorities.

EMPLOYMENT

Utility Employees

Issue

Market-based retail competition, as envisioned by its proponents, will create incentives for increased operational efficiency and reduced operational costs in the electrical utility industry. This suggests a potential for decline in employment in some businesses such as electric utilities and mining. A critical issue is whether adverse employment impacts will be regionally concentrated, or exaggerated by multiplier effects in certain regions and communities. Some businesses could actually see growth in employment as a result of restructuring if it creates a competitive environment sufficiently attractive to support business expansion. Finally, some express concern that the historical national shift from full-time to contract employment at utilities could lead to a long-term shortage of trained employees and a resultant risk to system-wide reliability and safety.

Alaska Dynamic

Statistics suggest that industry-wide utility employment levels have remained fairly constant over the past several years in Alaska. Unionization has certainly been a major factor in this trend. In fact, employment in the broader "Electricity, Gas & Sanitary Services" segment has exhibited a trend that is essentially consistent with state economic robustness and counter-cyclical to unemployment. Automation and mechanization have generally improved productivity while failing to increase employment in the face of steadily rising generation and demand.

Because the electric utility industry is characterized by economies of scale, additional efficiencies may be available through mergers and consolidations, outsourcing, or aggregation in Alaska, though this would be seen as a net loss to labor representatives. Some studies suggest that on a state-wide basis, employment growth could offset or slightly exceed declines if restructuring encourages business expansion through competitive opportunities. Labor union representatives around the nation are very concerned that a reduction in apprenticeship programs is leading to a pending shortage of qualified linemen and other technically trained workers.

Utilities and labor have engaged in some rather well publicized disputes in Alaska in recent years. IBEW workers at Matanuska Electric were on strike for more than three months during the winter of 1999.

Although the causative factors underlying labor disputes are often difficult to parse, it is at least plausible that utility attempts to prepare for competition play a contributory role. One issue of special concern for Alaska is whether increasing competitive pressure brought on by electric utility restructuring will lead to more frequent and difficult conflict between utility management and employees.

The APUC enjoys broad authority under AS 42.05.511 to investigate the management of a public utility, including staffing patterns, wage and salary scales and agreements or other acts that adversely affect the cost or quality of service. The Commission may order corrective action on the finding of unreasonable practices. Whether this power should continue and be expanded to include all participants in a competitive market is an important question of public policy.

Implications

One key concern in Alaska is whether potential negative employment impacts are sufficiently large or regionally focused to create significant economic problems. Some argue that competitive markets are themselves a driver for job-creating investment in the state. They suggest that the introduction of market-based competition could result in more jobs gained than lost, so long as market entry is facilitated or encouraged. Low income services, energy efficiency and renewable energy advocates argue that these service options are more job-intensive than coal or natural gas-fired electricity generation, and therefore measures to encourage these sectors could result in job growth as well.

Both financial and structural mechanisms are available to encourage the maintenance or enhancement of a skilled and adequate workforce. For example, a systems benefits charge could be created to fund employee retraining or relocation. Public funding mechanisms necessarily have the effect of reducing the overall level of savings made available by electricity restructuring. Whether this impact is significant will depend on the overall magnitude of savings and the magnitude of benefits obtained.

As utilities and new market entrants seek to minimize labor costs by reducing full-time employment, a concern is raised over whether Alaska will continue to enjoy the reliability and safety benefits of a well-trained, experienced electricity infrastructure workforce. However, some argue that reductions in highly-skilled workers at utilities in the lower-48 are more a function of pre-competitive cost-cutting strategies in the face of uncertain market conditions and will stabilize. Restructuring could improve business certainty within functional areas likely to remain regulated (i.e., transmission and distribution), and safety and reliability standards imposed through

regulation could create incentives for maintaining a highly trained and skilled infrastructure workforce. Performance based regulatory mechanisms could be imposed for market participants, especially the distribution and transmission providers. These mechanisms could create indirect pressure to maintain adequate staffing levels by rewarding safe, reliable service and penalizing failures. Though these mechanisms could properly incent adequate staffing, they could have the effect of increasing costs for distribution and transmission service, dampening the cost reduction benefits of competition.

Assessment

Most stakeholders believe that some employment changes are inevitable in the electricity industry as a result of the introduction of market forces. Few stakeholders express strong concern that the potential negative impacts are a critical issue, and many argue that the best incentive to employment growth is robust competition in the industry. However, some are concerned about erosion in the numbers of skilled workers responsible for infrastructure maintenance and repair, at least during the period of transition to competition.

Key Decisions

- Are unacceptable employment changes occurring in the electric utility industry today?
- To what extent can those changes be addressed under the current system of regulation and operations?
- What measures or mechanisms should be instituted today to address these adverse trends?
- Will restructuring (or the continued "preparation for restructuring" activities) cause unacceptable employment changes in the electric industry in Alaska?
- To what extent are those changes within the control of Alaska policy makers, and to what extent are they part of broader industry or nation-wide market forces and trends?
- Why are those changes unacceptable? Which adverse results are most likely to develop?
- What structural or economic mechanisms should be instituted to prevent unacceptable employment changes during the transition to and in a more competitive industry environment?
- How should those mechanisms be incorporated in current regulatory agendas and/or in restructuring legislation

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Historical trends

Electric utilities employ a broad range of staff to provide service to customers. Utilities hire manager, accountants, lawyers, engineers, clerical workers, customer service representatives, and many others. Related industries, such as the natural gas industry employ many additional personnel. Relatively stable employment levels have characterized the electric utility industry in Alaska over recent years. During the same time, utilities in Alaska have kept pace with increased demand.

Information on employment trends in the utility industry are provided in Table 10.1 and Figures 10.1 and 10.2.

Projections

The pressure to increase output and revenues while holding the line on additional staff will continue in the electric utility industry, even without retail competition. The introduction of market forces to the industry, however, introduces a new dynamic.

Analysis of the data from other industries that have gone through deregulation reveals certain trends. Data from the trucking, railroad, airlines, and telecommunication industries reveals consistent decline in union membership. Labor representatives are concerned that this trend could have adverse consequences on quality of service and safety if repeated in the electric industry. Further, while work force size in those

industries has grown, average weekly earnings have declined. Table 10.2 sets out the industry data. Figure 10.3 graphs weighed average weekly earnings in those industries from 1973 to 1996.

As investor-owned utilities are shifted away from cost-of-service regulation for generation and marketing of electricity, competition will place increasing pressure on utilities to reduce costs. For unregulated, for-profit affiliates of utilities, an emphasis on profitability will strengthen these pressures. The experience and views of one senior labor representative in California are set out in Table 10.3. Utilities are capital intensive industries and have relatively high fixed costs associated with plant and facilities. Because the opportunities to reduce fixed costs are limited, utilities continue to look to staffing and other variable expenses as a means of reducing costs and increasing profitability.

Cooperative and municipal utilities are not immune from these pressures, though investor-owned utilities may feel the pressure more acutely. The process of business benchmarking and the ability of the customer/owners of these utilities to track changes in the electricity industry translates into cost management and competitiveness pressure in those organizations as well.

The electric utility industry is also characterized by pervasive economies of scale. As competitive pressures continue to permeate the industry, utilities will continue to look to mergers and acquisitions as a vehicle for achieving these economies and improving overall performance. Mergers continue to be a primary driver for staffing reductions, as merged entities eliminate redundant positions and organize around functional areas.

"Merger fever" translates to publicly owned utilities, too. In many parts of the country, municipal utility managers are pressured to consider mergers and privatizations, and cooperative utilities are forced to examine mergers and consolidations as ways to increase size and manage costs.

While policy makers will generally welcome cost reductions resulting from retail competition in the electricity industry, a number of stakeholders are concerned that further significant cuts in staff may ultimately threaten the excellent record of safety, reliability and emergency response that has typified electric utility performance in the past. Stakeholder views related to restructuring and utility employees is provided in Table 10.4.

Impacts of restructuring

The impacts of restructuring on electric utilities are being faced well in advance of the passage of actual legislation throughout much of the

country. Utilities attempting to prepare for competition have engaged in broad cost-cutting and staff reduction programs. Staff reductions at utilities typically take two forms. Utilities rely on attrition through retirements and early retirement inducements to shrink the workforce without having to resort to layoffs. When layoffs are required in order to meet targets, they typically operate at the opposite end of the staff pool – on recent hires and younger employees. Labor advocates and utility consultants have recognized a resulting aging of the utility employee workforce, and express concern that utilities are no longer providing enough on the job training for the next generation of workers. Moreover, because the training period for newly hired staff can take years, there may be a significant lag in the time it takes to materially change – or restore – the quality of the workforce.

As competition enters the electric utility industry, one might also expect increased competition for trained and qualified staff. Electric utilities providing distribution service may face continuing erosion in trained and skilled staff as new market entrants attract employees from incumbent businesses in the industry. Electric utilities already increasingly rely upon contract workers and firms to obtain necessary skilled staff services without the financial cost of making permanent hires in the lower-48, and may be increasingly pressured to rely on these substitutes for full-time employees. There is potential for the same situation to develop in Alaska.

Another significant consequence of increasing competitive pressure is the automation of customer service functions. In this regard customers may see the greatest impacts, as local service offices are closed and replaced with telephone or mail-based customer service functions. As service agents are replaced by these systems, there is a risk that customers will have increasing difficulty resolving disputes, registering complaints or obtaining assistance dealing with a service account. Finally, as competition stimulates the introduction of new technologies into the industry, a broad range of staffing functions may be displaced. Automated meter reading technologies replacing human meter readers is a well-known example.

A summary of potential impacts on utility employees from restructuring appears in Table 10.5.

Restructuring may also act as stabilizing force. The current period between monopoly and competition is most characterized by uncertainty. This uncertainty contributes to utility unwillingness to hire additional staff unless absolutely necessary. A clear policy decision about whether and how to restructure the industry could provide the stability necessary for utilities to feel comfortable about permanently hiring full time staff.

Impacts on universal service and affordability

Reduced staffing levels or increased pressure to increase staff productivity may lead to several negative impacts on universal service and affordability. Utilities may take longer to respond to and repair emergency outages in widespread emergency situations, as smaller crews are expected to address more problems. In some cases of widespread weather-related outages in the recent past, community leaders have questioned their utility's restoration priorities and expressed concern that poor and minority neighborhoods are the last to be returned to service. While the affected utilities in these situations uniformly offer sound technical explanations and refutations for such charges, these allegations created at least a public relations problem. This adverse impact may be mitigated by technological advances that can substitute effectively for the act of sending an employee to the outage site until that action is most effective.

As customer service staff are reduced and consolidated at call centers, customers may face delays in obtaining information and resolving problems. The solution to this potential issue lies in ensuring that any automation or centralization of customers service functions meet high standards of responsiveness and effectiveness in addressing customer inquiries and problems.

Cost cutting strategies under restructuring may also lead to deferrals of scheduled maintenance and decisions to delay new investments in performance enhancing measures and programs. Such deferrals and delay may leave the utility system more vulnerable to multiple failure scenarios. Again, if staffing levels have been significantly reduced, customers may face more frequent and longer problems with service quality.

Finally, there may be adverse impacts on affordability as a result of cost shifting to the distribution system. Under most restructuring approaches taken in the United States, the transmission and distribution of electricity remain monopoly functions operating under cost of service regulation. As utilities reorganize themselves to operate in this world, there may be increasing incentive to shift employees, and therefore costs, to these sectors. As a result of this de-averaging of costs associated with the electricity system, residential and small commercial customers may be forced to bear a higher percentage of system costs. Even if such cost shifting is economically justified, the net effect may be sufficient to substantially offset the savings benefits of the move to competition. Potential impacts of changes in employment trends on universal service and reliability are summarized in Table 10.6.

CORRECTION

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Impacts on universal service and affordability

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Policy options

At one extreme of policy options is the option to do nothing. Policy makers can decide that staffing changes are an inevitable market response to increasing competition. This option has the effect of not only assigning the question of staffing levels to the market, but also the concomitant decision to allow the market to assign appropriate value to reliability, service quality, and emergency response. One significant disadvantage to this approach is the time lag associated with any policy change. Rebuilding a trained and capable staff, and restoring service quality conditions could take years.

Policy makers in Alaska have at their disposal a range of options for addressing potential adverse impacts on utility employees resulting from the introduction of competition. As indicated above, the most important step policy makers can take is to resolve the uncertainty about when and how the restructuring process will occur. In a more stable environment, utility services providers can address staffing levels and future needs with more certainty, and may be more willing to make investments in their workforce.

A more direct option is to mandate staffing levels for certain key utility functions. Staffing levels could be established by a competent agency to ensure safety, reliability and adequate response to emergency situations. The key disadvantage of this approach is that it requires extensive regulatory processes to determine appropriate staffing levels. Staffing standards may also reduce the utility's flexibility to respond to competitive pressures and to adjust staffing policies in the most cost-effective manner possible. The costs of developing and complying with such standards will be passed on to customers, and may diminish the overall level of savings benefits obtained through competition. Finally, staffing standards imposed under regulation may have the effect of eliminating market-driven incentives to increase productivity. Of course, these concerns are also often raised in response to efforts by labor organizations to maintain or expand minimum crew sizes. The essential question under such an approach is whether safety, reliability and emergency response rates can be maintained without unduly interfering with an appropriate level of utility management discretion.

An alternative to setting specific standards is the adoption of performance standards. Rather than attempting to determine "correct" staffing levels, a performance standard approach allows the utility to exercise its discretion in taking the appropriate action to meet the standard. Under a model of restructuring that allows some utilities to "opt-in" to restructured markets, the exercise of the option might be conditioned on an acceptance of limited jurisdiction.

At the most extreme, policy makers could create incentives for adequate staffing and service quality through legal liability mechanisms. That is, rather than dictating standards and overseeing them, policy makers could create and enhance legal mechanisms for imposing liability on service providers whose failure to maintain an adequate staffing resource causes or increases personal injury or property losses. While this approach has the benefit of allowing service providers discretion in ensuring continued safety, reliability and emergency response, establishing clear standards for liability may be difficult. Since most electrical system failures are related to forces beyond the control of the service provider, determining the degree to which inadequate staffing caused additional damages may be a complex task.

A summary of policy options relating to utility employees is contained in Table 10.7.

TABLE 10.1
1996 County Business Patterns for Alaska

SIC	Industry	Number of Employees	Annual Payroll (\$1,000)	Total Establishments	Establishments by Employment-size class			
					1-19	20-99	100-499	> 499
	TOTAL	183,484	6,093,911	17,645	15,992	1,391	241	21
1200	Coal mining	(C)	(D)	2	1	0	1	0
1220	Bituminous coal and lignite mining	(C)	(D)	1	0	0	1	0
1221	Bituminous coal and lignite surface	(C)	(D)	1	0	0	1	0
1240	Coal mining services	(A)	(D)	1	1	0	0	0
4900	Electric, gas, and sanitary services	1,969	112,634	133	112	18	3	0
4910	Electric services	1,309	77,823	54	41	10	3	0
4920	Gas production and distribution	(C)	(D)	8	6	2	0	0
4930	Combination utility services	(B)	(D)	2	0	2	0	0
4939	Combination utilities, n.e.c.	(B)	(D)	2	0	2	0	0

Source: <http://www.census.gov/cgi-bin/datamap/state?02>

Abbreviations and symbols:

SIC -- Standard Industrial Classification.

n.e.c. -- Not elsewhere classified.

(D) -- Withheld to avoid disclosing data for individual companies; data are included in broader industry totals.

(A)-(C), (E)-(M) -- Employment-size classes are indicated as follows:

A--0 to 19	H--2,500 to 4,999
B--20 to 99	I--5,000 to 9,999
C--100 to 249	J--10,000 to 24,999
E--250 to 499	K--25,000 to 49,999
F--500 to 999	L--50,000 to 99,999
G--1,000 to 2,499	M--100,000 or more

FIGURE 10.1 Average Employment in Electric, Gas & Sanitary Services Category and Average Unemployment Rates - Alaska (1990-1998)

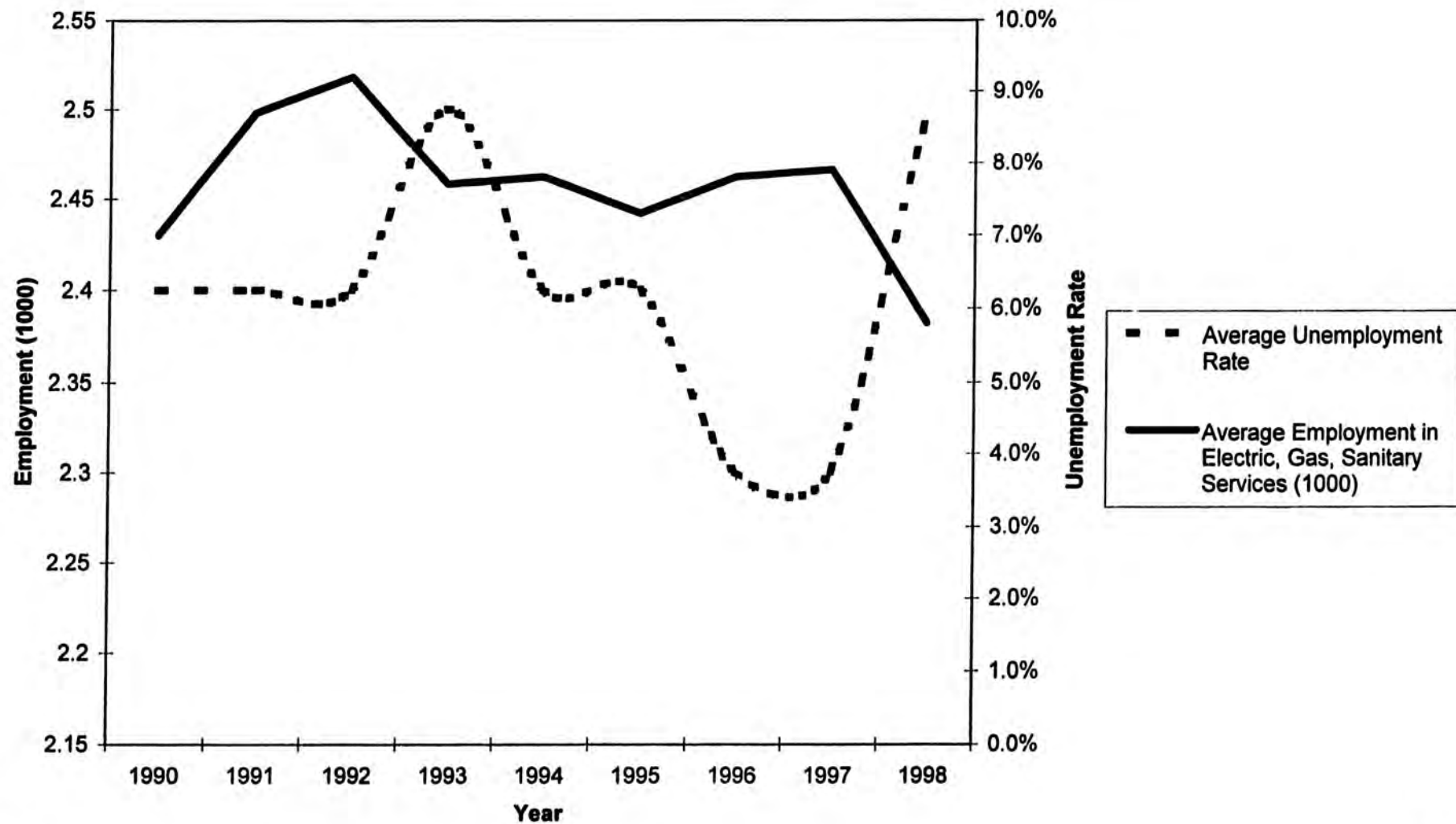
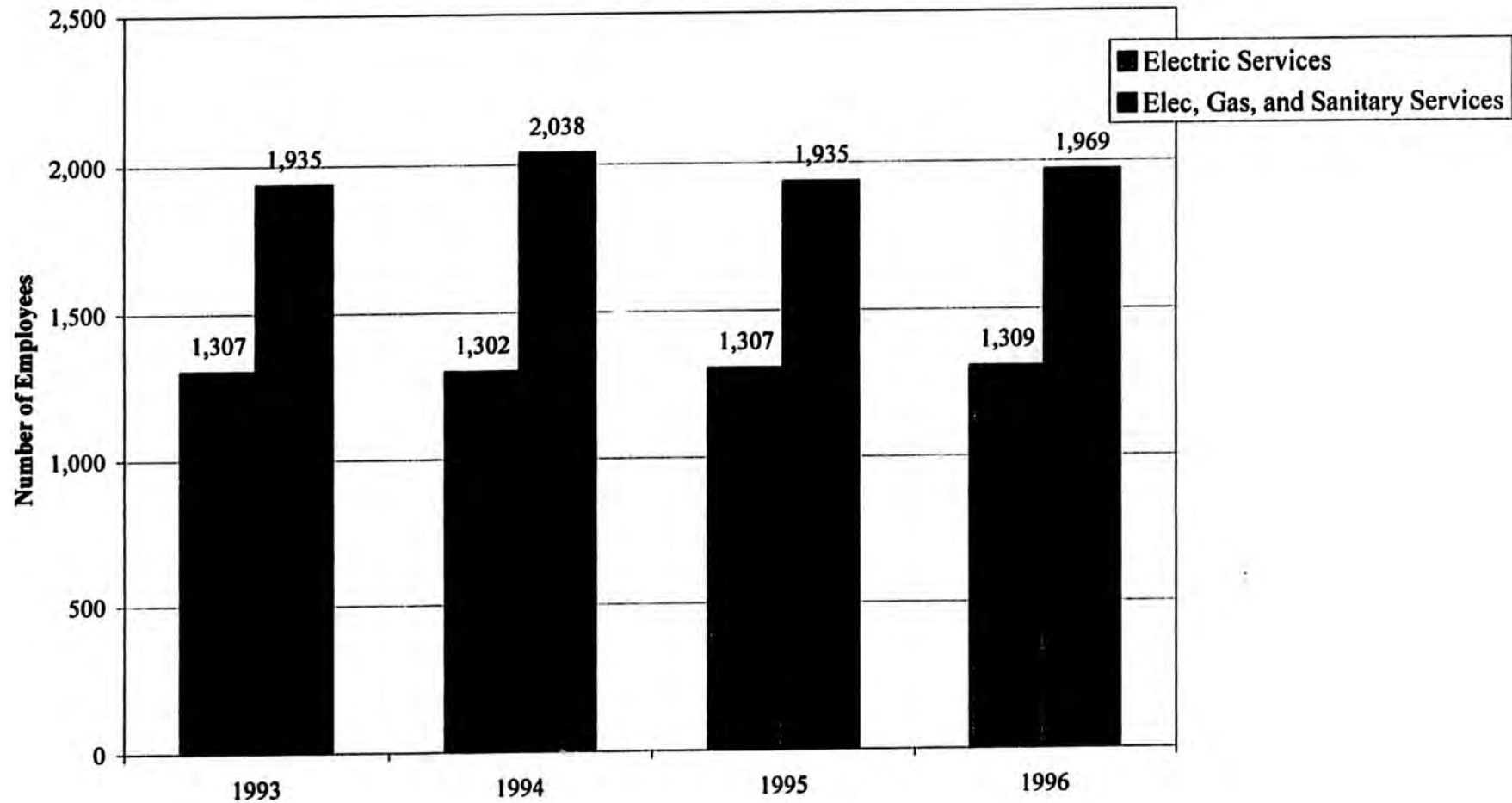


FIGURE 10.2 Utility Employment, Alaska 1993-1996



Source: US Census Bureau

TABLE 10.2
Unionization, Employment and Labor Earnings Patterns in Transportation and Telecommunications Industries

<i>Industry</i>	1973	1978	1983	1988	1991	1996
<i>Trucking</i>						
Union Membership Rate	49%	46%	38%	25%	25%	23%
Work Force Size (x1,000)	997	1,111	1,117	1,544	1,617	1,907
Weekly Earning (1983/84 dollars)	\$499	\$491	\$404	\$386	\$405	\$353
<i>Railroad</i>						
Union Membership Rate	83%	79%	83%	81%	78%	74%
Work Force Size (x1,000)	587	580	428	363	286	282
Weekly Earning (1983/84 dollars)	\$475	\$491	\$507	\$490	\$494	\$470
<i>Airlines</i>						
Union Membership Rate	46%	45%	43%	42%	37%	36%
Work Force Size (x1,000)	368	465	464	683	696	800
Weekly Earning (1983/84 dollars)	\$499	\$498	\$455	\$420	\$443	\$435
<i>Telecommunications</i>						
Union Membership Rate	59%	55%	55%	44%	42%	29%
Work Force Size (x1,000)	949	1,075	1,060	1,114	1,107	1,126
Weekly Earning (1983/84 dollars)	\$399	\$442	\$457	\$447	\$458	\$488
<i>All other Industries</i>						
Union Membership Rate	23%	22%	19%	16%	15%	14%
Work Force Size (x1,000)	72,619	81,737	85,220	97,704	99,080	107,844
Weekly Earning (1983/84 dollars)	\$399	\$363	\$301	\$310	\$322	\$334

Source: Information on union membership rates and industry work force sizes were provided by Barry Hirsch and David Macpherson. Information on labor earnings for the 1973-1991 sample period are taken from Current Population Survey Files and the 1996 earnings are taken from Hirsch and Macpherson's Union Membership and Earnings Data Book (1997a). The sample years from 1978 to 1996 cover the post-deregulation period for trucking, railroads, and airlines. The years 1983-1996 cover the post-divestiture period for telecommunications.

FIGURE 10.3 Weighted Average Weekly Earnings 1973 - 1996
Trucking, Railroad, Airlines, Telecommunications Industries
(\$1983-84)

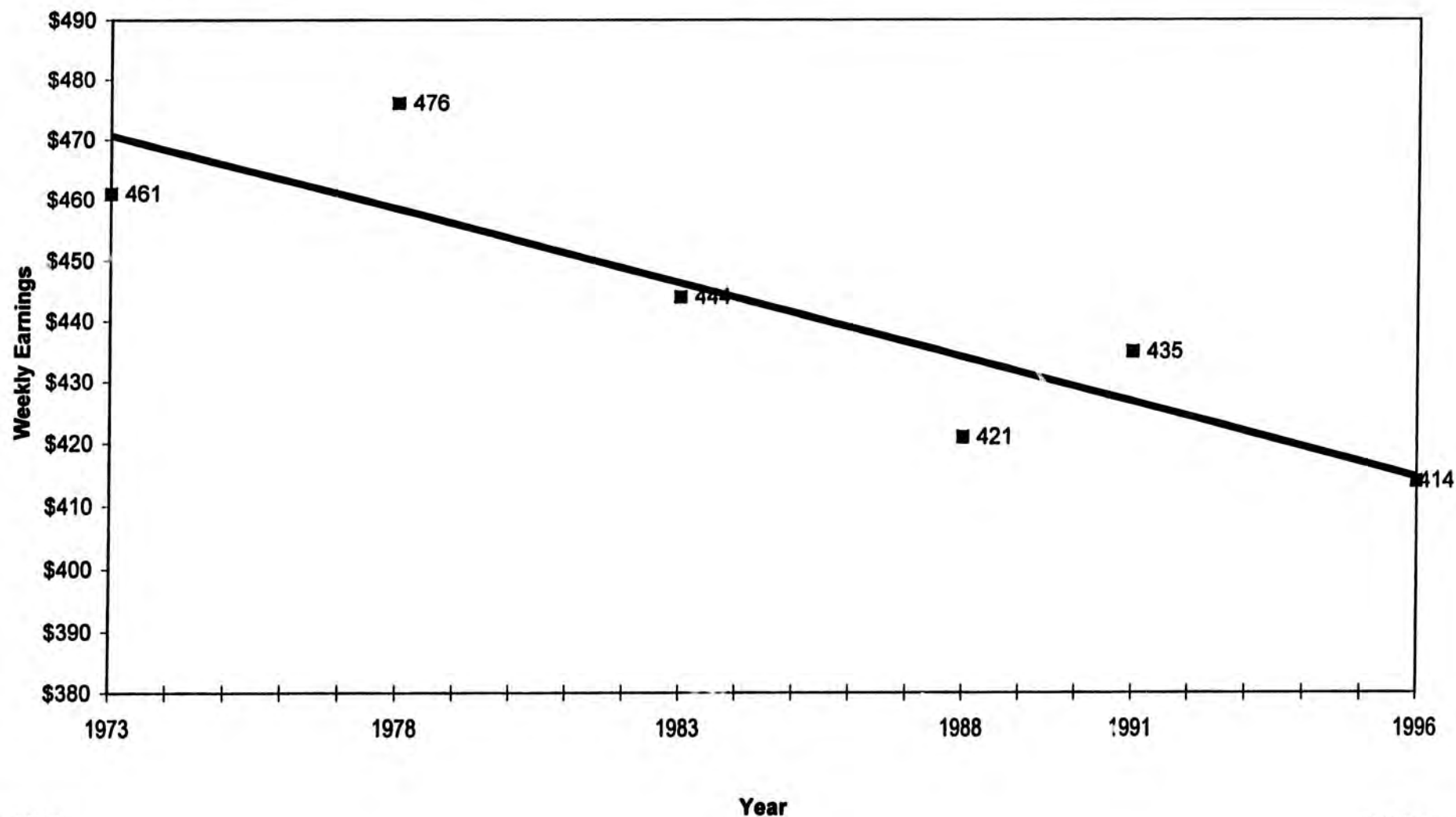


TABLE 10.3
Labor Representative's Experiences and Views on California Restructuring

Summary of Utility Employee Issues and Experiences – Labor Representative, California

TESTIMONY OF RAE E. SANBORN, BUSINESS MANAGER/FINANCIAL SECRETARY, IBEW LOCAL47 BEFORE THE CALIFORNIA ASSEMBLY UTILITIES AND COMMERCE COMMITTEE (January 25, 1999).

Chairman Wright and committee members; it is an honor to be afforded this opportunity to be here with you today and share my observations concerning changes in the California electric utility industry during the five years since the issue of utility deregulation came on the scene.

My comments will focus primarily on the impacts deregulation has had or is having on jobs and system reliability. As many of you know, I served as chairman of the CUE (California Utility Employees) coalition from its formation in May of 1994 through June of last year. While my testimony is based on my first-hand knowledge and experience on the Southern California Edison property, much of what I've addressed is applicable to the other utility properties in the state.

Loss of Good Full Time Jobs.

In March of 1994, Local 47 represented nearly 5,000 full-time workers on the Southern California Edison property. Three years later, that number had been cut by approximately 35 percent during the 95/96 time frame to slightly more than 3,200. This was done by laying off the younger up-and-coming workers followed by early retirements of the older, more skilled employees. As of December 1998, the number of full-time workers had climbed back to approximately 3,970 full-time workers. Thus, the number of California workers now receiving full-time employment and benefits in our segment of the industry is down approximately 20 percent. It would be one thing if deregulation had caused the utilities to examine their operations and determine that they actually had excess positions and had simply reduced the work force to the needed number of employees. However, this is not the case.

Cutbacks have left the Edison Company severely short-handed in skilled positions needed to lead and train the work force as well as in qualified younger employees to promote into vacancies. As a result of the understaffing, the remaining work forces in critical positions are being taxed to the maximum. For instance, in the manned substation switching centers, there is an ongoing shortage of qualified System Operators, thus requiring the remaining crew members to fill vacant shifts by working weeks and even months without a day off. Routine preventive maintenance is going undone due to the shortage of qualified test and maintenance personnel. Line crew personnel in many areas work virtually around the clock, with some employees tripling their base salaries due to overtime demands.

The voids in the work force are being filled with contractors (mostly non-union), and part-time and temporary employees. In many cases this is a temporary stop-gap measure which delays the inevitable. The adverse impact of the loss of the traditional supply of highly qualified personnel, coupled with the deterioration of the system infrastructure, will become more and more evident as time goes by. Edison is relying on expensive systems automation and modifications to substitute for the needed workers, but I believe this program has and will continue to result in decreases in true system reliability in the future. One thing is certain, several thousand good-paying middle-class California jobs have been lost and have been replaced by a transient, part-time work force which provides far less opportunity for California families.

System Reliability.

During the drafting of AB 1890, as residents and workers, we at Local 47 worked hard in helping to develop various performance standards to ensure a high level of system reliability and customer satisfaction. It seemed to be a perfect marriage: if meaningful system-reliability standards could be established, the public's interests would be protected and there would be a natural linkage to retaining good middle-class family jobs. Obviously, the number of jobs has been substantially reduced, yet you see no immediate correlation in reductions in service. This is a product of time and of recording and accounting procedures, rather than actual system reliability.