

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 8672

2673 SCOMM 120 HOUSE SPEC. COMM. UTILITY RESTRUCTURING, 1999-2000

Renewable Energy, Conservation, and Environmental Issues		
Nevada	A.B. 366	The PUC shall establish portfolio standards for domestic energy that set forth the minimum percentage of the total electricity sold during each calendar year that must be derived from renewable energy resources. The portfolio standards must require two-tenths of 1 percent of the total amount of electricity annually consumed by customers in this state as of 1/1/01 to come from renewables. This standard must be increased biannually thereafter by two-tenths of 1 percent of the total annual electric consumption until the standard reaches a total of 1 percent of the total amount of electricity consumed. The electricity must be derived from not less than 50 percent renewable energy resources and be derived from not less than 50 percent solar renewable energy systems. Tradable renewable energy credits are allowed. Reporting requirements are established to ensure that all providers comply with the standards. A vertically integrated electric utility that has 9 percent of its electricity furnished by renewable energy resources on 1/1/97 is deemed to be in compliance until 1/1/05. Between 1/1/05 and 12/31/09, such a utility shall reach a total of one-half of 1 percent of the annual amount of electricity consumed, in annual increments of one-tenth of 1 percent, from solar energy resources. (Section 52, p. 22-23)
California	H.B. 1890	PUC must require each electric corporation to identify a rate component to fund energy efficiency, public interest research and development, and demand side management in specified yearly amounts that total \$540 million through 3/31/02. The funds are to be held by the Energy Commission until further legislative action. Consumers can make voluntary contributions through their monthly bills to support such programs. (p. 6, 61-67)
Maine	H-568	Renewable resources are defined as total power production capacity not exceeding 100 mW and relying on fuel cells, tidal power, solar, wind, geothermal, hydroelectric, biomass, or municipal solid waste generators. Each competitive provider must demonstrate that no less than 30 percent of its portfolio of supply sources is derived from renewable resources. PUC shall review the 30 percent requirement and make a recommendation for any change to the joint standing legislative committee no later than 5 years after the beginning of retail competition. PUC shall require utilities to implement energy conservation programs. (p. 15-17)
Montana	S.B. 390	Public interest requires continued protection of consumers through funding for public purpose programs for energy conservation, weatherization, and renewable resource projects and applications. Such programs are paid for with a universal system benefits charge assessed at the meter. Beginning 1/1/89 through 7/1/03, 2.4 percent of each utility's annual retail sales revenue for the calendar year ending 12/31/95, is the minimum annual funding level for total system benefits programs, and 17 percent of that minimum must be used for low-income assistance programs, including weatherization. The balance may be used for other benefit programs such as energy conservation and renewables. Customers with loads greater than 1000 kW pay a system benefit program charge equal to the lesser of \$500,000, less credits, or .9 mills per kW hour x the customer's kWh purchases, less credits. Credits can be carried forward into future years. Customers are entitled to credits for expenditures on renewable energy or conservation-related activities that are part of internal utility programs or activities. Utilities must submit an annual summary report to PSC and transition advisory committee detailing activities relating to all system benefit programs. On or before 7/1/02, PSC and transition advisory committee shall reevaluate ongoing need for such programs and make future needs recommendation to legislature. (p. 2-4, 11-12, 16)
New Hampshire	H.B. 1392	Overall policy goal is to implement restructuring with minimum adverse consequences to environment. Continued environmental protection and long-term environmental sustainability should be encouraged. A non-bypassable, competitively neutral system benefits charge applied to distribution may be used to fund energy efficiency, research and development, and investments in new technologies, as determined by the PUC. Increased future commitments to renewables should be consistent with existing state energy policy and be balanced against impact on rates. Over the long term, renewables can have significant environmental, economic, and security benefits. Customers should be able to pay a premium for renewables. Incentives should be provided for demand side management. (p. 2, 5-7)
Oklahoma	S.B. 500	

Source: <http://www.ncsl.org/programs/esnr/compare.htm>

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Renewable Energy, Conservation, and Environmental Issues (cont.)		
Pennsylvania	H.B. 1509	From 1/1/97 until 12/31/01, each distribution company must include a 2.3 mills per kWh charge to fund demand side management and renewables. PUC shall determine allocations of funds between the two categories. PUC, at its own discretion, may increase the sums after notice and public hearing. City where a generation plant has been proposed may request builder to fund study of environmental effects of proposed facility, up to lesser of \$100,000 or .1 percent of estimated capital cost of project. (p. 43, 52-53)
Rhode Island	96-H 8124 Sub. B	Energy efficiency benefits charge assessed to all but muni electric company customers for DSM over five years starting 3/1/98 (\$.0033/kwh in '98, to \$.0025/kwh by 2002). Competitive procurement process must be used.
Massachusetts	H.B.5117	DOER will oversee and coordinate energy efficiency programs. Renewables will be funded by vacillating annual rate of \$.00075/kwh to \$.0005/kwh by 2002. Funds would be deposited in "Massachusetts Renewable Energy Trust Fund". Renewables portfolio will be established by DOER. DOER will oversee and coordinate ee programs. Minimum requirements for retail suppliers for new renewables: 1% of sales by 2003, or within one year of any renewable being within 10% of the avg. spot mkt price; an additional .5% per year through 2009; an additional 1% per year until a date determined by DOER. Hydro and municipal solid waste don't count toward new renewables requirement, but may count toward a portfolio standard to be determined by DOER for all renewables, including existing. A study was ordered to be conducted by department of revenue on the following tax deduction options: customers purchasing renewable energy in excess of minimum requirements under renewables portfolio standard, could take tax deduction of 50% of above market price. Business customers would get 25% tax deduction. Individual or business purchasing energy efficiency equipment would be eligible for a 20% deduction up to \$10,000. Businesses would be eligible for 10% up to \$50,000. Performance standards for fossil fuel plants will be drawn up by EPA with adoption by at least 3 other northeast states. Assessment against all nukes will be at least \$90,000 to be used for radiation control program. The performance standards for fossil fuel plants must include at least one pollutant by 2003, or earlier if adopted by 3 other states. The state Dept. of Environmental Protection, in conjunction with the A.G. shall promulgate standards for any pollutant determined by the DEP to be of concern to public health, and produced in quantity by electric generation facilities.
Connecticut	H.B. 5005	DPUC must establish a 0.3 cents per kilowatt-hour charge to fund energy conservation programs and a charge rising to 0.1 cents per kilowatt-hour to fund investments in renewable technologies. The Department of Environmental Protection must develop emission standards for pollutants for generating plants serving the Connecticut market, whether they are located in the state or elsewhere. The standard for a pollutant goes into effect when adopted by three northeastern states having a total population of at least 27 million. There is a Renewables Portfolio Standard that preserves the level of existing renewables, 5.5% of sales, and requires sales from those (or other renewable) technologies to increase to 7% by 2009. Sales from Class I renewables (solar, wind, sustainable biomass, fuel cells) must equal .5% per year to 3% by 2006; and an additional 1% per year to 6% by 2009.
Illinois	H.B. 362	Renewable Energy Resources Program will be administered by Dept. of Commerce and Community Affairs. Grants, loans and other incentives for investment in renewable energy resources. Report will be made to the General Assembly on the use and potential of renewables. As of 1/1/98 "Renewable Energy Resources and Coal Technology Development Assistance Charge" will be assessed customers. \$.05/mo for residential, non-residential and gas customers; \$37.5/month for non-residential electric and gas customers. Environmental protection: \$100 million over 10 years for development of renewable energy resources and coal technology. \$10 million in annual funding through surcharge on bills. Energy Efficiency Trust Fund: As of 1/1/98, this trust fund will consist of the pro-rata share of \$3 million based on kWh sales from each supplier. By 4/1/99, every supplier with nuclear generation must file a tariff indicating the kWh sales for those facilities for decommissioning expense purposes.

Source: <http://www.ncsl.org/programs/esnr/compare.htm>

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Treatment of Transmission and Distribution (T&D)		
Nevada	A.B. 386	A public entity does not become subject to the provisions of Sections 28-53 solely because the entity provides transmission or distribution service to an alternative seller except that the public entity shall provide such transmission and distribution services on an open and nondiscriminatory basis to alternative sellers in accordance with standards the PUC may establish by regulation. The PUC shall require each provider of a noncompetitive service that is necessary to the provision of a potentially competitive service to make its facilities or services available to all alternative sellers on equal and nondiscriminatory terms and conditions. The PUC may establish standards of conduct to prevent anti-competitive activities and such standards of conduct may include limitations on the ownership, operation, and control of transmission facilities and any generation necessary to reliable and economic operation of such transmission facilities. The PUC shall adopt regulations ensuring that a person who owns a transmission or distribution facility makes the facilities available on equal and nondiscriminatory terms and conditions to all alternative sellers or customers of alternative sellers. The Colorado River Commission may sell electricity or provide transmission or distribution service to customers who it was not serving or with whom it did not have a contract on the effective date of the relevant provisions of the Act, if the Colorado River Commission allows its system for transmission and distribution to be utilized by other alternative sellers pursuant to such terms and conditions as the PUC may establish. PUC may conduct an investigation of the effect on the market of transmission congestion or constraints. (Section 40, p. 14; Section 41, p. 15; Section 42, p. 15; Section 44, p. 17; Section 50, p. 20)
California	H.B. 1890	Continues to be regulated. All customers and suppliers to receive open, nondiscriminatory, and comparable access. (p. 29-30)
Maine	H-568	Upon request from a competitive provider, PUC shall provide load data on a class basis that is in the possession of a T&D utility, subject to reasonable protective orders to protect confidentiality. Except as otherwise permitted, on or after 3/1/00, an IOU T&D may not own, have a financial interest in, or otherwise control generation or generation-related assets. After commencement of retail access, a large investor-owned T&D utility serving more than 50,000 retail customers may not sell electricity to any retail customer. An affiliated provider may sell to retail customers outside the service territory of the distribution utility with which it is affiliated and within the service territory of the distribution utility with which it is affiliated, except that the affiliate may not sell more than 33 percent of the total kWh sold within the service territory of the distribution utility. No later than 1/1/05, based on its evaluation of the development of the competitive retail sales market, PUC shall complete an evaluation of the need for the market share limitation and shall report its findings to the legislature. A distribution utility may not engage in joint advertising or marketing programs of any sort with its affiliated competitive provider. Employees of a distribution utility may not be shared with and must be physically separated from those of an affiliated competitive provider. A distribution utility and its affiliated competitive provider must keep separate books and records. All regulated products and services offered by a distribution utility, including any discount, rebate, or fee waiver, must be available to all customers and competitive providers simultaneously and without undue or unreasonable discrimination. (p. 3, 8-12)
Montana	S.B. 390	Distribution services providers must make distribution facilities available to all suppliers, providers, and customers on a nondiscriminatory, comparable basis; and be the emergency supplier of electricity and related services. When a distribution services provider acts as emergency supplier, the supplier that should have provided the power must reimburse the distribution company according to a prescribed formula. Distribution services providers are not required to purchase reserve supply to fulfill emergency obligations. Transmission services must also be available on a nondiscriminatory, comparable basis. If a co-op offers electricity competitively to customers using a utility's distribution facilities, the co-op must create an affiliated for-profit entity to serve those customers that allows the entity to be taxed at the same level as other for-profit suppliers. PSC shall regulate retail transmission and distribution services including establishment of just and reasonable rates, which may include performance-based rates. (p. 2, 6, 9-10, 12-13, 22)
New Hampshire	H.B. 1392	T&D should remain regulated for the foreseeable future. PUC to take necessary measures to ensure nondiscriminatory, comparable, and open access to T&D. (p. 4-5)

Source: <http://www.ncsl.org/programs/esnr/compare.htm>

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Treatment of Transmission and Distribution (T&D) (cont.)		
Oklahoma	S.B. 500	A primary goal of a restructured industry is to enable suppliers to engage in fair and equitable competition through open, equal, and comparable access to T&D systems. Entities which own both T&D as well as generation facilities shall not be allowed to use any monopoly position in these services as a barrier to competition. Generation shall be functionally separated from T&D services, which shall remain regulated. Comparable access for retail suppliers competing with affiliates of entities supplying T&D shall be assured. Commission shall monitor companies providing T&D and take necessary measures to ensure no supplier of such services has an unfair advantage in offering and pricing such services. Benefits associated with implementing an independent system planning committee composed of owners of electric distribution systems to develop and maintain planning and reliability criteria for distribution facilities shall be evaluated. No later than 7/1/99, Commission shall commence study of consumer issues related to restructuring including but not limited to examination of service territories, obligation to serve, and obligation to connect, as well as rates for regulated services. Final report shall be provided to the legislative task force no later than 8/31/00. (p. 3-7)
Pennsylvania	H.B. 1509	Continues to be regulated as a natural monopoly. Distribution company remains provider of last resort unless PUC approves alternative. PUC shall require all transmission and distribution facilities to provide comparable open access to all customers and suppliers. There is a rebuttable presumption the distribution company can accommodate all requests for service from suppliers but does not have to install nonstandard equipment unless customer pays full cost of such facilities. While distribution company collects CTC, or until there is 100 percent direct access, company has full obligation to serve, including connection, delivery, and acquisition of power. After transition period, PUC shall adopt regulations defining obligation to serve. Company must accept returning customer on same terms and conditions as new applicant. Distribution company shall implement procedures to require suppliers to deliver sufficient power to meet supplier's customer obligations. Subject to PUC approval, company may require customer to pay for enhanced metering capability. (p. 22, 28, 34, 46, 48-49)
Rhode Island	96-H 8124 Sub. B	T&D companies must provide nondiscriminatory access on reasonable terms consistently applied to all customers. Distribution companies must terminate all requirements contracts with generators no later than 3 months after 40 percent of the kWh sales in New England are available for retail access and can only own or operate generation or transmission facilities through affiliates, with some specific exceptions. (p. 6, 17-19, 21)
Massachusetts	H.B. 5117	T&D companies must provide nondiscrimination access on reasonable terms for all suppliers and customers. Transmission and distribution assets as of 12/31/96, or acquired thereafter, shall be transferred to transmission or distribution companies, respectively. Distribution companies will be prohibited from selling electricity at retail and from owning or operating transmission services. As of 3/1/98, DTE will designate service territories for distribution companies.
Connecticut	H.B. 5005	Transmission and distribution activities will continue to be regulated by the DPUC, but electric generation activities will not be regulated.
Illinois	H.B. 362	To ensure system reliability, the Commission, within 180 days of the Act must adopt rules and regs for T&D that establish the procedures for restoring T&D to customers.

Source: <http://www.ncsl.org/programs/esnr/compare.htm>

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Legislative Oversight		
Nevada	A.B. 386	PUC shall issue a quarterly report to the legislature assessing developments in electric industry in Nevada. Report shall evaluate, at a minimum, effectiveness of competition, compatibility of direct access with environmental goals, impacts of competition on each customer class relative to present structure, and opportunities to cooperate with other states or the Federal Government in implementation of competition. In the quarterly report for the first quarter of 1999, the PUC shall provide a comprehensive evaluation of the development of the markets for potentially competitive services since 7/1/97. Not later than 1/1/99, Department of Taxation shall report to legislature on effect of Nevada's tax policies on potential for effective competition, effect of competition on state and local tax revenues, and recommend new legislation to advance Act in competitively neutral manner with minimum impact on state and local tax revenues. (Section 53, p. 23; Section 335, p. 148; Section 336, p. 148)
California	H.B. 1890	Five-member oversight board composed of three gubernatorial appointees, one Senator, and one Assemblyman. Board oversees the ISO and Power Exchange and serves as the appeal board from ISO decisions. (p. 5, 34-36)
Maine	H-568	On December 31 of each calendar year, PUC shall submit to the joint standing legislative committee a report describing the PUC's activities in carrying out the requirements of the Act, and include draft legislation designed to modify the Act consistent with the public interest. The joint standing legislative committee having jurisdiction over utility and energy matters may report out legislation concerning electric energy restructuring to future legislative sessions. (p. 22, 26)
Montana	S.B. 390	Transition advisory committee consists of eight voting members, equally balanced by party: 4 appointed by Speaker and 4 appointed by Senate President. Non-voting advisory members include: the director of dept. of environmental quality; one public utilities appointee; and 1 representative each from consumers, cooperatives, and PSC. Governor appoints 1 each non-voting member from: industry, non-industrial consumers, organized labor, environmental/ conservation, low-income program provider, Indian tribes, power market industry. PSC, legislative counsel, and agencies provide staff. Committee meets quarterly and dissolves on earlier of date full transition is completed or 12/31/04 and shall: provide an annual report on or before 11/1/01 to governor, speaker, Senate president, and PSC; provide quarterly reports to legislature thru 1/1/99; analyze and report on transition to effective competition. Annual report in 2000 must evaluate pilot programs with loads under 1000 kWh and include legislative recommendations about best means to further encourage choice, market access, and need for additional consumer protection revisions. Criteria for evaluating effective competition are specified. On or before 7/1/02, committee and PSC shall reevaluate need for ongoing universal system benefits programs and make recommendations. On or before 11/1/01, committee shall determine whether Montana utilities have an opportunity to market outside the state comparable to the reverse. On or before 11/1/98, committee shall make recommendations to governor and legislature regarding low-income assistance programs. (p. 4, 12, 15-16, 27)
New Hampshire	H.B. 1392	Establishes 14-member legislative oversight committee, seven from each house, with 2-year terms. Committee to report annually on or before 11/1 to governor, legislature, and PUC. In conjunction with PUC, report shall address new legislation and proposed amendments to existing law to promote restructuring. (p. 12)
Oklahoma	S.B. 500	Act creates Joint Electric Utility Task Force composed of 14 members of the legislature, 7 each selected by Senate President and House Speaker. Task force may appoint advisory councils made up of representatives of interested parties. Task force shall direct and oversee studies by the Commission and the Tax Commission. Task force shall remain in effect until termination, which shall be no later than 1/1/03. Commission shall make reports to task force on independent system operator issues, technical issues, financial issues, and consumer issues no later than 2/1/98, 12/31/98, 12/31/99, and 8/31/00, respectively. Task force may make final recommendations to the governor and the legislature. The task force is authorized to retain consultants and experts to study the creation of an ISO and the benefits of establishing a Power Exchange, which would operate as a power pool. All studies and recommendations relating to the ISO shall be submitted to the task force on or before 2/1/98, and shall conform to FERC Order No. 888. (p. 8-9)
Pennsylvania	H.B. 1509	

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Legislative Oversight (cont.)		
Rhode Island	96-H 8124 Sub. B	On 1/1/98, and annually for next 4 years, PUC to file report with governor and legislature detailing developments in competitive supply market, estimated savings from retail competition, progress towards regional transmission agreement, reforms instituted by regional power pool, and status of restructuring in surrounding states. (p. 23)
Massachusetts	H.B.5117	DTE, DOER and any other agencies, task forces involved with the Legislature will be reported to on an annual basis, or as necessary, by restructuring process.
Connecticut	H.B. 5005	Companies and agencies are required to report on various issues to the Legislature. These include the status of competition, rates, reliability, environmental quality and dislocated workers.
Illinois	H.B. 362	On or before 12/31/99, and once every three years thereafter, the Commission shall monitor and analyze patterns of entry and exit to the market and report its findings to the General Assembly. During 2001 through 2006, the Commission will prepare annual reports regarding the development of electric markets. Utility companies must report annually to legislature on their collection of transition charges, efforts to mitigate stranded costs and use of transition funding mechanisms. A Policy Advisory Council, established by the legislature, will analyze restructuring and ensure that requirements of the Act are met and advise legislature on the spending of the Fund monies.

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Taxes		
Nevada	A.B. 366	If two or more persons perform separate functions collectively needed to supply electricity to final customer and the property would be centrally assessed if owned by one person, it shall be centrally valued and apportioned. Proportion of the tax levied by each county shall be determined according to valuation of contribution of each person to aggregate valuation of property. However, this provision does not apply to QFs built before 7/1/97. Not later than 1/1/99, Department of Taxation shall report to legislature on effect of Nevada's tax policies on potential for effective competition, effect of competition on state and local tax revenues, and recommend new legislation to advance Act in competitively neutral manner with minimum impact on state and local tax revenues. (Section 278, p. 114-116; Section 335, p. 148)
California	H.B. 1890	
Maine	H-568, (LD 1804)	On or before 1/1/98, the PUC and the state planning office shall provide the legislature with recommendations concerning funds to assist low-income consumers through general fund appropriations or through a tax on all energy sources in the state. (p. 26)
Montana	S.B. 390	During 4-year transition period, utilities may accelerate amortization of accumulated deferred investment tax credits associated with T&D and general plant if earnings fall below 9.5 percent earned return on average equity. Revenue oversight committee shall analyze state and local tax revenue derived from previously regulated electricity suppliers that will enter the competitive market and report to legislature annually on how revenue to state and local government is changed by restructuring and competition. On or before 11/30/98, revenue oversight committee shall recommend legislative changes, if any, to address comparable state and local taxation burdens on all market participants. (p. 8, 10, 16, 21-22)
New Hampshire	H.B. 1392	
Oklahoma	S.B. 500	The Tax Commission shall study and fully assess the impact of restructuring on state tax revenues and all other facets of current utility tax structure both on the state and all other political subdivisions. Study shall include feasibility of a uniform consumption tax or other method of taxation. Tax Commission is expressly prohibited from promulgating any rule or order without prior express authorization from the legislature or legislative task force. In the event a uniform tax policy, which allows all competitors to be taxed on a fair and equal basis, has not been established on or before 7/1/02, effective date for customer choice shall be extended until such time as a uniform tax policy has been established. (p. 8)
Pennsylvania	H.B. 1509	Restructuring to be accomplished in a revenue neutral manner at a level necessary to recoup losses that may result from restructuring. (p. 57-66)
Rhode Island	96-H 8124 Sub. B	By 1/1/97, retail electric licensing committee shall submit plan to legislature for taxing and/or assessing distribution and transmission companies and non-regulated power producers. (p. 22)
Massachusetts	H.B.5117	Requires parent, affiliate, subsidiary to pay transition payments to municipality impacted by devaluing of power plant in which generation facility is located. Transition payments are calculated on a declining rate from 1998-2009 (percentage difference between local property tax value of the property as of 1/1/98 and the fair cash value of the property as of 1/1 of the year previous to the year during which calculation is made). Generation facilities would be subject to the full fair cash valuation by localities. Tax payment would be a payment-in-lieu-of-taxes.
Connecticut	H.B. 5005	The gross earnings tax as it applies to generation is eliminated but the tax rate on transmission and distribution services is increased. The CTA and SBC are subject to this tax. The corporation business tax and sales tax is amended to reflect the bill's changes to the electric industry. The gross earnings tax changes are effective 1/1/00. Electric suppliers, including aggregators, will receive a one-time credit of \$1,500 against the state corporation business tax for each worker hired by the supplier who was displaced as a result of deregulation.
Illinois	H.B. 362	Sale, pledge, assignment or other transfer of intangible transition property shall be exempt from state and local taxes. A per/kWh use tax will be implemented, except for municipal corporations owning and operating a local transportation system for public service.

Source: <http://www.ncsl.org/programs/esnr/compare.htm>

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Performance Based Rates (PBR)		
Nevada	A.B. 366	PUC shall adopt regulations permitting innovative methods of pricing noncompetitive services upon a finding that such methods would improve performance or lower costs. (Section 44, p. 17)
California	H.B. 1890	
Maine	H-568, (LD 1804)	
Montana	S.B. 390	PSC shall establish just and reasonable rates, through established rate making principles, for distribution and transmission services and shall regulate these services. PSC may approve performance-based rate making on a demonstration by utilities that the alternative methods comply with the utilities' transition plans. (p. 13)
New Hampshire	H.B. 1392	Performance-based or incentive regulation should be considered for transmission and distribution services. (p. 4)
Oklahoma	S.B. 500	
Pennsylvania	H.B. 1509	PUC has authority to approve flexible rates, including negotiated, contract-based tariffs and to use performance based rates. (p. 45)
Rhode Island	96-H 8124 Sub. B	It is in the public interest to establish performance based rate making. To hold overall rate increases to the level of inflation, for the period 1/1/97 to 12/31/98, distribution companies shall implement a PBR plan in accordance with specified provisions, subject to PUC approval. However, rates for low-income customers cannot increase. (p. 3, 33-35)
Massachusetts	H.B.5117	-DTE has authority to promulgate rules and regs to establish and require PBR for each distribution, transmission, and gas company organized and doing business in the Commonwealth. Service quality standards will be established for customer service performance. Each company will file a report with DTE by 3/1 of each year comparing performance during the previous year to DTE's standards. DTE will be able to levy a penalty against any company failing to meet standards up to 2% of revenues for the previous calendar year.
Connecticut	H.B. 5005	The DPUC must investigate performance-based regulation by having each distrib co design a PBR plan and report its findings to the Energy and Technology Committee.
Illinois	H.B. 362	An Electric Utility Property Tax Assessment Task Force will be established. From the 1997 assessment year through the 1999 assessment year, fair cash value for any electric generating plant shall be determined using original cost less depreciation, and depreciation rates shall be equal to those in effect on 11/1/97.

Source: <http://www.ncsl.org/programs/esnr/compare.htm>

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APPENDIX 3

Comparison of States that have Mandated Retail Competition

	Estimated Population		1994 Gross State Product		1995 Energy Consumption			1995 Energy Generation	
	July 1, 1996	% of Total	Millions \$	% of GDP	Millions kWh	% Total	Cents/kWh	Millions kWh	% Total
Arizona	4,428,068	1.7%	89,450	1.4%	48,295	1.6%	7.7	68,967	2.4%
California	31,878,234	12.0%	833,935	12.8%	213,693	7.1%	9.9	121,881	4.2%
Illinois	11,846,544	4.5%	317,166	4.9%	126,387	4.2%	7.7	145,165	5.0%
Maine	1,243,316	0.5%	24,629	0.4%	11,386	0.4%	9.6	2,668	0.1%
Maryland	5,071,604	1.9%	125,565	1.9%	56,539	1.9%	7.1	44,659	1.5%
Massachusetts	6,092,352	2.3%	177,313	2.7%	46,750	1.6%	10.3	26,972	0.9%
Michigan	9,594,350	3.6%	227,368	3.5%	94,863	3.2%	7	92,479	3.2%
Montana	879,372	0.3%	16,046	0.2%	13,567	0.5%	4.6	25,411	0.9%
Nevada	1,602,163	0.6%	41,547	0.6%	20,582	0.7%	6.1	19,997	0.7%
New Hampshire	1,162,481	0.4%	28,066	0.4%	8,914	0.3%	11.8	13,936	0.5%
New Jersey	7,987,933	3.0%	242,171	3.7%	66,693	2.2%	10.5	27,088	0.9%
New York	18,184,774	6.9%	544,749	8.4%	129,995	4.3%	11.1	101,161	3.5%
Oklahoma	3,300,902	1.2%	63,541	1.0%	41,288	1.4%	5.5	47,955	1.6%
Pennsylvania	12,056,112	4.5%	279,897	4.3%	125,605	4.2%	7.9	168,942	5.8%
Rhode Island	990,225	0.4%	22,686	0.3%	6,547	0.2%	10.5	653	0.0%
Vermont	588,654	0.2%	12,641	0.2%	5,109	0.2%	9.5	4,840	0.2%
Virginia	6,675,451	2.5%	170,594	2.6%	84,953	2.8%	6.3	52,727	1.8%
Group	123,582,535	46.6%	3,217,364	49.4%	1,101,166	36.6%	8.6*	965,501	33.0%
ALASKA									
United States	265,283,783	100.0%	6,518,459	100.0%	3,008,641	100.0%	6.9*	2,923,933	100.0%

* Represents weighted average, by kWh consumed.

Sources: U.S. Census Bureau, EIA, Electric Power Annual 1995

From "Creating Competitive Markets in Electric Energy: A Critical Analysis of H.R. 655," T. Lenard & B. Lips, Electricity Journal, May 1998

Appendix 4

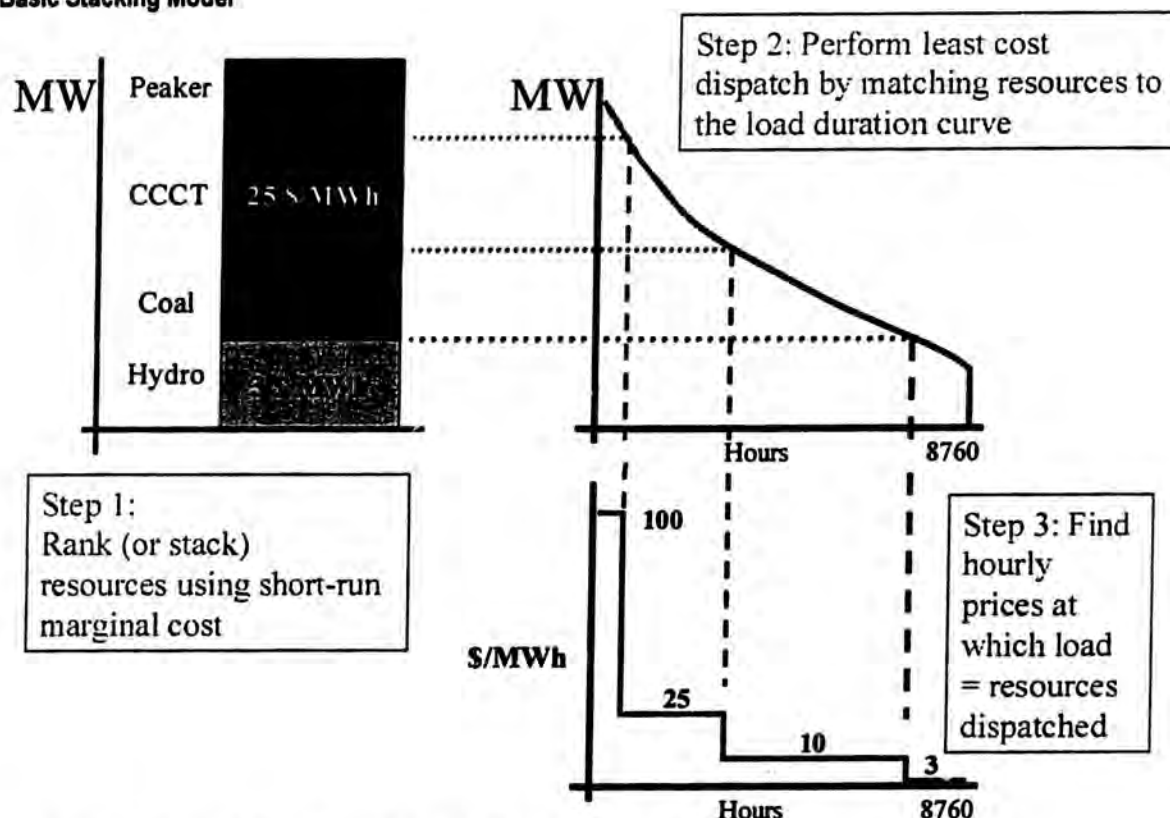
Technical Description of the Stacking Model

The stacking model calculates the operating cost and the market clearing price (MCP) using the least-cost dispatch of plants to serve the hourly demands, subject to transmission transfer limits.

Fundamental Assumptions

- Competition is fierce and sell bids follow short-run marginal cost (SRMC). Under this assumption, each generator bids into a power exchange its entire output at its SRMC that includes fuel and variable O&M. (Some market power scenarios depart from this assumption)
- Because of plant outages and hourly demand fluctuations, the hourly demand is adjusted upwards by 6% to account for operation reserve.
- Hourly demand is price insensitive.
- Bilateral contracts do not affect the dispatch order.
- Easy market entry at "all-in" cost caps the maximum annual MCP. (The surplus capacity in the region negates the need for this assumption)
- All dispatched generators receive the MCP, even if some bids are below the MCP. MCPs exist for intrazonal and export sales.
- Each generator's revenue = MCP x Dispatched output.

FIGURE 1
Basic Stacking Model



The stacking model was modified for this analysis by incorporating the ability to analyze multiple generation and load areas. The multi-area model allows transmission constraints to be modeled between the southern and northern utilities. The multi-area model enhances the standard stacking model analysis by developing separate stacks for each generation zone. Three zones were used for this study, MLP, CEA, and GVEA service territories. The multi-zone stacking works as follows:

1. The load in all three zones is determined for a load duration curve block.¹ The block is derived from the load duration curve and the annual load growth projection.
2. All plants are sorted in ascending order according to bid price. The base case assumes that bid price equals short-run variable costs of operating the plant (fuel and variable O&M)
3. Starting from the lowest bids first, a plant is dispatched subject to two limits

¹ For computational efficiency, the load duration curve consisting of loads for 8760 hours in the year has been summarized down to 74 points. Each point represents between 20 and 500 hours of usage. The magnitude of each point and the number of hours it represents constitute a load duration curve block. For LDC hours 1 to 1000, each block represents 20 hours. For LDC hours 1001 to 2000, each block represents 40 hours, and LDC hours 2001 to 8760 are summarized by 500 hour blocks.

- Total dispatched generation in a zone cannot exceed the zone's sum of native load, operating reserve, and transmission rights.
 - Total dispatched generation across all zones must equal the total native demand and operating reserve for the system.
4. Cost of operating each plant are calculated for the load duration curve block, and added to the prior operating costs for the year. Results are tracked by plant ownership.
 5. An "in-area" Market Clearing Price (MCP) is calculated for each zone based on the highest cost dispatched plant physically located in the zone. An "export" MCP is also calculated based on the highest cost unit dispatched anywhere in the system. All plants are assumed to serve native load first (that is, a plant serves load in the zone in which it is physically located). Output that exceeds the intrazonal need is assumed to be exported and receives the export MCP. Since the utilities do not own fossil units outside of their zones, it is not necessary to determine which plants serve in-area versus export markets.
 6. The model moves to the next load duration block and repeats steps 1 through 5
 7. Fixed costs are added after all load duration blocks have been analyzed

Appendix 5

Input Data Assumptions

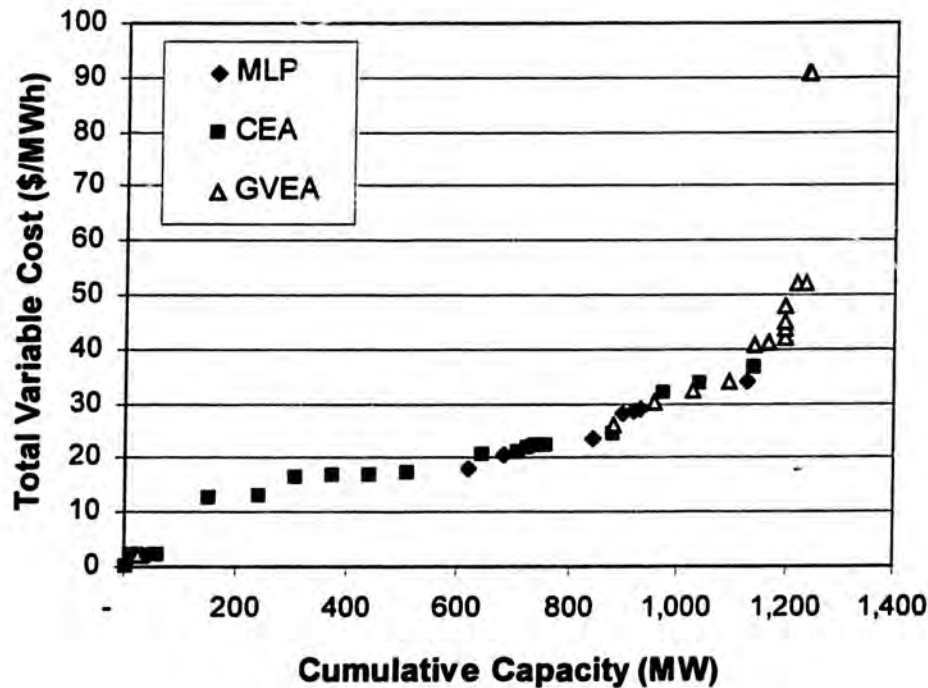
Assumptions and Data Sources

TABLE 1
Plant Information (for 1996)

Plant	Company	1st Yr Online (if after 1996)	Nameplate Capacity (MW)	Maximum Capacity Factor	Adjusted Capacity	Fuel Type	Fuel \$/MMBTU	Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr)	Variable (\$/MWh)
MLP Plant1 Unit 1	MLP		16.8	97%	16.2	Gas	1.86	14,590	27.1	7.66	2
MLP Plant1 Unit 2	MLP		16.8	97%	16.2	Gas	1.86	13,980	26.0	7.66	2
MLP Plant1 Unit 3	MLP		19.5	97%	18.9	Gas	1.86	14,371	26.7	7.66	2
MLP Plant1 Unit 4	MLP		34.1	97%	33.0	Gas	1.86	17,324	32.2	7.66	2
MLP Plant2 Unit 5	MLP		38.4	97%	37.1	Gas	1.86	10,106	18.8	0	2
MLP Plant2 Unit 7/6	MLP		109.5	97%	105.9	Gas	1.86	8,527	15.9	7.266	2
MLP Plant2 Unit 8	MLP		87.6	97%	84.7	Gas	1.86	11,557	21.5	7.266	2
Beluga Unit 1	CEA		16.7	93%	15.5	Gas	1.17	16,924	19.8	7.95	2
Beluga Unit 2	CEA		16.7	98%	16.4	Gas	1.17	17,320	20.3	7.95	2
Beluga Unit 3	CEA		66.9	96%	64.2	Gas	1.17	12,288	14.4	7.95	2
Beluga Unit 5	CEA		71	97%	68.9	Gas	1.17	12,537	14.7	7.95	2
Beluga Unit 6	CEA		74	90%	66.8	Gas	1.17	12,743	14.9	7.95	2
Beluga Unit 7	CEA		74	95%	70.3	Gas	1.17	13,172	15.4	7.95	2
Beluga Unit 6-8	CEA		101.5	90%	91.4	Gas	1.17	9,372	11.0	7.95	2
Beluga Unit 7-8	CEA		101.5	90%	91.4	Gas	1.17	9,149	10.7	7.95	2
Bernice Lake 2	CEA		19.3	100%	19.3	Gas	1.38	14,817	20.4	6.5	2
Bernice Lake 3	CEA		28	93%	26.0	Gas	1.38	13,512	18.6	6.5	2
Bernice Lake 4	CEA		28	95%	26.6	Gas	1.38	13,715	18.9	6.5	2
International 1	CEA		15	90%	13.5	Gas	1.98	15,992	31.7	5.75	2
International 2	CEA		15.1	90%	13.6	Gas	1.98	17,384	34.4	5.75	2
International 3	CEA		18.9	89%	16.8	Gas	1.98	15,030	29.8	5.75	2
Soldotna 1	CEA		39	95%	38.6	Gas	1.98	11,401	22.6	3.399	2
Chena 6	GVEA		29	95%	27.6	HAGO	3.4	12,256	41.7	9	0.3
Zehnder EMD 5	GVEA		2.6	99%	2.6	HAGO	3.21	25,679	82.4	8.44497	8.24
Zehnder EMD 6	GVEA		2.6	99%	2.6	HAGO	3.21	25,679	82.4	8.44497	8.24
Zehnder GT 1	GVEA		18	99%	17.8	HAGO	3.21	14,560	46.7	7.84654	5.37
Zehnder GT 2	GVEA		18	99%	17.8	HAGO	3.21	14,560	46.7	7.84654	5.37
North Pole 1	GVEA		56.7	95%	53.9	HAGO	3	9,751	29.3	5.32201	4.8
North Pole 2	GVEA		59.3	92%	54.6	HAGO	3	9,154	27.5	5.32201	4.8
Healy 1	GVEA		25	91%	22.8	Coal	1.36	13,995	19.0	97.49671	11.1961
Healy D 1	GVEA		2.6	95%	2.5	HAGO	3.21	11,451	36.8	23.33465	8.24
Bradley Lake - GVEA	GVEA		15.2	40%	6.0	Hydro	0	1	-	20.6	2.16
Bradley Lake - HEA	GVEA		10.8	43%	4.7	Hydro	0	1	-	20.6	2.16
Bradley Lake - ML&P	MLP		23.3	44%	10.3	Hydro	0	1	-	20	2.16
Ekulna	MLP		21.3	40%	8.6	Hydro	0	1	-	20	2.16
Bradley - Chugach	CEA		40.7	42%	17.3	Hydro	0	1	-	20.0	2.163
Ekulna Chugach	CEA		18.7	37%	7.0	Hydro	0	1	-	20.6	2.16
Cooper Lake 1	CEA		8.6	33%	2.8	Hydro	0	1	-	22.15736	0.206
Cooper Lake 2	CEA		8.6	33%	2.8	Hydro	0	1	-	22.157	0.21
GE 7EA	GVEA	2004	85.4	95%	-	HAGO	3.21	11,721	37.6	4.4	3.03
GE 7EA CC	GVEA	2012	128	95%	-	HAGO	3.21	6,861	22.0	23.38	3.84
GE 6B SC	GVEA	2016	38	95%	-	HAGO	3.21	12,242	39.3	7.36	4.41
GVEA HCCP	GVEA	1999	53	95%	-	HAGO	3.21	11,804	37.9	63.8	10
Aurora Chena	GVEA		29	47%	27.6	HAGO	3.21	12,256	39.3	3.399	2

Plant characteristics from BVI study Appendix C

FIGURE 1
Variable Costs (Fuel and O&M) of Utility Generation



As shown in Figure 1, review of the heat rates confirms that the engineering performance of the MLP and CEA units are not drastically different. The significant advantage of CEA plants over the MLP plants shown in Figure 2 is due to the gas prices forecasted for each utility.

FIGURE 2
Natural Gas Generator Heat Rate Supply Curve (\$1996)

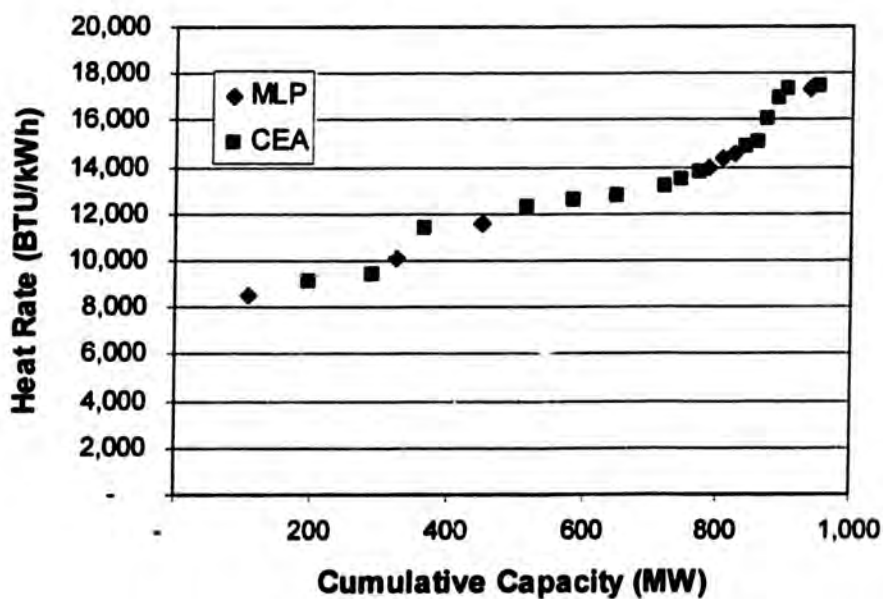


TABLE 2
Fuel Costs by Year and Plant (\$/MMBTU)

Utility Plant	ML&P All	Beluga	Chugach Bernice	Int'l	HEA Soldotna	GVEA			
Unit(s)		1 to 8	2 to 4	1 to 3	1	Healy 1	North Pole	Zehnder Hago	Chena 6
Fuel	NG	NG	NG	NG	NG	Coal	Hago	Hago	Hago
1996	1.86	1.17	1.38	1.98	1.98	1.36	3	3.21	3.4
1997	1.74	1.46	1.5	2.25	2.25	1.39	3.09	3.31	3.4
1998	1.97	1.69	1.7	2.05	2.05	1.02	3.18	3.41	3.5
1999	2.01	1.73	1.75	2.1	2.1	0.94	3.28	3.51	3.61
2000	2.06	1.78	1.8	2.15	2.15	0.97	3.38	3.62	3.72
2001	2.12	1.84	1.85	2.2	2.2	0.99	3.48	3.73	3.83
2002	2.16	1.88	1.9	2.25	2.25	1.05	3.58	3.84	3.94
2003	2.22	1.94	1.95	2.3	2.3	1.07	3.69	3.95	4.06
2004	2.27	1.99	2	2.35	2.35	1.09	3.8	4.07	4.18
2005	2.33	2.05	2.06	2.41	2.41	1.11	3.91	4.19	4.31
2006	2.39	2.11	2.12	2.47	2.47	1.13	4.03	4.32	4.44
2007	2.44	2.16	2.18	2.53	2.53	1.16	4.15	4.45	4.57
2008	2.5	2.22	2.24	2.59	2.59	1.18	4.28	4.58	4.71
2009	2.57	2.29	2.3	2.65	2.65	1.2	4.41	4.72	4.85
2010	2.63	2.35	2.37	2.72	2.72	1.22	4.54	4.86	4.99
2011	2.7	2.42	2.44	2.79	2.79	1.25	4.67	5.01	5.14
2012	2.77	2.49	2.5	2.85	2.85	1.27	4.81	5.16	5.3
2013	2.84	2.56	2.57	2.92	2.92	1.29	4.96	5.31	5.46
2014	2.91	2.63	2.65	3	3	1.32	5.11	5.47	5.62
2015	2.98	2.7	2.72	3.07	3.07	1.34	5.26	5.64	5.79
2016	3.06	2.78	2.8	3.15	3.15	1.37	5.42	5.8	5.96

Source: BVI Table 3-3. No value was shown for Chena 6 HAGO in 1996, so the 1997 value was replicated.

Load Growth

TABLE 3
Expected Zonal and System Peak Loads (MW)¹

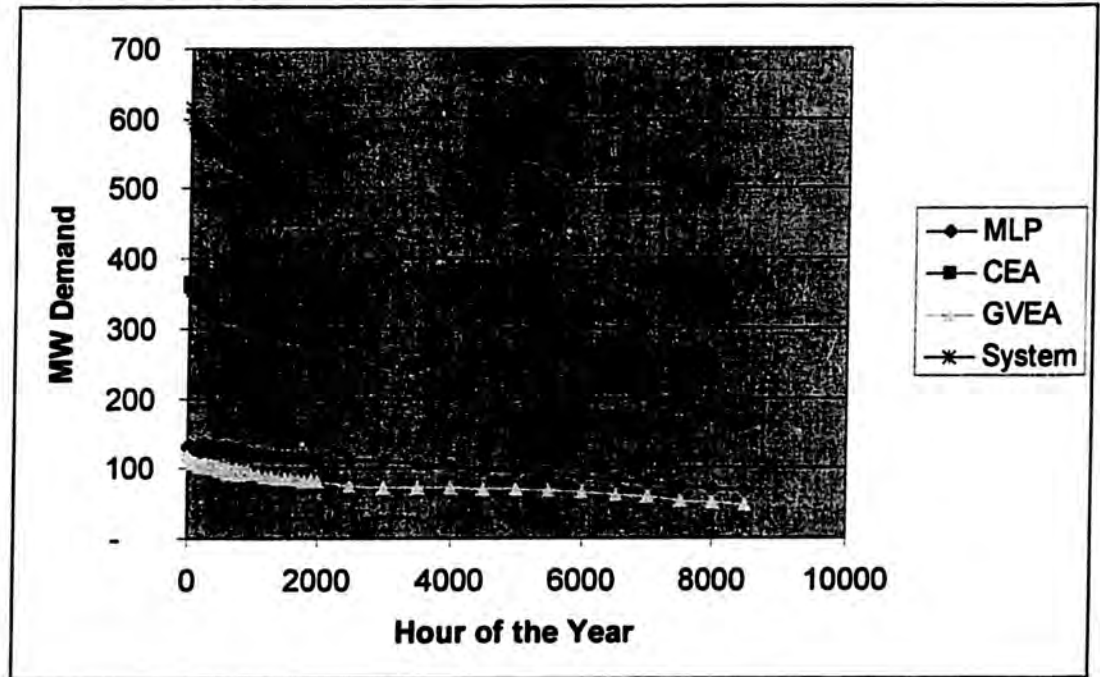
Year	Data from BVI Table 3-1.						System Totals
	ML&P	Chugach	GVEA	HEA	MEA	Total	From BVI Table 5-9
1996	151	381	127	73	94	659	634.17
1997	152	380	167	73	98	698	672
1998	154	384	196	74	100	733	707
1999	156	389	201	75	101	745	718
2000	158	394	203	76	103	755	728
2001	160	399	208	77	104	768	740
2002	163	405	214	78	106	782	753
2003	166	413	220	79	107	799	770
2004	168	420	228	80	109	816	780
2005	170	424	232	81	111	826	797
2006	173	426	236	81	112	835	805
2007	175	432	241	82	114	847	817
2008	177	439	245	83	116	862	831
2009	179	446	250	85	117	876	845
2010	182	453	255	86	118	890	859
2011	184	461	260	87	119	905	874
2012	187	470	266	89	120	922	890
2013	189	478	271	91	122	938	906
2014	192	487	276	92	123	955	923
2015	195	497	282	94	124	974	933
2016	197	506	288	96	125	991	957
2017	200	514	296	97	127	1,009	975
2018	203	521	304	98	129	1,028	994
2019	205	529	313	100	130	1,048	1,013
2020	208	537	322	101	132	1,068	1,032
2021	211	546	332	102	134	1,089	1,052
2022	214	554	341	104	136	1,109	1,072
2023	217	562	351	105	137	1,131	1,093
2024	220	571	362	107	139	1,153	1,114
2025	223	580	372	108	141	1,175	1,135
2026	226	588	383	110	143	1,198	1,157
2027	229	597	394	111	145	1,221	1,180
AAGR	1.39	1.52	2.91	1.40	1.32		
Chugach's peak demand includes AEG&T, HEA, MEA, and SES.							
AAGR = Annual Average Growth Rate over 1997 - 2016.							

¹ Total load is the total, noncoincident peak load of the railbelt utilities. System total load is the coincident peak load of the rail belt utilities, as reported in the BVI study. Load forecast for the period 1996 - 2016 is replicated from the BVI data. Load forecasted between 2017 and 2027 is escalated at the annual average load growth rates from the BVI data, and as shown in the row title AAGR.

Hourly Load Information from Alaska PUC

The hourly loads were converted to load duration curves. For computational efficiency, the first 1,000 hours of the LDC are represented by 20 hour averages. Hours 1,001 through 2,000 are represented by 40 hour averages, and the remainder of the LDC uses 500 hour averages.

FIGURE 3
Load Duration Curves



Hourly loads (annual load shapes) are assumed to escalate linearly each year at the same rate as the peak demand forecast (BVI Table 3-1).

Detailed Modeling Inputs (Appendix 6)

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Scenario Summary

Table 1: Scenario Control Sheet

Controls for Stacking Model	Base Case	System	Independent dispatch	Fuel Costs the Same	CEA 20%, Contract transmission	CEA 40%, Contract transmission	Unlimited Transmission	CEA 10% and Unlimited Transmission	CEA 20% and Unlimited Transmission	Equal Split on T	CEA + 20%, Equal Split on T	CEA + 40%, Equal Split on T	No New Gen	Fuel Costs the Same, Equal T Split	CEA 40%, 70MW MLP	Withdraw Beluga 3	Withdraw Beluga 6-8	Additional 2 % Growth	Minus 1.5% Growth
Scenario Number		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19
Year being analyzed:																			
Starting Year	1996																		
Model Scenario in Use:	4																		
Start Year	1996																		
End Year	2017																		
System transmission constraint set	0		1				2	2	2	3	3	3		3	4				
Plant Capacities																			
Beluga 3 (MW)																0			
Beluga Unit 6-8 (MW)	66.90																0		
Set Fuel Costs Equal	101.5			TRUE										TRUE					
CEA Company strategic bidding (% Premium)	FALSE				20%	40%		10%	20%		20%	40%			40%				
GE 7EA	0%																		
GE 7EA CC	2004												2018						
GE 6B SC	2012												2018						
GVEA HCCP	2016												2018						
Growth Rate Adjustment (%/yr)	1999												2018					2%	-1.50%
	0%																		

The Scenario Control Sheet summarizes the variation in input values for the numerous Stacking model cases run as part of this Alaska Analysis.

If an entry is blank, the values from the Base Case column are used for the scenario.

A subset of these scenarios were also run for the case where a 100MW IPP locates in GVEA's service territory in 2002.Plant Information (1996)

Table 2: Base Case Plant Information

System: Scenario - 1

0%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	0
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	0
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	0
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 3 Base case continued

System: Scenario - 1				O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)	
Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstant \$'s	Variable (\$/MWh) Cnstant \$'s	Fixed	Variable					
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,105	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	21.80
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	22.26
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	16.38
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	16.67
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	16.91
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	17.41
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	12.97
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	12.70
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	22.45
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	20.65
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	20.93
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	33.66
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	36.42
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	31.76
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	24.57
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,580	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekultna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekultna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2063	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,86	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 4: Independent Dispatch

Independent: Scenario - 2

0%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	0
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	0
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	0
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		6.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		6.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 5: Independent Dispatch, continued

Independent: Scenario - 2			O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)		
Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstnt \$'s	Variable (\$/MWh) Cnstnt \$'s	Fixed					Variable	
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	21.80
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	22.26
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	16.38
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	16.67
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	16.91
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	17.41
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	12.97
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	12.70
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	22.45
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	20.65
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	20.93
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	33.66
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	36.42
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	31.76
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	24.57
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 6: Equalized Fuel Costs

Fuel Costs the Same: Scenario - 3

0%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.17	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.17	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.17	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.17	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.17	
MLP Plant2 Unit7/6	MLP	Gas	1	MLP		109.5	97%	106	1.17	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.17	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.17	0
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.17	0
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.17	0
International 1	CEA	Gas	4	CEA		15	0.90	14	1.17	0
International 2	CEA	Gas	4	CEA		15	0.90	14	1.17	0
International 3	CEA	Gas	4	CEA		19	0.89	17	1.17	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.17	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2015	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 7: Equalized Fuel Costs, continued

Fuel Costs the Same: Scenario - 3				O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstrnt \$'s	Variable (\$/MWh) Cnstrnt \$'s	Fixed	Variable				
MLP Plant1 Unit 1	14,590	17	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	19.07
MLP Plant1 Unit 2	13,980	16	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	18.36
MLP Plant1 Unit 3	14,371	17	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	18.81
MLP Plant1 Unit 4	17,324	20	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	22.27
MLP Plant2 Unit 5	10,106	12	0.00	2.00	3.0%	3.0%	\$ -	2.0000	13.82
MLP Plant2 Unit7/6	8,527	10	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	11.98
MLP Plant2 Unit 8	11,557	14	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	15.52
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 584	2.0000	16.67
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70
Bernice Lake 2	14,817	17	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	19.34
Bernice Lake 3	13,512	16	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	17.81
Bernice Lake 4	13,715	16	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	18.05
International 1	15,992	19	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	20.71
International 2	17,384	20	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	22.34
International 3	15,030	18	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	19.59
Soldotna 1	11,401	13	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	15.34
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02
GE 6B SC	12,242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30
GVEA HCCP	11,804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03

Table 8: CEA Bids 20% above Dispatch Cost - Contract Transmission

CEA 20%, Contract transmission: Scenario - 4

20%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	4
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	4
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	3
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	3
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	3
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	3
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	3
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	3
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	4
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	4
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	4
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	7
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	7
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	6
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	5
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 9: CEA Bids 20% above Dispatch Cost - Contract Transmission

CEA 20%, Contract transmission: Scenario - 4					O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstrnt \$'s	Variable (\$/MWh) Cnstrnt \$'s	Fixed	Variable					
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	26.16
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	26.72
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	19.65
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	20.00
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	20.29
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	20.89
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	15.56
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	15.25
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	26.94
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	24.78
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	25.11
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	40.40
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	43.70
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	38.11
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	29.49
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 10 CEA Bids 40% above Dispatch Cost - Contract Transmission

CEA 40%, Contract transmission: Scenario - 5

40%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	9
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	9
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	7
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	7
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	7
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	7
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	5
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	5
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	9
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	8
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	8
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	13
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	15
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	13
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	10
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekulna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA	2018	40.70	0.424320959	17	0.0000	
Ekulna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 11 CEA Bids 40% above Dispatch Cost - Contract Transmission, continued

CEA 40%, Contract transmission: Scenario - 5				O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)	
Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstrnt \$'s	Variable (\$/MWh) Cnstrnt \$'s	Fixed	Variable					
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	30.52
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	31.17
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	22.93
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	23.34
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	23.67
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	24.38
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	18.15
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	17.79
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	31.43
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	28.91
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	29.30
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	47.13
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	50.99
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	44.46
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	34.40
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekultna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekultna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 12: Unlimited Transmission Capacity

Unlimited Transmission: Scenario - 6

0%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	0
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	0
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	0
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		6.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		6.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2018	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 13: Unlimited Transmission Capacity, continued

Unlimited Transmission: Scenario - 6										
	Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - (\$/MWh) Cnstrnt \$'s		O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
			Fixed	Variable	Fixed	Variable				
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Bekuga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	21.80
Bekuga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	22.26
Bekuga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	16.38
Bekuga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	16.67
Bekuga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	16.91
Bekuga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	17.41
Bekuga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	12.97
Bekuga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	12.70
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	22.45
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	20.65
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	20.93
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	33.66
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	36.42
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	31.76
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	24.57
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,580	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,580	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6,961	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12,242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11,804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 14: CEA bids 10% above Dispatch Cost w/ Unlimited Transmission

CEA 10% and Unlimited Transmission: Scenario - 7

10%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	2
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	2
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	2
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	2
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	2
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	2
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	1
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	1
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	2
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	2
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	2
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	3
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	4
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	3
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	2
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekulna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekulna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 15: CEA bids 10% above Dispatch Cost w/ Unlimited Transmission, continued

CEA 10% and Unlimited Transmission: Scenario - 7					O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
	Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstrnt \$'s	Variable (\$/MWh) Cnstrnt \$'s	Fixed	Variable				
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	23.98
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	24.49
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	18.01
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	18.34
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	18.60
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	19.15
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	14.26
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	13.97
Bemice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	24.69
Bemice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	22.71
Bemice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	23.02
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	37.03
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	40.06
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	34.94
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	27.03
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekultna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekultna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2080	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6661	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 16: CEA bids 20% above Dispatch Cost w/ Unlimited Transmission

CEA 20% and Unlimited Transmission: Scenario - 8

20%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	4
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	4
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	3
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	3
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	3
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	3
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	3
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	3
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	4
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	4
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	4
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	7
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	7
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	6
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	5
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 68 SC	GVEA	HAGO	8	GVEA	2018	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 17: CEA bids 20% above Dispatch Cost w/ Unlimited Transmission, continued

CEA 20% and Unlimited Transmission: Scenario - 8				O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)	
Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstnt \$'s	Variable (\$/MWh) Cnstnt \$'s	Fixed	Variable					
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	26.16
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	26.72
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	19.65
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	20.00
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	20.29
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	20.89
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	15.56
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	15.25
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	26.94
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	24.78
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	25.11
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	40.40
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	43.70
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	38.11
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	29.49
Chena 6	12,258	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 486	2.1600	2.16	2.16
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,258	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 18: Equal Split on Transmission Capacity between MLP and CEA

Equal Split on T: Scenario - 9

0%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	0
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	0
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	0
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		6.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		6.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 19: Equal Split on Transmission Capacity between MLP and CEA, continued

Equal Split on T: Scenario - 9					O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
	Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstnt \$'s	Variable (\$/MWh) Cnstnt \$'s	Fixed	Variable				
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	21.80
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	22.26
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	16.38
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 584	2.0000	16.67	16.67
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	16.91
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	17.41
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	12.97
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	12.70
Bemice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	22.45
Bemice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	20.65
Bemice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	20.93
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	33.66
International 2	17,394	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	36.42
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	31.76
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	24.57
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,879	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekultna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekultna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6961	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,661	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 20: CEA bids 20% above Dispatch Cost, w/equal Split on Transmission Capacity

CEA + 20%, Equal Split on T: Scenario - 10

20%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	4
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	4
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	3
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	3
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	3
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	3
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	3
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	3
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	4
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	4
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	4
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	7
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	7
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	6
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	5
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 21: CEA bids 20% above Dispatch Cost, w/equal Split on Transmission Capacity, continued

CEA + 20%, Equal Split on T: Scenario - 10				O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)	
Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstrnt \$'s	Variable (\$/MWh) Cnstrnt \$'s	Fixed	Variable					
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	26.16
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	26.72
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	19.65
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	20.00
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	20.29
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	20.89
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	15.56
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	15.25
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	26.94
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	24.78
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	25.11
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	40.40
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	43.70
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	38.11
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	29.49
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekultna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekultna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999,0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999,0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999,0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999,0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999,0000	10,007.03	10,007.03

Table 22: CEA bids 40% above Dispatch Cost, w/equal Split on Transmission Capacity

CEA + 40%, Equal Split on T: Scenario - 11

40%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	9
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	9
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	7
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	7
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	7
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	7
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	5
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	5
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	9
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	8
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	8
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	13
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	15
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	13
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	10
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA	2018	40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 23: CEA bids 40% above Dispatch Cost, w/equal Split on Transmission Capacity, continued

CEA + 40%, Equal Split on T: Scenario - 11					O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstrnt \$'s	Variable (\$/MWh) Cnstrnt \$'s	Fixed	Variable					
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	30.52
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	31.17
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	22.93
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	23.34
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	23.67
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	24.38
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	18.15
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	17.79
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	31.43
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	28.91
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	29.30
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	47.13
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	50.99
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	44.46
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	34.40
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekultna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekultna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 24: No New Generation

No New Gen: Scenario - 12

0%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	0
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	0
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	0
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2018	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2018	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2018	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	2018	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 25: No New Generation, continued

No New Gen: Scenario - 12					O&M Inflation							
	Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) Cnstrnt \$'s	Variable (\$/MWh) Cnstrnt \$'s	Fixed	Variable	Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)		
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14		
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00		
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73		
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22		
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80		
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86		
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50		
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	21.80		
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	22.26		
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	16.38		
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	16.67		
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	16.91		
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	17.41		
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	12.97		
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	12.70		
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	22.45		
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	20.65		
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	20.93		
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	33.66		
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	36.42		
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	31.76		
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	24.57		
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97		
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67		
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67		
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11		
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11		
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05		
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26		
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23		
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00		
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16		
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16		
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16		
Ekultna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16		
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16		
Ekultna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16		
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21		
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21		
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62		
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02		
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30		
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89		
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34		
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03		

Table 26: Fuel Costs the Same w/ Equal Split of Transmission Between MLP and CEA

Fuel Costs the Same, Equal T Split: Scenario - 13

0%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.17	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.17	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.17	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.17	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.17	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.17	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.17	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.17	0
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.17	0
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.17	0
International 1	CEA	Gas	4	CEA		15	0.90	14	1.17	0
International 2	CEA	Gas	4	CEA		15	0.90	14	1.17	0
International 3	CEA	Gas	4	CEA		19	0.89	17	1.17	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.17	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 27: Fuel Costs the Same w/ Equal Split of Transmission Between MLP and CEA, continued

Fuel Costs the Same, Equal T Split: Scenario - 13					O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstrnt \$'s	Variable (\$/MWh) Cnstrnt \$'s		Fixed	Variable				
MLP Plant1 Unit 1	14,590	17	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	19.07	19.07
MLP Plant1 Unit 2	13,980	16	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	18.36	18.36
MLP Plant1 Unit 3	14,371	17	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	18.81	18.81
MLP Plant1 Unit 4	17,324	20	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	22.27	22.27
MLP Plant2 Unit 5	10,106	12	0.00	2.00	3.0%	3.0%	\$ -	2.0000	13.82	13.82
MLP Plant2 Unit7/6	8,527	10	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	11.98	11.98
MLP Plant2 Unit 8	11,557	14	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	15.52	15.52
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	21.80
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	22.26
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	16.38
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	16.67
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	16.91
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	17.41
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	12.97
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	12.70
Bemice Lake 2	14,817	17	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	19.34	19.34
Bemice Lake 3	13,512	16	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	17.81	17.81
Bemice Lake 4	13,715	16	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	18.05	18.05
International 1	15,992	19	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	20.71	20.71
International 2	17,384	20	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	22.34	22.34
International 3	15,030	18	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	19.59	19.59
Soldotna 1	11,401	13	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	15.34	15.34
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekultna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekultna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 28: CEA bids 40% above Dispatch Costs w/ 70MW Transmission Capacity for MLP

CEA 40%, 70MW MLP: Scenario - 14

40%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas		1 MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas		1 MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas		1 MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas		1 MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas		1 MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas		1 MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas		1 MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas		2 CEA		16.7	93%	16	1.17	9
Beluga Unit 2	CEA	Gas		2 CEA		16.7	98%	16	1.17	9
Beluga Unit 3	CEA	Gas		2 CEA		66.90	96%	64	1.17	7
Beluga Unit 5	CEA	Gas		2 CEA		71	97%	69	1.17	7
Beluga Unit 6	CEA	Gas		2 CEA		74	90%	67	1.17	7
Beluga Unit 7	CEA	Gas		2 CEA		74	95%	70	1.17	7
Beluga Unit 6-8	CEA	Gas		2 CEA		101.50	90%	91	1.17	5
Beluga Unit 7-8	CEA	Gas		2 CEA		101.50	90%	91	1.17	5
Bernice Lake 2	CEA	Gas		3 CEA		19	1.00	19	1.38	9
Bernice Lake 3	CEA	Gas		3 CEA		28	0.93	26	1.38	8
Bernice Lake 4	CEA	Gas		3 CEA		28	0.95	27	1.38	8
International 1	CEA	Gas		4 CEA		15	0.90	14	1.98	13
International 2	CEA	Gas		4 CEA		15	0.90	14	1.98	15
International 3	CEA	Gas		4 CEA		19	0.89	17	1.98	13
Soldotna 1	CEA	Gas		5 CEA		39	0.99	39	1.98	10
Chena 6	GVEA	HAGO		9 GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO		8 GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO		8 GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO		8 GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO		8 GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO		7 GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO		7 GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal		6 GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO		8 GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekulna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekulna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO		8 GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO		8 GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO		8 GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO		8 GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO		8 GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas		2 GVEA	2018	100	100%	0	1.17	

Table 29: CEA bids 40% above Dispatch Costs w/ 70MW Transmission Capacity for MLP, continued

CEA 40%, 70MW MLP; Scenario - 14

	Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - (\$/MWh) Cnslt \$'s		Variable (\$/MWh) Cnslt \$'s		O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
			Fixed	Variable	Fixed	Variable	Fixed	Variable				
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$		129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$		129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$		149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$		261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$		-	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$		796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$		637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$		133	2.0000	21.80	30.52
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$		133	2.0000	22.26	31.17
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$		532	2.0000	16.38	22.93
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$		564	2.0000	16.67	23.34
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$		588	2.0000	16.91	23.67
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$		588	2.0000	17.41	24.38
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$		807	2.0000	12.97	18.15
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$		807	2.0000	12.70	17.79
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$		125	2.0000	22.45	31.43
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$		182	2.0000	20.65	28.91
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$		182	2.0000	20.93	29.30
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$		86	2.0000	33.66	47.13
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$		87	2.0000	36.42	50.99
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$		109	2.0000	31.76	44.46
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$		133	2.0000	24.57	34.40
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$		261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$		22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$		22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$		141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$		141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$		302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$		316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$		2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$		61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$		313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$		222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$		466	2.1600	2.16	2.16
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$		426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$		838	2.1630	2.16	2.16
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$		385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$		191	0.2080	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$		191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$		-	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$		-	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$		-	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$		-	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$		99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$		-	9,999.0000	10,007.03	10,007.03

Table 30: Withdraw Beluga 3

Withdraw Beluga 3: Scenario - 15

0%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas		1 MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas		1 MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas		1 MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas		1 MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas		1 MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas		1 MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas		1 MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas		2 CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas		2 CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas		2 CEA			96%	0	1.17	0
Beluga Unit 5	CEA	Gas		2 CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas		2 CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas		2 CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas		2 CEA		101.50	90%	91	1.17	0
Beluga Unit 7-8	CEA	Gas		2 CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas		3 CEA		19	1.00	19	1.38	0
Bernice Lake 3	CEA	Gas		3 CEA		28	0.93	26	1.38	0
Bernice Lake 4	CEA	Gas		3 CEA		28	0.95	27	1.38	0
International 1	CEA	Gas		4 CEA		15	0.90	14	1.98	0
International 2	CEA	Gas		4 CEA		15	0.90	14	1.98	0
International 3	CEA	Gas		4 CEA		19	0.89	17	1.98	0
Soldotna 1	CEA	Gas		5 CEA		39	0.99	39	1.98	0
Chena 6	GVEA	HAGO		9 GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO		8 GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO		8 GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO		8 GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO		8 GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO		7 GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO		7 GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal		6 GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO		8 GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA	2018	40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.80	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.80	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO		8 GVEA		2004	85	0.95	0	3.21
GE 7EA CC	GVEA	HAGO		8 GVEA		2012	128	0.95	0	3.21
GE 6B SC	GVEA	HAGO		8 GVEA		2016	38	0.95	0	3.21
GVEA HCCP	GVEA	HAGO		8 GVEA		1999	53	0.95	0	3.21
Aurora Chena	GVEA	HAGO		8 GVEA		0	29	0.95	28	3.21
Merchant Plant	Ind	gas		2 GVEA	2018	100	100%	0	1.17	

Table 31: Withdraw Beluga 3, continued

Withdraw Beluga 3: Scenario - 15					O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
	Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstnt \$'s	Variable (\$/MWh) Cnstnt \$'s	Fixed	Variable				
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	21.80
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	22.26
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ -	9,999.0000	10,013.38	10,013.38
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	16.67
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	16.91
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	17.41
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	12.97
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	12.70
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	22.45
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	20.65
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	20.93
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	33.66
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	36.42
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	31.76
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	24.57
Chena 6	12,258	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 32: Withdraw Beluga 6-8

Withdraw Beluga 6-8: Scenario - 16

										0%
Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas	2	CEA			90%	0	1.17	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	0
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	0
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	0
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 33: Withdraw Beluga 6-8, continued

Withdraw Beluga 6-8: Scenario - 16										
	Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstnt \$'s	Variable (\$/MWh) Cnstnt \$'s	O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
					Fixed	Variable				
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	21.80
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	22.26
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	16.38
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	16.67
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	16.91
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	17.41
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ -	9,999.0000	10,009.97	10,009.97
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	12.70
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	22.45
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	20.65
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	20.93
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	33.66
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	36.42
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	31.76
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	24.57
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 34: Additional 2% Annual Growth

Additional 2 % Growth: Scenario - 18

0%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	0
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	0
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	0
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA	2018	40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		19.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA		2004	85	0.95	0	3.21
GE 7EA CC	GVEA	HAGO	8	GVEA		2012	128	0.95	0	3.21
GE 6B SC	GVEA	HAGO	8	GVEA		2016	38	0.95	0	3.21
GVEA HCCP	GVEA	HAGO	8	GVEA		1999	53	0.95	0	3.21
Aurora Chena	GVEA	HAGO	8	GVEA		0	29	0.95	28	3.21
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 35: Additional 2% Annual Growth, continued

Additional 2 % Growth: Scenario - 18

	Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed Variable (\$/kW-yr) - (\$/MWh) Cnstnt \$'s		O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
			Fixed Cnstnt \$'s	Variable Cnstnt \$'s	Fixed	Variable				
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	21.80
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	22.26
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	16.38
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	16.67
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	16.91
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	17.41
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	12.97
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	12.70
Bernice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	22.45
Bernice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	20.65
Bernice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	20.93
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	33.66
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	36.42
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	31.76
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	24.57
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	2.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2080	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

Table 36: 1.5% less Annual Growth

Minus 1.5% Growth: Scenario - 19

0%

Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	1.86	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	1.86	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	1.86	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	1.86	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	1.86	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	1.86	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.17	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.17	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.17	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.17	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.17	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.17	0
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.17	0
Bernice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.38	0
Bernice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.38	0
Bernice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.38	0
International 1	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 2	CEA	Gas	4	CEA		15	0.90	14	1.98	0
International 3	CEA	Gas	4	CEA		19	0.89	17	1.98	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	1.98	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.4	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.21	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.21	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.36	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.21	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.21	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.21	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.21	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	0	3.21	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.21	
Merchant Plant	Ind	gas	2	GVEA	2018	100	100%	0	1.17	

Table 37: 1.5% less Annual Growth, continued

Minus 1.5% Growth: Scenario - 19					O&M Inflation		Fixed Costs (k\$)	Inflated Variable O&M Cost (\$/MWh)	Total Dispatch Cost (\$/MWh)	Bid Cost for Ranking (\$/MWh)
Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstrnt \$'s	Variable (\$/MWh) Cnstrnt \$'s	Fixed	Variable					
MLP Plant1 Unit 1	14,590	27	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	29.14	29.14
MLP Plant1 Unit 2	13,980	26	7.66	2.00	3.0%	3.0%	\$ 129	2.0000	28.00	28.00
MLP Plant1 Unit 3	14,371	27	7.66	2.00	3.0%	3.0%	\$ 149	2.0000	28.73	28.73
MLP Plant1 Unit 4	17,324	32	7.66	2.00	3.0%	3.0%	\$ 261	2.0000	34.22	34.22
MLP Plant2 Unit 5	10,106	19	0.00	2.00	3.0%	3.0%	\$ -	2.0000	20.80	20.80
MLP Plant2 Unit7/6	8,527	16	7.27	2.00	3.0%	3.0%	\$ 796	2.0000	17.86	17.86
MLP Plant2 Unit 8	11,557	21	7.27	2.00	3.0%	3.0%	\$ 637	2.0000	23.50	23.50
Beluga Unit 1	16,924	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	21.80	21.80
Beluga Unit 2	17,320	20	8.0	2.00	3.0%	3.0%	\$ 133	2.0000	22.26	22.26
Beluga Unit 3	12,288	14	8.0	2.00	3.0%	3.0%	\$ 532	2.0000	16.38	16.38
Beluga Unit 5	12,537	15	8.0	2.00	3.0%	3.0%	\$ 564	2.0000	16.67	16.67
Beluga Unit 6	12,743	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	16.91	16.91
Beluga Unit 7	13,172	15	8.0	2.00	3.0%	3.0%	\$ 588	2.0000	17.41	17.41
Beluga Unit 6-8	9,372	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.97	12.97
Beluga Unit 7-8	9,149	11	8.0	2.00	3.0%	3.0%	\$ 807	2.0000	12.70	12.70
Bemice Lake 2	14,817	20	6.5	2.00	3.0%	3.0%	\$ 125	2.0000	22.45	22.45
Bemice Lake 3	13,512	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.65	20.65
Bemice Lake 4	13,715	19	6.5	2.00	3.0%	3.0%	\$ 182	2.0000	20.93	20.93
International 1	15,992	32	5.8	2.00	3.0%	3.0%	\$ 86	2.0000	33.66	33.66
International 2	17,384	34	5.8	2.00	3.0%	3.0%	\$ 87	2.0000	36.42	36.42
International 3	15,030	30	5.8	2.00	3.0%	3.0%	\$ 109	2.0000	31.76	31.76
Soldotna 1	11,401	23	3.4	2.00	3.0%	3.0%	\$ 133	2.0000	24.57	24.57
Chena 6	12,256	42	9	0.3	3.0%	3.0%	\$ 261	0.3000	41.97	41.97
Zehnder EMD 5	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder EMD 6	25,679	82	8	8.2	3.0%	3.0%	\$ 22	8.2400	90.67	90.67
Zehnder GT 1	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
Zehnder GT 2	14,560	47	8	5.4	3.0%	3.0%	\$ 141	5.3700	52.11	52.11
North Pole 1	9,751	29	5	4.8	3.0%	3.0%	\$ 302	4.8000	34.05	34.05
North Pole 2	9,154	27	5	4.8	3.0%	3.0%	\$ 316	4.8000	32.26	32.26
Healy 1	13,995	19	97	11.2	3.0%	3.0%	\$ 2,437	11.1961	30.23	30.23
Healy D 1	11,451	37	23	8.2	3.0%	3.0%	\$ 61	8.2400	45.00	45.00
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 313	2.1600	2.16	2.16
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 222	2.1600	2.16	2.16
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 466	2.1600	2.16	2.16
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$ 426	2.1600	2.16	2.16
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 838	2.1630	2.16	2.16
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 385	2.1600	2.16	2.16
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2060	0.21	0.21
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 191	0.2100	0.21	0.21
GE 7EA	11,721	38	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,036.62	10,036.62
GE 7EA CC	6861	22	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,021.02	10,021.02
GE 6B SC	12,242	39	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,038.30	10,038.30
GVEA HCCP	11,804	38	63.8	10.0	3.0%	3.0%	\$ -	9,999.0000	10,036.89	10,036.89
Aurora Chena	12,256	39	3.4	2.0	3.0%	3.0%	\$ 99	2.0000	41.34	41.34
Merchant Plant	6,861	8	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,007.03	10,007.03

IPP Merchant Plant in 2002

Table 38: Addition of Merchant Plant in 2002

(Note that this table is for the year 2002 to show values for the merchant plant)

Add IPP: Scenario - 20

										0%
Plant	Company	Fuel Type	Fuel Cost Index	Area	First year online	Raw Capacity (MW)	Maximum Capacity Factor	Capacity Adj for Ownership Availability & Installation	Fuel \$/MBTU	CEA Bid Premium
MLP Plant1 Unit 1	MLP	Gas	1	MLP		16.8	97%	16	2.16	
MLP Plant1 Unit 2	MLP	Gas	1	MLP		16.8	97%	16	2.16	
MLP Plant1 Unit 3	MLP	Gas	1	MLP		19.5	97%	19	2.16	
MLP Plant1 Unit 4	MLP	Gas	1	MLP		34.1	97%	33	2.16	
MLP Plant2 Unit 5	MLP	Gas	1	MLP		38.4	97%	37	2.16	
MLP Plant2 Unit 7/6	MLP	Gas	1	MLP		109.5	97%	106	2.16	
MLP Plant2 Unit 8	MLP	Gas	1	MLP		87.6	97%	85	2.16	
Beluga Unit 1	CEA	Gas	2	CEA		16.7	93%	16	1.88	0
Beluga Unit 2	CEA	Gas	2	CEA		16.7	98%	16	1.88	0
Beluga Unit 3	CEA	Gas	2	CEA		66.90	96%	64	1.88	0
Beluga Unit 5	CEA	Gas	2	CEA		71	97%	69	1.88	0
Beluga Unit 6	CEA	Gas	2	CEA		74	90%	67	1.88	0
Beluga Unit 7	CEA	Gas	2	CEA		74	95%	70	1.88	0
Beluga Unit 6-8	CEA	Gas	2	CEA		101.50	90%	91	1.88	0
Beluga Unit 7-8	CEA	Gas	2	CEA		101.50	90%	91	1.88	0
Bemice Lake 2	CEA	Gas	3	CEA		19	1.00	19	1.9	0
Bemice Lake 3	CEA	Gas	3	CEA		28	0.93	26	1.9	0
Bemice Lake 4	CEA	Gas	3	CEA		28	0.95	27	1.9	0
International 1	CEA	Gas	4	CEA		15	0.90	14	2.25	0
International 2	CEA	Gas	4	CEA		15	0.90	14	2.25	0
International 3	CEA	Gas	4	CEA		19	0.89	17	2.25	0
Soldotna 1	CEA	Gas	5	CEA		39	0.99	39	2.25	0
Chena 6	GVEA	HAGO	9	GVEA		29	0.95	28	3.94	
Zehnder EMD 5	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.84	
Zehnder EMD 6	GVEA	HAGO	8	GVEA		2.6	0.99	3	3.84	
Zehnder GT 1	GVEA	HAGO	8	GVEA		18	0.99	18	3.84	
Zehnder GT 2	GVEA	HAGO	8	GVEA		18	0.99	18	3.84	
North Pole 1	GVEA	HAGO	7	GVEA		56.7	0.95	54	3.58	
North Pole 2	GVEA	HAGO	7	GVEA		59.3	0.92	55	3.58	
Healy 1	GVEA	Coal	6	GVEA		25	0.91	23	1.05	
Healy D 1	GVEA	HAGO	8	GVEA		2.6	0.95	2	3.84	
Bradley Lake - GVEA	GVEA	Hydro		GVEA		15.2	0.397245254	6	0.0000	
Bradley Lake - HEA	GVEA	Hydro		GVEA		10.8	0.434836377	5	0.0000	
Bradley Lake - ML&P	MLP	Hydro		MLP		23.3	0.442574519	10	0.0000	
Ekultna	MLP	Hydro		MLP		21.3	0.401660343	9	0.0000	
Bradley - Chugach	CEA	Hydro		CEA		40.70	0.424320959	17	0.0000	
Ekultna Chugach	CEA	Hydro		CEA		18.70	0.374325446	7	0.0000	
Cooper Lake 1	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
Cooper Lake 2	CEA	Hydro		CEA		8.60	0.325607943	3	0.0000	
GE 7EA	GVEA	HAGO	8	GVEA	2004	85	0.95	0	3.84	
GE 7EA CC	GVEA	HAGO	8	GVEA	2012	128	0.95	0	3.84	
GE 6B SC	GVEA	HAGO	8	GVEA	2016	38	0.95	0	3.84	
GVEA HCCP	GVEA	HAGO	8	GVEA	1999	53	0.95	50	3.84	
Aurora Chena	GVEA	HAGO	8	GVEA	0	29	0.95	28	3.84	
Merchant Plant	Ind	gas	2	GVEA	2002	100	100%	100	1.88	

Note: Numerous scenarios were run with the merchant plant built in the year 2002. Those input files will exactly match their counterparts above, with the sole exception of the year 2002 replacing the year 2018 for the year the Merchant Plant is on line.

Table 39: Merchant plant in 2002, continued.

Add IPP: Scenario - 20				O&M inflation				Inflated	Total	Bid Cost for
	Heat Rate (BTU/kWh)	Fuel Costs (\$/MWh)	Fixed (\$/kW-yr) - Cnstrnt \$'s	Variable (\$/MWh) Cnstrnt \$'s	Fixed	Variable	Fixed Costs (k\$)	Variable O&M Cost (\$/MWh)	Dispatch Cost (\$/MWh)	Ranking (\$/MWh)
MLP Plant1 Unit 1	14,590	32	7.66	2.00	3.0%	3.0%	\$ 154	2.3881	33.90	33.90
MLP Plant1 Unit 2	13,980	30	7.66	2.00	3.0%	3.0%	\$ 154	2.3881	32.58	32.58
MLP Plant1 Unit 3	14,371	31	7.66	2.00	3.0%	3.0%	\$ 178	2.3881	33.43	33.43
MLP Plant1 Unit 4	17,324	37	7.66	2.00	3.0%	3.0%	\$ 312	2.3881	39.81	39.81
MLP Plant2 Unit 5	10,106	22	0.00	2.00	3.0%	3.0%	\$ -	2.3881	24.22	24.22
MLP Plant2 Unit 7/6	8,527	18	7.27	2.00	3.0%	3.0%	\$ 950	2.3881	20.81	20.81
MLP Plant2 Unit 8	11,557	25	7.27	2.00	3.0%	3.0%	\$ 760	2.3881	27.35	27.35
Beluga Unit 1	16,924	32	8.0	2.00	3.0%	3.0%	\$ 159	2.3881	34.21	34.21
Beluga Unit 2	17,320	33	8.0	2.00	3.0%	3.0%	\$ 159	2.3881	34.95	34.95
Beluga Unit 3	12,288	23	8.0	2.00	3.0%	3.0%	\$ 635	2.3881	25.49	25.49
Beluga Unit 5	12,537	24	8.0	2.00	3.0%	3.0%	\$ 674	2.3881	25.96	25.96
Beluga Unit 6	12,743	24	8.0	2.00	3.0%	3.0%	\$ 702	2.3881	26.34	26.34
Beluga Unit 7	13,172	25	8.0	2.00	3.0%	3.0%	\$ 702	2.3881	27.15	27.15
Beluga Unit 6-8	9,372	18	8.0	2.00	3.0%	3.0%	\$ 964	2.3881	20.01	20.01
Beluga Unit 7-8	9,149	17	8.0	2.00	3.0%	3.0%	\$ 964	2.3881	19.59	19.59
Bernice Lake 2	14,817	28	6.5	2.00	3.0%	3.0%	\$ 150	2.3881	30.54	30.54
Bernice Lake 3	13,512	26	6.5	2.00	3.0%	3.0%	\$ 217	2.3881	28.06	28.06
Bernice Lake 4	13,715	26	6.5	2.00	3.0%	3.0%	\$ 217	2.3881	28.45	28.45
International 1	15,992	36	5.8	2.00	3.0%	3.0%	\$ 103	2.3881	38.37	38.37
International 2	17,384	39	5.8	2.00	3.0%	3.0%	\$ 104	2.3881	41.50	41.50
International 3	15,030	34	5.8	2.00	3.0%	3.0%	\$ 130	2.3881	36.21	36.21
Soldotna 1	11,401	26	3.4	2.00	3.0%	3.0%	\$ 158	2.3881	28.04	28.04
Chena 6	12,256	48	9	0.3	3.0%	3.0%	\$ 312	0.3582	48.65	48.65
Zehnder EMD 5	25,679	99	8	8.2	3.0%	3.0%	\$ 26	9.8390	108.45	108.45
Zehnder EMD 6	25,679	99	8	8.2	3.0%	3.0%	\$ 26	9.8390	108.45	108.45
Zehnder GT 1	14,560	56	8	5.4	3.0%	3.0%	\$ 169	6.4121	62.32	62.32
Zehnder GT 2	14,560	56	8	5.4	3.0%	3.0%	\$ 169	6.4121	62.32	62.32
North Pole 1	9,751	35	5	4.8	3.0%	3.0%	\$ 360	5.7315	40.64	40.64
North Pole 2	9,154	33	5	4.8	3.0%	3.0%	\$ 377	5.7315	38.50	38.50
Healy 1	13,995	15	97	11.2	3.0%	3.0%	\$ 2,910	13.3687	28.06	28.06
Healy D 1	11,451	44	23	8.2	3.0%	3.0%	\$ 72	9.8390	53.81	53.81
Bradley Lake - GVEA	1	0	20.6	2.2	3.0%	3.0%	\$ 374	2.5792	2.58	2.58
Bradley Lake - HEA	1	0	20.6	2.2	3.0%	3.0%	\$ 266	2.5792	2.58	2.58
Bradley Lake - ML&P	1	0	20.0	2.2	3.0%	3.0%	\$ 556	2.5792	2.58	2.58
Ekulna	1	0	20.0	2.2	3.0%	3.0%	\$ 509	2.5792	2.58	2.58
Bradley - Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 1,001	2.5827	2.58	2.58
Ekulna Chugach	1	0	20.6	2.2	3.0%	3.0%	\$ 460	2.5792	2.58	2.58
Cooper Lake 1	1	0	22.2	0.2	3.0%	3.0%	\$ 228	0.2460	0.25	0.25
Cooper Lake 2	1	0	22.2	0.2	3.0%	3.0%	\$ 228	0.2508	0.25	0.25
GE 7EA	11,721	45	4.4	3.0	3.0%	3.0%	\$ -	9,999.0000	10,044.01	10,044.01
GE 7EA CC	6861	26	23.4	3.8	3.0%	3.0%	\$ -	9,999.0000	10,025.35	10,025.35
GE 6B SC	12242	47	7.4	4.4	3.0%	3.0%	\$ -	9,999.0000	10,046.01	10,046.01
GVEA HCCP	11804	45	63.8	10.0	3.0%	3.0%	\$ 4,038	11.9405	57.27	57.27
Aurora Chena	12,256	47	3.4	2.0	3.0%	3.0%	\$ 118	2.3881	49.45	49.45
Merchant Plant	6,861	13	23.4	3.8	3.0%	3.0%	\$ 2,792	4.5852	17.48	17.48

Load Growth

Table 40: Base Case Load Growth (Scenarios 1 through 17)

Spinning
Reserve
Margin: 6%

Data from BVI Table 3-1. Expected Peak Demand (MW)

Year	ML&P	Chugach	GVEA	HEA	MEA	Total	Total From BVI Table 5-9	Scenario growth Adj	Set to Use	Demand to Use Includes Target Reserve Margin
1996	151	381	127	73	94	659	634.17	100%	634.17	672.23
1997	152	380	167	73	98	698	672	100%	672	712.32
1998	154	384	196	74	100	733	707	100%	707	749.42
1999	156	389	201	75	101	745	718	100%	718	761.08
2000	158	394	203	76	103	755	728	100%	728	771.68
2001	160	399	208	77	104	768	740	100%	740	784.40
2002	163	405	214	78	106	782	753	100%	753	798.18
2003	166	413	220	79	107	799	770	100%	770	816.20
2004	168	420	228	80	109	816	780	100%	780	826.80
2005	170	424	232	81	111	826	797	100%	797	844.82
2006	173	426	236	81	112	835	805	100%	805	853.30
2007	175	432	241	82	114	847	817	100%	817	866.02
2008	177	439	245	83	116	862	831	100%	831	880.86
2009	179	446	250	85	117	876	845	100%	845	895.70
2010	182	453	255	86	118	890	859	100%	859	910.54
2011	184	461	260	87	119	905	874	100%	874	926.44
2012	187	470	266	89	120	922	890	100%	890	943.40
2013	189	478	271	91	122	938	906	100%	906	960.36
2014	192	487	276	92	123	955	923	100%	923	978.38
2015	195	497	282	94	124	974	933	100%	933	988.98
2016	197	506	288	96	125	991	957	100%	957	1,014.42
2017	200	514	296	97	127	1,009	975.1600	100%	975.16	1,033.67
2018	203	521	304	98	129	1,028	993.7050	100%	993.71	1,053.33
2019	205	529	313	100	130	1,048	1012.644	100%	1012.6	1,073.40
2020	208	537	322	101	132	1,068	1031.986	100%	1032	1,093.91
2021	211	546	332	102	134	1,089	1051.741	100%	1051.7	1,114.85
2022	214	554	341	104	136	1,109	1071.919	100%	1071.9	1,136.23
2023	217	562	351	105	137	1,131	1092.530	100%	1092.5	1,158.08
2024	220	571	362	107	139	1,153	1113.583	100%	1113.6	1,180.40
2025	223	580	372	108	141	1,175	1135.090	100%	1135.1	1,203.20
2026	226	588	383	110	143	1,198	1157.062	100%	1157.1	1,226.49
2027	229	597	394	111	145	1,221	1179.509	100%	1179.5	1,250.28

AAGR 1.39 1.52 2.91 1.40 1.32

Chugach's peak demand includes AEG&T, HEA, MEA, and SES.

AAGR = Annual Average Growth Rate over 1997 - 2016.

Table 41: 2% Additional Annual Load Growth (Scenario 18)

Spinning
Reserve
Margin: 6%

Data from BVI Table 3-1. Expected Peak Demand (MW)

Year	ML&P	Chugach	GVEA	HEA	MEA	Total	Total From BVI Table 5-9	Scenario growth Adj	Set to Use	Demand to Use Includes Target Reserve Margin
1996	151	381	127	73	94	659	634.17	102%	634.17	685.67
1997	152	380	167	73	98	698	672	104%	672	741.10
1998	154	384	196	74	100	733	707	106%	707	795.29
1999	156	389	201	75	101	745	718	108%	718	823.82
2000	158	394	203	76	103	755	728	110%	728	852.00
2001	160	399	208	77	104	768	740	113%	740	883.36
2002	163	405	214	78	106	782	753	115%	753	916.86
2003	166	413	220	79	107	799	770	117%	770	956.31
2004	168	420	228	80	109	816	780	120%	780	988.10
2005	170	424	232	81	111	826	797	122%	797	1,029.83
2006	173	426	236	81	112	835	805	124%	805	1,060.97
2007	175	432	241	82	114	847	817	127%	817	1,098.32
2008	177	439	245	83	116	862	831	129%	831	1,139.49
2009	179	446	250	85	117	876	845	132%	845	1,181.86
2010	182	453	255	86	118	890	859	135%	859	1,225.47
2011	184	461	260	87	119	905	874	137%	874	1,271.80
2012	187	470	266	89	120	922	890	140%	890	1,320.99
2013	189	478	271	91	122	938	906	143%	906	1,371.63
2014	192	487	276	92	123	955	923	146%	923	1,425.31
2015	195	497	282	94	124	974	933	149%	933	1,469.57
2016	197	506	288	96	125	991	957	152%	957	1,537.52
2017	200	514	296	97	127	1,009	975.1600	155%	975.16	1,598.03
2018	203	521	304	98	129	1,028	993.7050	158%	993.71	1,660.99
2019	205	529	313	100	130	1,048	1012.644	161%	1012.6	1,726.50
2020	208	537	322	101	132	1,068	1031.986	164%	1032	1,794.67
2021	211	546	332	102	134	1,089	1051.741	167%	1051.7	1,865.60
2022	214	554	341	104	136	1,109	1071.919	171%	1071.9	1,939.42
2023	217	562	351	105	137	1,131	1092.530	174%	1092.5	2,016.25
2024	220	571	362	107	139	1,153	1113.583	178%	1113.6	2,096.20
2025	223	580	372	108	141	1,175	1135.090	181%	1135.1	2,179.42
2026	226	588	383	110	143	1,198	1157.062	185%	1157.1	2,266.04
2027	229	597	394	111	145	1,221	1179.509	188%	1179.5	2,356.20

AAGR 1.39 1.52 2.91 1.40 1.32

Chugach's peak demand includes AEG&T, HEA, MEA, and SES.

AAGR = Annual Average Growth Rate over 1997 - 2016.

Table 42: 1.5% Less Annual Load Growth (Scenario 19)

Spinning
Reserve
Margin:  6%

Data from BVI Table 3-1. Expected Peak Demand (MW)

Year	ML&P	Chugach	GVEA	HEA	MEA	Total	Total From BVI Table 5-9	Scenario growth Adj	Set to Use	Demand to Use Includes Target Reserve Margin
1996	151	381	127	73	94	659	634.17	99%	634.17	662.14
1997	152	380	167	73	98	698	672	97%	672	691.11
1998	154	384	196	74	100	733	707	96%	707	716.20
1999	156	389	201	75	101	745	718	94%	718	716.43
2000	158	394	203	76	103	755	728	93%	728	715.51
2001	160	399	208	77	104	768	740	91%	740	716.40
2002	163	405	214	78	106	782	753	90%	753	718.05
2003	166	413	220	79	107	799	770	89%	770	723.25
2004	168	420	228	80	109	816	780	87%	780	721.65
2005	170	424	232	81	111	826	797	86%	797	726.32
2006	173	426	236	81	112	835	805	85%	805	722.60
2007	175	432	241	82	114	847	817	83%	817	722.37
2008	177	439	245	83	116	862	831	82%	831	723.73
2009	179	446	250	85	117	876	845	81%	845	724.89
2010	182	453	255	86	118	890	859	80%	859	725.84
2011	184	461	260	87	119	905	874	79%	874	727.44
2012	187	470	266	89	120	922	890	77%	890	729.65
2013	189	478	271	91	122	938	906	76%	906	731.62
2014	192	487	276	92	123	955	923	75%	923	734.17
2015	195	497	282	94	124	974	933	74%	933	730.99
2016	197	506	288	96	125	991	957	73%	957	738.55
2017	200	514	296	97	127	1,009	975.1600	72%	975.16	741.27
2018	203	521	304	98	129	1,028	993.7050	71%	993.71	744.04
2019	205	529	313	100	130	1,048	1012.644	70%	1012.6	746.85
2020	208	537	322	101	132	1,068	1031.986	69%	1032	749.70
2021	211	546	332	102	134	1,089	1051.741	68%	1051.7	752.59
2022	214	554	341	104	136	1,109	1071.919	66%	1071.9	755.52
2023	217	562	351	105	137	1,131	1092.530	65%	1092.5	758.50
2024	220	571	362	107	139	1,153	1113.583	65%	1113.6	761.52
2025	223	580	372	108	141	1,175	1135.090	64%	1135.1	764.58
2026	226	588	383	110	143	1,198	1157.062	63%	1157.1	767.69
2027	229	597	394	111	145	1,221	1179.509	62%	1179.5	770.84

AAGR 1.39 1.52 2.91 1.40 1.32

Chugach's peak demand includes AEG&T, HEA, MEA, and SES.

AAGR = Annual Average Growth Rate over 1997 - 2016.

Fuel Costs

Table 43: Fuel Costs – Base Case

Model Code:	1	2	3	4	5	6	7	8	9
Utility Plant Unit(s) Fuel	ML&P MLP NG	Chugach Beluga 1 to 8 NG	Bernice 2 to 4 NG	Int'l 1 to 3 NG	HEA Soldotna 1 NG	GVEA Healy 1 Coal	North Pole Hago	Zehnder Hago	Chena 6 Hago
1996	\$ 1.86	\$ 1.17	\$ 1.38	\$ 1.98	\$ 1.98	\$ 1.36	\$ 3.00	\$ 3.21	\$ 3.40
1997	\$ 1.74	\$ 1.46	\$ 1.50	\$ 2.25	\$ 2.25	\$ 1.39	\$ 3.09	\$ 3.31	\$ 3.40
1998	\$ 1.97	\$ 1.69	\$ 1.70	\$ 2.05	\$ 2.05	\$ 1.02	\$ 3.18	\$ 3.41	\$ 3.50
1999	\$ 2.01	\$ 1.73	\$ 1.75	\$ 2.10	\$ 2.10	\$ 0.94	\$ 3.28	\$ 3.51	\$ 3.61
2000	\$ 2.06	\$ 1.78	\$ 1.80	\$ 2.15	\$ 2.15	\$ 0.97	\$ 3.38	\$ 3.62	\$ 3.72
2001	\$ 2.12	\$ 1.84	\$ 1.85	\$ 2.20	\$ 2.20	\$ 0.99	\$ 3.48	\$ 3.73	\$ 3.83
2002	\$ 2.16	\$ 1.88	\$ 1.90	\$ 2.25	\$ 2.25	\$ 1.05	\$ 3.58	\$ 3.84	\$ 3.94
2003	\$ 2.22	\$ 1.94	\$ 1.95	\$ 2.30	\$ 2.30	\$ 1.07	\$ 3.69	\$ 3.95	\$ 4.06
2004	\$ 2.27	\$ 1.99	\$ 2.00	\$ 2.35	\$ 2.35	\$ 1.09	\$ 3.80	\$ 4.07	\$ 4.18
2005	\$ 2.33	\$ 2.05	\$ 2.06	\$ 2.41	\$ 2.41	\$ 1.11	\$ 3.91	\$ 4.19	\$ 4.31
2006	\$ 2.39	\$ 2.11	\$ 2.12	\$ 2.47	\$ 2.47	\$ 1.13	\$ 4.03	\$ 4.32	\$ 4.44
2007	\$ 2.44	\$ 2.16	\$ 2.18	\$ 2.53	\$ 2.53	\$ 1.16	\$ 4.15	\$ 4.45	\$ 4.57
2008	\$ 2.50	\$ 2.22	\$ 2.24	\$ 2.59	\$ 2.59	\$ 1.18	\$ 4.28	\$ 4.58	\$ 4.71
2009	\$ 2.57	\$ 2.29	\$ 2.30	\$ 2.65	\$ 2.65	\$ 1.20	\$ 4.41	\$ 4.72	\$ 4.85
2010	\$ 2.63	\$ 2.35	\$ 2.37	\$ 2.72	\$ 2.72	\$ 1.22	\$ 4.54	\$ 4.86	\$ 4.99
2011	\$ 2.70	\$ 2.42	\$ 2.44	\$ 2.79	\$ 2.79	\$ 1.25	\$ 4.67	\$ 5.01	\$ 5.14
2012	\$ 2.77	\$ 2.49	\$ 2.50	\$ 2.85	\$ 2.85	\$ 1.27	\$ 4.81	\$ 5.16	\$ 5.30
2013	\$ 2.84	\$ 2.56	\$ 2.57	\$ 2.92	\$ 2.92	\$ 1.29	\$ 4.96	\$ 5.31	\$ 5.46
2014	\$ 2.91	\$ 2.63	\$ 2.65	\$ 3.00	\$ 3.00	\$ 1.32	\$ 5.11	\$ 5.47	\$ 5.62
2015	\$ 2.98	\$ 2.70	\$ 2.72	\$ 3.07	\$ 3.07	\$ 1.34	\$ 5.26	\$ 5.64	\$ 5.79
2016	\$ 3.06	\$ 2.78	\$ 2.80	\$ 3.15	\$ 3.15	\$ 1.37	\$ 5.42	\$ 5.80	\$ 5.96
2017	\$ 3.13	\$ 2.85	\$ 2.88	\$ 3.23	\$ 3.23	\$ 1.40	\$ 5.57	\$ 5.96	\$ 6.13

Table 44: Equalized Fuel Costs – Scenario 3

Model Code:	1	2	3	4	5	6	7	8	9
Utility Plant Unit(s) Fuel	ML&P MLP NG	Chugach Beluga 1 to 8 NG	Bernice 2 to 4 NG	Int'l 1 to 3 NG	HEA Soldotna 1 NG	GVEA Healy 1 Coal	North Pole Hago	Zehnder Hago	Chena 6 Hago
1996	\$ 1.17	\$ 1.17	\$ 1.17	\$ 1.17	\$ 1.17	\$ 1.36	\$ 3.00	\$ 3.21	\$ 3.40
1997	\$ 1.46	\$ 1.46	\$ 1.46	\$ 1.46	\$ 1.46	\$ 1.39	\$ 3.09	\$ 3.31	\$ 3.40
1998	\$ 1.69	\$ 1.69	\$ 1.69	\$ 1.69	\$ 1.69	\$ 1.02	\$ 3.18	\$ 3.41	\$ 3.50
1999	\$ 1.73	\$ 1.73	\$ 1.73	\$ 1.73	\$ 1.73	\$ 0.94	\$ 3.28	\$ 3.51	\$ 3.61
2000	\$ 1.78	\$ 1.78	\$ 1.78	\$ 1.78	\$ 1.78	\$ 0.97	\$ 3.38	\$ 3.62	\$ 3.72
2001	\$ 1.84	\$ 1.84	\$ 1.84	\$ 1.84	\$ 1.84	\$ 0.99	\$ 3.48	\$ 3.73	\$ 3.83
2002	\$ 1.88	\$ 1.88	\$ 1.88	\$ 1.88	\$ 1.88	\$ 1.05	\$ 3.58	\$ 3.84	\$ 3.94
2003	\$ 1.94	\$ 1.94	\$ 1.94	\$ 1.94	\$ 1.94	\$ 1.07	\$ 3.69	\$ 3.95	\$ 4.06
2004	\$ 1.99	\$ 1.99	\$ 1.99	\$ 1.99	\$ 1.99	\$ 1.09	\$ 3.80	\$ 4.07	\$ 4.18
2005	\$ 2.05	\$ 2.05	\$ 2.05	\$ 2.05	\$ 2.05	\$ 1.11	\$ 3.91	\$ 4.19	\$ 4.31
2006	\$ 2.11	\$ 2.11	\$ 2.11	\$ 2.11	\$ 2.11	\$ 1.13	\$ 4.03	\$ 4.32	\$ 4.44
2007	\$ 2.16	\$ 2.16	\$ 2.16	\$ 2.16	\$ 2.16	\$ 1.16	\$ 4.15	\$ 4.45	\$ 4.57
2008	\$ 2.22	\$ 2.22	\$ 2.22	\$ 2.22	\$ 2.22	\$ 1.18	\$ 4.28	\$ 4.58	\$ 4.71
2009	\$ 2.29	\$ 2.29	\$ 2.29	\$ 2.29	\$ 2.29	\$ 1.20	\$ 4.41	\$ 4.72	\$ 4.85
2010	\$ 2.35	\$ 2.35	\$ 2.35	\$ 2.35	\$ 2.35	\$ 1.22	\$ 4.54	\$ 4.86	\$ 4.99
2011	\$ 2.42	\$ 2.42	\$ 2.42	\$ 2.42	\$ 2.42	\$ 1.25	\$ 4.67	\$ 5.01	\$ 5.14
2012	\$ 2.49	\$ 2.49	\$ 2.49	\$ 2.49	\$ 2.49	\$ 1.27	\$ 4.81	\$ 5.16	\$ 5.30
2013	\$ 2.56	\$ 2.56	\$ 2.56	\$ 2.56	\$ 2.56	\$ 1.29	\$ 4.96	\$ 5.31	\$ 5.46
2014	\$ 2.63	\$ 2.63	\$ 2.63	\$ 2.63	\$ 2.63	\$ 1.32	\$ 5.11	\$ 5.47	\$ 5.62
2015	\$ 2.70	\$ 2.70	\$ 2.70	\$ 2.70	\$ 2.70	\$ 1.34	\$ 5.26	\$ 5.64	\$ 5.79
2016	\$ 2.78	\$ 2.78	\$ 2.78	\$ 2.78	\$ 2.78	\$ 1.37	\$ 5.42	\$ 5.80	\$ 5.96
2017	\$ 2.85	\$ 2.85	\$ 2.85	\$ 2.85	\$ 2.85	\$ 1.40	\$ 5.57	\$ 5.96	\$ 6.13

Table 45: Load Duration Curves by Area (sorted by system load level)

# of Hours	LDC hour	MLP	CEA	GVEA	System
20	0	131	366	120	617
20	20	132	359	113	605
20	40	130	358	113	601
20	60	130	354	111	596
20	80	129	354	110	592
20	100	129	352	107	588
20	120	127	349	109	585
20	140	129	347	107	583
20	160	128	344	108	579
20	180	132	342	103	577
20	200	129	342	104	575
20	220	125	343	105	573
20	240	126	339	106	571
20	260	134	333	103	570
20	280	126	335	107	568
20	300	130	333	103	566
20	320	131	331	102	565
20	340	127	335	101	563
20	360	129	326	105	561
20	380	123	328	108	559
20	400	132	324	102	557
20	420	125	328	103	556
20	440	123	328	104	555
20	460	125	326	102	553
20	480	127	328	98	552
20	500	127	328	96	551
20	520	128	323	99	550
20	540	127	320	102	549
20	560	129	319	99	547
20	580	126	321	99	545
20	600	131	321	92	544
20	620	121	321	101	543
20	640	123	321	98	542
20	660	125	321	96	541
20	680	129	316	96	540
20	700	123	320	93	539
20	720	127	318	93	538
20	740	123	316	98	537
20	760	123	314	98	536
20	780	122	315	97	534
20	800	125	318	90	533
20	820	120	320	92	532
20	840	121	314	95	531
20	860	126	312	92	530
20	880	121	314	94	529
20	900	120	314	94	528
20	920	119	316	92	527
20	940	122	308	96	526
20	960	120	311	94	525
20	980	121	311	91	523
100	1000	118	310	92	520
100	1100	119	304	92	515
100	1200	120	302	88	511
100	1300	116	302	87	506
100	1400	118	296	86	500
100	1500	116	294	86	496
100	1600	116	290	86	492
100	1700	117	288	83	487
100	1800	115	286	82	482
100	1900	113	283	83	478
500	2000	111	274	80	465
500	2500	111	262	76	449
500	3000	112	253	73	438
500	3500	108	248	73	429

# of Hours	LDC hour	MLP	CEA	GVEA	System
500	4000	104	243	72	419
500	4500	99	240	71	410
500	5000	95	235	70	400
500	5500	92	229	69	389
500	6000	87	223	66	376
500	6500	84	213	63	360
500	7000	80	202	59	341
500	7500	76	186	54	316
500	8000	71	172	50	294
260	8500	68	163	47	278

Table 46 Transmission Limits (MW of generation allowed above native demand)

Transmission Scenarios	MLP	CEA	GVEA	Model Code
System Pooled dispatch	20	50	70	0
Individual dispatch	0	26	0	1
Relieve Transmission	500	500	500	2
Equal Split	35	35	70	3
All MLP	70	0	0	4

Table 47 ML&P Costs and Revenue Requirements

FERC Accounts					Allocation Factors				Derivation of Allocation Factors						
Current	Pg	Line	Comment		Total	Gen	Trans	Dist	Other	Total	Gen	Trans	Dist	Public	Total
Rate Base Items															
Original Cost Plant in Service															
301-2	14,113	204	5	Intangible		50%	7%	43%	0%		Use same as common and shared				
	21,134	204	15	Steam		100%									
	-	204	23	Nuclear		100%									
	-	204	32	Hydraulic		100%									
	102,395	206	41	Other		100%									
350-353	17,255	206	53	Transmission		0%	100%	0%	0%						
360-373	105,504	206	69	Distribution				100%							
389-399	37,931	206	83	General Plant		50%	7%	43%	0%	123,529	17,255	105,504		246288	
	-	200	4	Property under Capital Leases		50%	7%	43%	0%						
Depreciation Reserve															
108	11,616	219	18	Steam		100%									
108	-	219	19	Nuclear		100%									
108	-	219	20	Hydraulic		100%									
108	58,304	219	22	Other Production		100%									
108	7,102	219	23	Transmission		0%	100%	0%	0%						
108	30,554	219	24	Distribution				100%							
108	27,155	219	25	General		50%	7%	43%	0%						
Plant and Equipment															
154	688	227	1,7	Fuel and Prod Plant M&S		100%									
	29	227	8	Trans M&S		0%	100%	0%	0%						
	552	227	9	Dist M&S				100%							
	2,323	227	5	Other		50%	7%	43%	0%						
ADFIT	-	113	53	Deferred Taxes		50%	7%	43%	0%	Gross Original plant Cost					
CWIP	8,154	110	3				14%	86%		Gross T&D Original Cost					
Expense Items															
Operating Expenses															
500-507	1,243	320	13	Steam Plant Operations		100%									
510-514	544	320	20	Steam Maint		100%									
517-525	-	320	33	Nuclear Operations		100%									
528-532	-	320	40	Nuclear Maint		100%									
535-540	-	320	50	Hydro Operations		100%									
541-545	-	321	58	Hydro Maint		100%									
548-550	6,272	321	67	Other Power Operations		100%									
551-554	2,251	321	73	Other Power Maint		100%									
555-557	5,281	321	79	Power Purchase etc.		100%									
Transmission Expenses															
560	-	321	83			0%	100%	0%	0%						
562	-	321	84			0%	100%	0%	0%						
563	-	321	85			0%	100%	0%	0%						
564	-	321	86			0%	100%	0%	0%						
565	-	321	87			100%									
566	-	321	88			0%	100%	0%	0%						
567	-	321	89			0%	100%	0%	0%						
561	757	321	90			100%									
Distribution Expenses															
568	-	321	93			0%	100%	0%	0%						
569	-	321	94	Structures		100%									
570	-	321	95			0%	100%	0%	0%						
571	-	321	96			0%	100%	0%	0%						
572	-	321	97			0%	100%	0%	0%						
573	6	321	98			0%	100%	0%	0%						
Customer Service Expenses															
580-589	3,257	322	114	Distribution Expense Ops				100%							
590-598	2,472	322	125	Dist Exp Maint				100%							
901-905	2,685	322	134	Customer Accounts Exp				0%	100%						
907-910	133	322	141	Customer Service					100%						
920-932	3,274	322-3	165	A&G		50%	7%	43%	0%						
Other Expenses															
403	339	336	2	Steam		100%									
403	-	336	3	Nuclear		100%									
403	-	336	4	Hydraulic		100%									
403	4,892	336	6	Other Production		100%									
403	529	336	7	Transmission		0%	100%	0%	0%						
403	3,308	336	8	Distribution				100%							
403	2,587	336	9	General		50%	7%	43%	0%						
403	550	336	1,10	Common Taxes		50%	7%	43%	0%						
190															
255															
281															
282															
283															
408															

Table 48 ML&P Unbundled Rate Summary

UNBUNDLED RATE SUMMARY SECTION					
	Gen	Trans	Dist	Other	Total
Total Plant	149,632	20,901	127,798	-	298,332
Depreciation Reserve					
Materials and Supply	1,853	192	1,547	-	3,592
ADFIT	-	-	-	-	0
CWIP	-	1,146	7,008	-	8,154
Net Plant	151,485	22,239	136,353	-	310,078
Return	6%	6%	6%	6%	
Return on	8,770	1,334	8,204		17,951
	2,060	150	1,019	244	3,473
Total O&M	17,233	992	7,132	2,818	28,175
Depreciation Expense	6,604	749	4,653	-	12,006
Subtotal Expense	23,837	1,741	11,785	2,818	40,181
Total Rev Req	34,008	3,075	19,889	3,417	61,005
Retail Rev Req	38,694.07	3,548.35	23,100.44	3,417.14	68,760.00
Retail Avg Rate	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Capital Structure and Tax Costs					
	p. 112	Cap Structure	Rate	Wtd Rate	Tax w/ tax
Debt	323189	84%	5%	4%	
Equity	60578	16%	10%	2%	
				6%	7%
Taxes	2,060	150	1,019	244	3,473

This was removed to reconcile difference between Utility Plant shown on p. 110 vs Plant in service on p. 206

Zeroed out due to deferred income taxes

Total less Dep Res plus M&S less ADFIT plus CWIP

Retail Revenue 68,760 P 300 I.10 112%
Resale Revenue 2131 P 300 I.12
Total Revenue 70,891

Total Operating Revenue 82,575 (P. 114, L. 2) 34%

Retail Sales p. 304 line 41
Resale MWh 1244203 p. 311
Total MWh 1,244,203

-10%

Table 49 ML&P Annual Growth

Trended Generation

Growth: 1.39%

Generation	Net Book	Depreciation	Return on Net Book	Reduction in Gen Rev Req	Fuel Cost \$/MMBTU	Fuel Cost Incr Fctr	Cost Incr w/ Growth	Increase in Fuel Cost	Adjusted Gen Rev Req
1996	41,272	6,604	2,389	382	1.86	1.1	1.1	695	39,771.4
1997	34,668		2,007	-	1.74	1.0	1.0	0	38,694.1
1998	28,063		1,625	(382)	1.97	1.1	1.1	1,893	40,204.5
1999	21,459		1,242	(765)	2.01	1.2	1.2	2,399	40,328.7
2000	14,855		860	(1,147)	2.06	1.2	1.2	2,994	40,540.9
2001	8,250		478	(1,529)	2.12	1.2	1.3	3,680	40,844.3
2002	1,646		95	(1,912)	2.16	1.2	1.3	4,224	41,006.1
2003	(4,959)		(287)	(2,294)	2.22	1.3	1.4	4,940	41,339.7
2004	(11,563)		(669)	(2,676)	2.27	1.3	1.4	5,591	41,608.9
2005	(18,167)		(1,052)	(3,059)	2.33	1.3	1.5	6,340	41,974.9
2006	(24,772)		(1,434)	(3,441)	2.39	1.4	1.6	7,105	42,358.1
2007	(31,376)		(1,816)	(3,823)	2.44	1.4	1.6	7,804	42,674.6
2008	(37,981)		(2,199)	(4,206)	2.5	1.4	1.7	8,604	43,092.1
2009	(44,585)		(2,581)	(4,588)	2.57	1.5	1.7	9,509	43,614.8
2010	(51,189)		(2,963)	(4,970)	2.63	1.5	1.8	10,347	44,070.4
2011	(57,794)		(3,346)	(5,353)	2.7	1.6	1.9	11,293	44,634.3
2012	(64,398)		(3,728)	(5,735)	2.77	1.6	2.0	12,261	45,220.0
2013	(71,003)		(4,111)	(6,118)	2.84	1.6	2.0	13,251	45,828.0
2014	(77,607)		(4,493)	(6,500)	2.91	1.7	2.1	14,264	46,458.6
2015	(84,211)		(4,875)	(6,882)	2.98	1.7	2.2	15,301	47,112.4
2016	(90,816)		(5,258)	(7,265)	3.06	1.8	2.3	16,456	47,885.4
2017	(97,420)		(5,640)	(8,029)	3.132	1.8	2.4	17,660	48,225.1
			NPV(8%)	(\$25,582)				\$57,955	\$427,081

Table 50 CEA Costs and Revenue Requirements

FERC Accounts		Current		Pg	Line	Comment	Allocation Factors				Derivation of Allocation Factors														
							Total	Gen	Trans	Dist	Other	Total	Gen	Trans	Dist	Public	Total								
Rate Base Items																									
Original Cost Plant In Service																									
301-2	4,711	204	5			Intangible	34%	37%	29%	0%		Use same as common and shared													
	61,380	204	15			Steam	100%																		
	-	204	23			Nuclear	100%																		
	8,850	204	32			Hydraulic	100%																		
	113,732	206	41			Other	100%																		
350-353	203,223	206	53			Transmission	0%	100%	0%	0%															
360-373	161,393	206	69			Distribution			100%																
389-399	62,075	206	83			General Plant	34%	37%	29%	0%		184,062	203,223	161,393		548,678									
	56	200	4			Property under Capital Leases	34%	37%	29%	0%															
Depreciation Reserve																									
108	23,988	219	18			Steam	100%																		
108	-	219	19			Nuclear	100%																		
108	5,773	219	20			Hydraulic	100%																		
108	-	219	22			Other Production	100%																		
108	39,185	219	23			Transmission	0%	100%	0%	0%															
108	75,730	219	24			Distribution			100%																
108	52,754	219	25			General	34%	37%	29%	0%															
Materials and Supply																									
154	9,282	227	1,7			Fuel and Prod Plant M&S	100%																		
	4,072	227	8			Trans M&S	0%	100%	0%	0%															
	2,218	227	9			Dist M&S			100%																
	616	227	5			Other	34%	37%	29%	0%															
ADFIT	-	113	53			Deferred Taxes	34%	37%	29%	0%		Gross Original plant Cost Gross T&D Original Cost													
CWIP	19,827	110	3					56%	44%																
Expense Items																									
Operation and Maintenance																									
500-507	-	320	13			Steam Plant Operations	100%																		
510-514	-	320	20			Steam Maint	100%																		
517-525	-	320	33			Nuclear Operations	100%																		
528-532	-	320	40			Nuclear Maint	100%																		
535-540	289	320	50			Hydro Operations	100%																		
541-545	198	321	58			Hydro Maint	100%																		
546-550	38,066	321	67			Other Power Operations	100%																		
551-554	7,327	321	73			Other Power Maint	100%																		
555-557	14,033	321	79			Power Purchase etc.	100%																		
Transmission Expense Ops																									
560	-	321	83				0%	100%	0%	0%															
562	-	321	84				0%	100%	0%	0%															
563	-	321	85				0%	100%	0%	0%															
564	-	321	86				0%	100%	0%	0%															
565	-	321	87				100%																		
566	-	321	88				0%	100%	0%	0%															
567	-	321	89				0%	100%	0%	0%															
561	992	321	90				100%																		
Transmission Exp Maint																									
568	-	321	93				0%	100%	0%	0%															
569	-	321	94			Structures	100%																		
570	-	321	95				0%	100%	0%	0%															
571	-	321	96				0%	100%	0%	0%															
572	-	321	97				0%	100%	0%	0%															
573	2,386	321	98				0%	100%	0%	0%															
580-589	3,547	322	114			Distribution Expense Ops			100%																
590-598	5,093	322	125			Dist Exp Maint			100%																
901-905	4,324	322	134			Customer Accounts Exp			0%	100%															
907-910	632	322	141			Customer Service				100%															
920-932	12,108	322-3	165			A&G	34%	37%	29%	0%															
Other																									
403	1,893	336	2			Steam	100%																		
403	-	336	3			Nuclear	100%																		
403	150	336	4			Hydraulic	100%																		
403	4,118	336	6			Other Production	100%																		
403	5,850	336	7			Transmission	0%	100%	0%	0%															
403	6,101	336	8			Distribution			100%																
403	3,046	336	9			General	34%	37%	29%	0%															
403	-	336	10			Common	34%	37%	29%	0%															
190	-					Taxes																			
255	-																								
281	-																								
282	-																								
283	-																								
408	-																								

Table 51 CEA Unbundled Rate Summary

UNBUNDLED RATE SUMMARY SECTION					
	Gen	Trans	Dist	Other	Total
Total Plant	206,485	227,980	181,054	-	615,520
Depreciation Reserve	47,458	58,724	91,248	-	197,430
Materials and Supply	9,489	4,300	2,399	-	16,188
ADFIT	-	-	-	-	0
CWIP	-	11,051	8,776	-	19,827
Net Plant	168,516	184,807	100,982	-	454,105
Return	6%	6%	6%	6%	
Rate Base	10,960	11,569	12,022	4,956	41,517
Rate	4.44	8.33	2.00	3.11	8.88
Total O&M	63,975	7,863	12,202	4,956	88,995
Depreciation Expense	6,983	6,988	6,997	-	20,968
Other Expenses	70,958	14,051	1,007	4,000	90,016
Total	81,962	28,902	20,206	8,956	139,100
Retail Rev Req	53,462.93	17,293.88	16,729.23	3,252.97	90,739.00
Retail Avg Rate	0.0521	0.0169	0.0163	0.0032	0.0885
Capital Structure and Tax Costs					
	p. 112	Cap Structure	Rate	Wtd Rate	Tax w/ tax effects
Debt	307906	75%	5%	4%	
Equity	104477	25%	10%	3%	
				6%	
Taxes	444	93	120	31	688

Retail Revenue	90,739	p. 304 line	65%
Resale Revenue	52942	p. 311	
Total Revenue	143,681		
Total Operating Revenue	143,948	(P. 114, L.	3%
Retail Sales	1,025,250	p. 304 line 41	
Resale MWh	1244203	p. 311	
Total MWh	2,269,453		

Table 52 CEA Annual Growth

Trended Generation (All Costs in Thousands)

Growth: 1.52%

Generation	Net Book	Depreciation	Return on Net Book	Reduction in Gen Rev Req	Fuel Cost \$/M.BTU	Fuel Cost Incr Fctr	Cost Incr w/ Growth	Increase in Fuel Cost	Adjusted Gen Rev Req
1996	88,945	6,983	5,574	438	1.38	0.9	0.9	-4,913	48,987.9
1997	81,962		5,136	-	1.5	1.0	1.0	0	53,462.9
1998	74,979		4,699	(438)	1.7	1.1	1.2	7,888	60,912.9
1999	67,996		4,261	(875)	1.75	1.2	1.2	10,603	63,191.2
2000	61,014		3,824	(1,313)	1.8	1.2	1.3	13,388	65,538.2
2001	54,031		3,386	(1,750)	1.85	1.2	1.3	16,243	67,955.3
2002	47,048		2,948	(2,188)	1.9	1.3	1.4	19,169	70,444.0
2003	40,065		2,511	(2,626)	1.95	1.3	1.4	22,168	73,005.7
2004	33,082		2,073	(3,063)	2	1.3	1.5	25,242	75,642.2
2005	26,099		1,636	(3,501)	2.06	1.4	1.5	28,787	78,748.8
2006	19,117		1,198	(3,938)	2.12	1.4	1.6	32,421	81,945.4
2007	12,134		760	(4,376)	2.18	1.5	1.7	36,147	85,233.6
2008	5,151		323	(4,814)	2.24	1.5	1.8	39,966	88,615.5
2009	(1,832)		(115)	(5,251)	2.3	1.5	1.8	43,881	92,093.0
2010	(8,815)		(552)	(5,689)	2.37	1.6	1.9	48,319	96,093.2
2011	(15,798)		(990)	(6,126)	2.44	1.6	2.0	52,869	100,206.0
2012	(22,780)		(1,428)	(6,564)	2.5	1.7	2.1	57,097	103,996.0
2013	(29,763)		(1,865)	(7,002)	2.57	1.7	2.2	61,873	108,334.8
2014	(36,746)		(2,303)	(7,439)	2.65	1.8	2.3	67,221	113,244.8
2015	(43,729)		(2,740)	(7,877)	2.72	1.8	2.4	72,247	117,832.7
2016	(50,712)		(3,178)	(8,314)	2.8	1.9	2.5	77,862	123,011.0
2017	(57,694)		(3,616)	(8,750)	2.875	1.9	2.6	83,384	127,657.5
NPV(8%) (\$29,279)								\$259,333	\$775,415

Table 53 CGVEA Costs and Revenue Requirements

FERC Accounts				Allocation Factors				Derivation of Allocation Factors						
Current	Pg.	Line	Comment	Total	Gen	Trans	Dist	Other	Total	Gen	Trans	Dist	Public	Total
Rate Base Items														
Original Cost Plant in Service														
301-2	-	204	5	Intangible	29%	18%	53%	0%	Use same as common and shared					
	22,136	204	15	Steam	100%									
	-	204	23	Nuclear	100%									
	-	204	32	Hydraulic	100%									
	37,894	206	41	Other	100%									
350-353	37,772	206	53	Transmission	0%	100%	0%	0%						
360-373	112,064	206	69	Distribution			100%							
389-399	22,792	206	83	General Plant	29%	18%	53%	0%	60,030	37,772	112,064		209866	
	-	200	4	Property under Capital Leases	29%	18%	53%	0%						
Depreciation														
108	16,526	219	18	Steam	100%									
108	-	219	19	Nuclear	100%									
108	-	219	20	Hydraulic	100%									
108	25,320	219	22	Other Production	100%									
108	23,148	219	23	Transmission	0%	100%	0%	0%						
108	36,852	219	24	Distribution			100%							
108	10,283	219	25	General	29%	18%	53%	0%						
Maintenance														
154	3,520	227	1,7	Fuel and Prod Plant M&S	100%									
	108	227	8	Trans M&S	0%	100%	0%	0%						
	108	227	9	Dist M&S			100%							
	2,274	227	5	Other	29%	18%	53%	0%						
ADFIT	-	113	53	Deferred Taxes	29%	18%	53%	0%	Gross Original plant Cost					
CWIP	11,161	110	3			25%	75%		Gross T&D Original Cost					
Expense Items														
Operations and Maintenance														
500-507	6,936	320	13	Steam Plant Operations	100%									
510-514	1,737	320	20	Steam Maint	100%									
517-525	-	320	33	Nuclear Operations	100%									
528-532	-	320	40	Nuclear Maint	100%									
535-540	-	320	50	Hydro Operations	100%									
541-545	-	321	58	Hydro Maint	100%									
546-550	15,319	321	67	Other Power Operations	100%									
551-554	1,919	321	73	Other Power Maint	100%									
555-557	13,438	321	79	Power Purchase etc.	100%									
Transmission Expenses														
560	-	321	83		0%	100%	0%	0%						
562	-	321	84		0%	100%	0%	0%						
563	-	321	85		0%	100%	0%	0%						
564	-	321	86		0%	100%	0%	0%						
565	-	321	87			100%								
566	-	321	88		0%	100%	0%	0%						
567	-	321	89		0%	100%	0%	0%						
561	1,308	321	90			100%								
Transmission Expenses														
568	-	321	93		0%	100%	0%	0%						
569	-	321	94	Structures		100%								
570	-	321	95		0%	100%	0%	0%						
571	-	321	96		0%	100%	0%	0%						
572	-	321	97		0%	100%	0%	0%						
573	1,035	321	98		0%	100%	0%	0%						
580-589	673	322	114	Distribution Expense Ops			100%							
590-598	2,154	322	125	Dist Exp Maint			100%							
901-905	2,201	322	134	Customer Accounts Exp			0%	100%						
907-910	619	322	141	Customer Service				100%						
920-932	3,433	322-3	165	A&G	29%	18%	53%	0%						
Transmission Expenses														
403	691	336	2	Steam	100%									
403	-	336	3	Nuclear	100%									
403	-	336	4	Hydraulic	100%									
403	1,163	336	6	Other Production	100%									
403	1,271	336	7	Transmission	0%	100%	0%	0%						
403	3,114	336	8	Distribution			100%							
403	370	336	9	General	29%	18%	53%	0%						
403	-	336	10	Common	29%	18%	53%	0%						
190				Taxes										
255														
281														
282														
283														
408														

Table 54 GVEA Unbundled Rate Summary

UNBUNDLED RATE SUMMARY SECTION					
	Gen	Trans	Dist	Other	Total
Total Plant	66,549	41,874	124,234	-	232,658
Depreciation Reserve	44,787	24,999	42,343	-	112,129
Materials and Supply	4,170	517	1,322	-	6,010
ADFIT	-	-	-	-	0
CWIP	-	2,814	8,347	-	11,161
Net Plant	25,933	20,206	91,561	-	137,700
Return	7%	7%	7%	7%	
Reference Rate: 6.28%					
Reference Rate: 11.0%					
Reference Rate: 204					
Reference Rate: 72					
Total O&M	40,331	2,961	4,660	2,820	50,772
Depreciation Expense	1,960	1,338	3,312	-	6,609
Strategic Expense	-	-	7,972	2,820	10,792
Reference Rate: 14.48%					
Reference Rate: 2.82%					
Reference Rate: 66,282.00					
Retail Rev Req	43,815.73	5,624.43	14,035.40	2,806.44	66,282.00
Retail Avg Rate	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Capital Structure and Tax Costs					
p. 112	Cap Structure	Rate	Wtd Rate	Tax	w/ tax effects
Debt	118459	63%	5%	3%	
Equity	69433	37%	10%	4%	2%
			7%	54%	9%
Taxes	1,080	110	204	72	1,465

Zeroed out due to deferred income taxes

Total less Dep Res plus M&S less ADFIT plus CWIP

Retail Revenue 66,282 P 300 I.10 97%
 Resale Revenue 1677 P 300 I.12
 Total Revenue 67,959

Total Operating Revenue 69,126 (P. 114, L. 2) 1%

Retail Sales p. 304 line 41
 Resale MWh 1244203 p. 311
 Total MWh 1,244,203

3%

Table 55 GVEA Annual Growth

Trended Generation

Growth: 2.91%

Generation	Net Book	Depreciation	Return on Net Book	Reduction in Gen Rev Req	Fuel Cost \$/MMBTU	Fuel Cost Incr Fctr	Cost Incr w/ Growth	Increase in Fuel Cost	Adjusted Fuel Cost
1996	47,111	1,960	3,235	135	3.4	1.0	1.0	-1,009	42,941.0
1997	45,151		3,101	-	3.4	1.0	1.0	0	43,815.7
1998	43,192		2,966	(135)	3.5	1.0	1.1	2,119	45,800.1
1999	41,232		2,832	(269)	3.61	1.1	1.1	4,442	47,988.8
2000	39,272		2,697	(404)	3.72	1.1	1.2	6,869	50,280.7
2001	37,312		2,562	(538)	3.83	1.1	1.3	9,403	52,879.9
2002	35,352		2,428	(673)	3.94	1.2	1.3	12,048	55,190.4
2003	33,392		2,293	(808)	4.06	1.2	1.4	14,933	57,941.4
2004	31,433		2,159	(942)	4.18	1.2	1.5	17,946	60,819.9
2005	29,473		2,024	(1,077)	4.31	1.3	1.6	21,224	63,963.0
2006	27,513		1,889	(1,211)	4.44	1.3	1.7	24,847	67,251.4
2007	25,553		1,755	(1,346)	4.57	1.3	1.8	28,221	70,690.8
2008	23,593		1,620	(1,481)	4.71	1.4	1.9	32,096	74,431.1
2009	21,633		1,486	(1,615)	4.85	1.4	2.0	36,142	78,342.7
2010	19,674		1,351	(1,750)	4.99	1.5	2.1	40,366	82,432.5
2011	17,714		1,217	(1,884)	5.14	1.5	2.3	44,933	86,864.1
2012	15,754		1,082	(2,019)	5.3	1.6	2.4	49,862	91,658.5
2013	13,794		947	(2,153)	5.46	1.6	2.5	55,009	96,671.5
2014	11,834		813	(2,288)	5.62	1.7	2.7	60,384	101,911.6
2015	9,874		678	(2,423)	5.79	1.7	2.9	66,171	107,563.7
2016	7,915		544	(2,557)	5.96	1.8	3.0	72,213	113,471.2
2017	5,955		409	(2,626)	6.125	1.8	3.2	78,427	119,416.3
NPV(8%)			(\$9,005)			\$204,446		\$642,393	

Table 56 Generation Revenue Requirement Trends

	MLP		CEA		GVEA
1996 \$	40	\$	49	\$	43
1997 \$	39	\$	53	\$	44
1998 \$	40	\$	61	\$	46
1999 \$	40	\$	63	\$	48
2000 \$	41	\$	66	\$	50
2001 \$	41	\$	68	\$	53
2002 \$	41	\$	70	\$	55
2003 \$	41	\$	73	\$	58
2004 \$	42	\$	76	\$	61
2005 \$	42	\$	79	\$	64
2006 \$	42	\$	82	\$	67
2007 \$	43	\$	85	\$	71
2008 \$	43	\$	89	\$	74
2009 \$	44	\$	92	\$	78
2010 \$	44	\$	96	\$	82
2011 \$	45	\$	100	\$	87
2012 \$	45	\$	104	\$	92
2013 \$	46	\$	108	\$	97
2014 \$	46	\$	113	\$	102
2015 \$	47	\$	118	\$	108
2016 \$	48	\$	123	\$	113
2017 \$	48	\$	128	\$	119

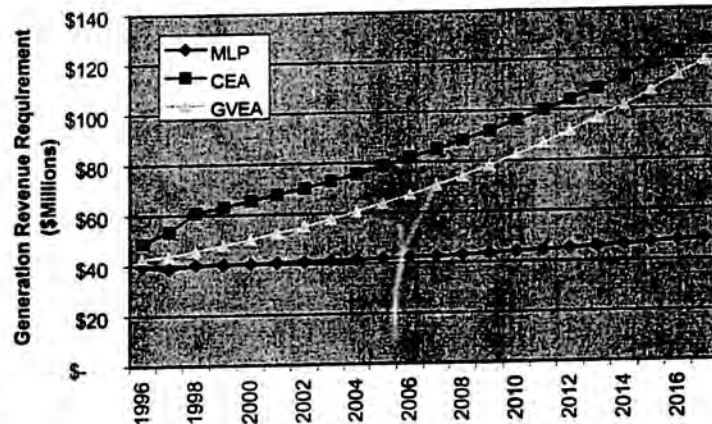


Table 57 Conversion of Table Results for Calculation of Stranded Costs

		Base Case Revenue	Scenario Change in revenue	Increase in IPP Revenue	Net Increase in Revenue for Utilities	Utility Revenue (\$ Millions)	Base Case Cost Change	Increase in Cost	Increase for IPP	NPV Increase in Cost (\$Millions)	Note on Costs
Table 5	Base Case	1431	0			1431	-40.94			-40.94	
Table 6	Fuel Cost Equalization	1431	-49.2			1381.8	-40.94	-41.7		-82.64	Relative to Base case w/no IPP
Table 7	Fuel Cost Equalization with Increases MLP Transmission	1431	-45.1			1385.9	-40.94	-46.7		-87.64	Relative to Base case w/no IPP
Table 8	CEA Bids 20% over Marginal Cost, Contract Transmission Capacity	1431	172.2			1603.2	-40.94	6.4		-34.54	Relative to Base case w/no IPP
Table 9	CEA Bids 20% Over Marginal Costs, 35 MW Transmission Capacity for MLP	1431	176.3			1607.3	-40.94	4.9		-36.04	Relative to Base case w/no IPP
Table 10	CEA Bids 20% Over Marginal Costs, 70 MW Transmission Capacity for MLP	1431	118.6			1549.6	-40.94	2.2		-38.74	Relative to Base case w/no IPP
Table 11	CEA Fossil Fleet bids 40% over Marginal Cost	1431	343.9			1774.9	-40.94	10.1		-30.84	Relative to Base case w/no IPP
Table 12	CEA Fleet bids 40% above Marginal Cost, and MLP T Capacity 35MW	1431	346.1			1777.1	-40.94	9.1		-31.84	Relative to Base case w/no IPP
Table 13	CEA Fleet bids 40% above Marginal Cost, and MLP owns 70MW T Capacity	1431	348.8			1779.8	-40.94	9.5		-31.44	Relative to Base case w/no IPP
Table 14	Withholding of Beluga 3 by CEA	1431	27.1			1458.1	-40.94	1.3		-39.64	Relative to Base case w/no IPP
Table 15	Withholding of Beluga 7-8 by CEA	1431	44.8			1475.8	-40.94	49		8.06	Relative to Base case w/no IPP
Table 16	Withholding of Beluga 6-8	1431	44.8			1475.8	-40.94	52.6		11.63	Relative to Base case w/no IPP
Table 17	No New Generation Capacity Added	1431	13.2			1444.2	-40.94	-42.3		-83.24	Relative to Base case w/no IPP
Table 23	No Transmission Capacity Constraint MLP Receives 35 MW of Transmission Capacity	1431	-71.6			1359.4	-40.94	-10.5		-51.44	Relative to Base case w/no IPP
Table 24	Capacity	1431	5.8			1436.8	-40.94	-1		-41.94	Relative to Base case w/no IPP
Table 25	Load Growth Forecast Increased by 2%	1431	529.3			1960.3	-40.94	365.7		324.76	Relative to Base case w/no IPP
Table 26	Load Growth Forecast Decreased by 1.5%	1431	-257.1			1173.9	-40.94	-199.7		-240.64	Relative to Base case w/no IPP
Table 18	New Entrant in the Status Quo Case		72.9	159.8	-86.9	1344.1		-74	120.6	-194.6	
Table 19	New Entrant in the Pooled Dispatch Base Case		-105.4	111.8	-217.2	1213.8		-37.6	120.6	-158.2	
Table 20	New Entrant when the CEA Fleet Bids 40% above Dispatch Cost		-65.3	168.9	-234.2	1196.8		-39.9	120.6	-160.5	
Table 21	Impact of CEA Bidding 40% above Dispatch Cost (with IPP in 2002)	1213.8	384.1	57	327.1	1540.9	-158.2		0	-158.2	Relative to IPP in base case
Table 22	Impact of IPP on CEA's Withdrawal of Beluga Unit 3	1213.8	22.2	0	22.2	1236	-158.2		0	-158.2	Relative to IPP in base case

Table 58 Calculation of Stranded Costs by Scenario

Scenario	Increase in NPV Revenue	Increase in Costs	Stranded Cost
Table 5 Base Case	(\$414)	(\$41)	\$373
Table 6 Fuel Cost Equalization	(\$463)	(\$83)	\$380
Table 7 Fuel Cost Equalization with Increases MLP Transmission	(\$459)	(\$88)	\$371
Table 8 CEA Bids 20% over Marginal Cost, Contract Transmission Capacity	(\$242)	(\$35)	\$207
Table 9 CEA Bids 20% Over Marginal Costs, 35 MW Transmission Capacity for MLP	(\$238)	(\$36)	\$202
Table 10 CEA Bids 20% Over Marginal Costs, 70 MW Transmission Capacity for MLP	(\$295)	(\$39)	\$257
Table 11 CEA Fossil Fleet bids 40% over Marginal Cost	(\$70)	(\$31)	\$39
Table 12 CEA Fleet bids 40% above Marginal Cost, and MLP T Capacity 35MW	(\$68)	(\$32)	\$36
Table 13 CEA Fleet bids 40% above Marginal Cost, and MLP owns 70MW T Capacity	(\$65)	(\$31)	\$34
Table 14 Withholding of Beluga 3 by CEA	(\$387)	(\$40)	\$347
Table 15 Withholding of Beluga 7-8 by CEA	(\$369)	\$8	\$377
Table 16 Withholding of Beluga 6-8	(\$369)	\$12	\$381
Table 17 No New Generation Capacity Added	(\$401)	(\$83)	\$317
Table 23 No Transmission Capacity Constraint	(\$485)	(\$51)	\$434
Table 24 MLP Receives 35 MW of Transmission Capacity	(\$408)	(\$42)	\$366
Table 25 Load Growth Forecast Increased by 2%	\$115	\$325	\$209
Table 26 Load Growth Forecast Decreased by 1.5%	(\$671)	(\$241)	\$430
Table 18 New Entrant in the Status Quo Case	(\$501)	(\$195)	\$306
Table 19 New Entrant in the Pooled Dispatch Base Case	(\$631)	(\$158)	\$473
Table 20 New Entrant when the CEA Fleet Bids 40% above Dispatch Cost	(\$648)	(\$161)	\$488
Table 21 Impact of CEA Bidding 40% above Dispatch Cost (with IPP in 2002)	(\$304)	(\$158)	\$146
Table 22 Impact of IPP on CEA's Withdrawal of Beluga Unit 3	(\$609)	(\$158)	\$451

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REPORT ON THE ALASKA PUBLIC UTILITIES COMMISSION

by

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INTRODUCTION

While claims of dramatic change and great challenge in a field are usually an exaggeration, that is probably not the case where the subject is the regulation of public utilities. Current developments in industry organization, technology, customer expectations, and attendant public policy are altering the provision of most utility services in fundamental ways. Intimately related to all this are the state public utility commissions as both responders to necessary change and initiators of constructive change. These roles often center around changes in mission, process, and timeliness. In electricity, gas, telecommunications and, to a lesser extent, water, the changes taking place are changes in kind and not just degree. Most importantly to state public utility commissions, the introduction of market forces and competition into the utility industries may substantially supplant the need for continuing, comprehensive, and traditional public utility regulation.

As each state public utility commission undertakes an effort to transform itself to meet the demands of this emerging environment, it is often useful to begin the process with a self-assessment to identify the major issues involved, the necessary timing of change, staff attitudes about change, and potential impediments to change. Such a self-assessment also presents an opportunity for commission staff to provide input into the direction of commission change.

After several preliminary discussions in early spring, the National Regulatory Research Institute (NRRI) was invited in May to submit a proposal "To Assist the Alaska Public Utilities Commission (APUC) in an Organizational Self-Assessment As

It Undertakes Efforts Toward Large-scale Change." A contract for this work was subsequently entered into, and the onsite team visit took place over the period June 17-22, 1998.

To accomplish this self-assessment, NRRI staff interviewed sixteen Alaska PUC staff, the five Commissioners, and four former employees, and asked the interviewed staff to complete a short assessment instrument. The results of the overall NRRI inquiry are contained in this report. Part I of the report describes the assessment instrument and presents the results obtained by its application. Part II of the report presents NRRI findings by major subject component. For each component, the NRRI draws some conclusions and offers accompanying observations. Part III provides summary conclusions. Specific comments received by NRRI in the interviews are included in the Appendix.

Reports of this type are inherently judgmental and subjective. In that sense they are always limited and imperfect. The task, of course, is to be fair and accurate, and we have tried to be both in our assessment. In trying to accomplish this we have avoided the extreme stances — "the sky is falling" at the APUC (it isn't) or "we have no problems" at the APUC. We have employed "discount factors" where they seemed appropriate and have only treated things that could be called recurring themes coming from multiple interviewees, thus minimizing the outlier phenomenon. We have attempted to make our frame of reference either *horizontal* comparisons, that is, differences in conditions within the APUC and with other commissions, or *vertical* comparisons, that is, differences in conditions at the APUC now as against the APUC at an earlier time. We have also avoided references to the behavior of specific individuals. It was not our purpose to evaluate individual performance; comments directed toward individuals were only included if they could be regarded as applying to the position held by the individual in some generic sense. Finally, the report is the collaborative product of the three-person team that conducted the exercise; it contains only those observations and conclusions that could be agreed to by all of the authors.

For a report to be contributory to agency self-assessment and to be useful to the leadership it must be a candid one — even if occasionally painfully so. Accordingly, while not seeking sharply pointed assessments, we have not glossed over areas of important perceived deficiencies with indirect writing. It should be said that all participants demonstrated a great deal of goodwill toward the assessment initiative and genuinely cared about an improved APUC as a place to work and contribute.

PART I

APPLICATION OF THE COMPETING VALUES MODEL

Robert Quinn of the University of Michigan has developed one typology of organizational change that may hold great promise for the analysis of public utility commissions as they undergo transformation in response to their evolving environment. His model focuses on the inherent contradictions of organizational life and is referred to as the competing values model.¹

Quinn identifies four ways of categorizing organizations and arrays them in a two-by-two grid, which is illustrated in Figure 1. In the upper right-hand quadrant (I) is the open systems approach. Organizations in this quadrant are oriented toward taking risks, excitement, and innovation. Success is measured by being on the leading edge.² An interdisciplinary team working on industry restructuring would help pull the commission in the direction of quadrant I.

In the lower right-hand quadrant (II) is the rational goal approach. These organizations tend to be achievement oriented, emphasize logical direction, and are competitive. Success is measured by acquiring resources and defeating competitors.³ As commissions confront their new environments and adapt to new market and consumer needs, they move toward quadrant II.

In the lower left-hand quadrant (III) is the internal process approach. This organization is control-oriented and mechanistic. Organizations in this quadrant are

¹ Robert E. Quinn, *Beyond Rational Management: Mastering the Paradoxes and Competing Demands of High Performance* (San Francisco, CA: Jossey-Bass Publishers, 1989).

² Ibid., 36.

³ Ibid.