

1 **Chapter 1. Overview**
2

3 The following pages contain brief descriptions of the contractual
4 arrangements that govern electricity provisions in the Railbelt. Fuel supply
5 contracts for Railbelt electrical generation are presented first. Wholesale power
6 supply contracts are presented next. Finally, agreements for or directly affecting
7 the transmission of power are offered. Charts outlining the arrangements of fuel
8 and wholesale electricity contracts are presented at the beginning of the packet.

9 The goal of the document is to afford the reader an intuitive understanding
10 of contract structure, along with pertinent terms and conditions for each of the
11 contracts. The intent is to provide the Commission with a knowledge base for use
12 in future proceedings in R-97-10, the Electric Market Structure Docket. The
13 document is organized to present summaries of each contract in a uniform format.
14 Graphic presentations are also included to show the overall structure in which
15 individual contracts reside.

16 Before proceeding some caveats are in order. Many contractual details are
17 necessarily not discussed. The purpose is to summarize, not to reproduce, the fuel
18 supply, wholesale power, and transmission agreements. Some contract provisions
19 may have been excluded that nevertheless prove relevant to Railbelt market
20 structure and conduct. In addition, although the Railbelt utilities have reviewed
21 and provided comments on an earlier version, the enclosed summaries may
22 contain factual errors. Finally, we stress that the summaries *do not* represent a
23 Commission finding of fact or law and our descriptions here should not be seen as
24 precedent setting in any other proceeding.

25
26 **Fuel Supply Contracts**
27

28 *Southern Railbelt (Natural Gas Based)*

29 Natural gas used by railbelt utilities comes from Cook Inlet. There are two
30 utility buyers and three sellers of this gas. Chugach buys from the Beluga Field
31 Producers (ML&P, Phillips, and Chevron), Marathon, and (in effect)
32 AEG&T/HEA. ML&P buys from the Beluga Field Producers (including itself).

33 None of the gas supply contracts are “take or pay”; they are, instead, “net
34 requirements”¹. The distinction is important. Net requirements arrangements
35 provide freedom for the utility to optimize dispatch, subject to the constraint that
36 different plants are tied to specific fuel sources and/or prices.
37

¹ See definitions at the end of this section.

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Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

1 Chugach's contractual relationships are complex. Gas contracts are tied to
2 specific generating plants, as follows.

3
4 **Beluga** Chugach must purchase 60 percent of its fuel requirements from
5 the Beluga Field producers collectively (1/3 each), except that gas for
6 GVEA sales falls outside this requirement. (Each of the Beluga Field
7 producers has a substantially similar contract with Chugach.) Chugach
8 must buy 40 percent of its Beluga plant requirements from Marathon,
9 where again gas for GVEA sales falls outside this requirement. Base
10 prices are different between the Marathon and Beluga Field producer
11 contracts and also among the three contracts with Beluga producers.

12 **Bernice Lake** Chugach must use Marathon-supplied gas when it generates
13 power at the Bernice Lake plant. Prices are the same as for delivery to the
14 Beluga power plant (transportation is included.)

15 **International** Chugach must use Marathon-supplied gas when it generates
16 power at the International generating plant. Prices are the same as under
17 the Beluga/Marathon Contract. Chugach pays a transportation fee to
18 ENSTAR.

19 **Nikiski** Chugach provides Marathon gas or compensates AEG&T/HEA
20 for gas burned in the Nikiski plant. AEG&T/HEA gets the gas it provides
21 on an in-kind basis, from ANP, in exchange for providing steam. The
22 plant only burns AEG&T/HEA gas once HEA has purchased 350
23 GWh/year from Chugach.

24 ML&Ps supply relationships are comparatively simple.

25 **Plants 1 and 2** All requirements come from the Beluga River field
26 producers (including itself). Specific terms under which ML&P sells gas
27 to itself are under investigation in U-96-36.

28
29 *Northern Railbelt (Coal and Fuel Oil Based)*

30 Base load generation north of the Alaska Range is a mix of coal and oil.
31 Coal comes exclusively from the Usibelli Coal Mine near Healy. Sources of oil
32 fuels are the Williams refinery in North Pole. Oil fuels combustion-turbine
33 generation resources owned by GVEA. The combustion turbines presently see
34 major application in peaking service.

35 There presently are five primary generation plants that use coal and oil:
36 GVEA; Aurora Energy; University of Alaska Fairbanks; US Army (Fort
37 Wainwright); US Airforce (Eielson and Clear). The Commission does not have a
38 complete set of contracts for utilities that fall under RCA jurisdiction.²

² Northern region utilities regulated by the RCA are GVEA and Aurora Energy.

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Wholesale Electric Contracts

Wholesale electric contracts can be grouped into three main “markets”.

The first is a selling “market”, characterized by Chugach being the supplier for all (or most) of other utilities’ power and energy requirements. The buyers in this market are MEA, SES, and HEA -- utilities that are all in the Kenai-Anchorage area. MEA is under an all requirements arrangement with Chugach. SES has an all requirements arrangement with Chugach, except that Chugach may interrupt SES load on a certain number of occasions each year. Chugach supplies all of HEA’s power requirements up to 73 MW. HEA/AEG&T is obligated to purchase from Chugach a minimum of 350 GWh of energy each year and -- after HEA/AEG&T takes its Bradley Lake energy -- all of its residual energy requirements up to 320 GWh.

The second “market” is defined by GVEA as a large buyer. GVEA meets roughly 40 percent of its total energy needs through power purchases. The suppliers in this market are AIDEA (Healy Clean Coal Project)³; AEA (Bradley Lake energy); Aurora Energy (firm power from the Chena plant); Chugach (nonfirm, economy, energy); and ML&P (economy spot market energy). Under contracted terms AEA and Aurora Energy are priority sellers; Bradley Lake energy is take-or-pay, and Chena 1 is contracted to be base-load “firm” energy. Chugach has priority for meeting GVEA’s non-firm needs. It has rights to supply 2/3 of GVEA’s first 450 GWh, and 4/5 of subsequent, nonfirm needs (if any). Chugach and ML&P now compete on the “economy energy spot market” for the remainder of GVEA’s nonfirm needs. Competitive supply entry is possible for any utility wishing to provide firm or non-firm power, subject to conditions imposed under GVEA’s nonfirm energy contract with Chugach.

The third “market” centers around the Bradley Lake Hydroelectric Project. Funded by the State of Alaska through the AEA,⁴ Bradley Lake provides power to each of the railbelt utilities. The AEA, as owner of the Project, sells power to each of the Railbelt utilities through the Bradley Lake Power Sales Agreement. Both MEA and SES pool their shares with Chugach under a net-billing arrangement. Chugach receives rights to MEA’s and SES’s Bradley Lake power, and provides a credit on their respective wholesale bills that is equal to their Bradley Lake purchase cost. As the only utilities that currently require wheeling of Bradley Lake Power, ML&P and GVEA have a Services Agreement with Chugach. The Services Agreement delineates the terms under which Chugach provides

³ The Healy Clean Coal Project is presently not producing power. AIDEA and GVEA are in a process to determine what will happen with the Project.

⁴ While the contract references the “Alaska Power Authority”, the functions and duties of the former APA are now vested with the Alaska Energy Authority, a division of the Alaska Industrial Development and Export Authority.

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1 wheeling, storage, and purchase services that may prove necessary for wheeling
2 utilities to make use of their Bradley Lake resources.

3 **Transmission Agreements**

4 There are three transmission rate agreements on file with the Commission.
5 The first concerns rates that Chugach charges for wheeling, energy storage, and
6 (if necessary) purchase of another utility’s Bradley Lake energy over its system.
7 This is known as the Bradley Lake Services Agreement. Second, the Intertie
8 Operating Agreement sets conditions for rates paid by wheeling utilities to the
9 AEA for use of the Intertie. Lastly, a stipulation sets wheeling rates that Chugach
10 and GVEA charge for use of their facilities when energy is transmitted over the
11 Intertie. For purposes of wholesale sales, Chugach and GVEA do not directly
12 charge themselves for their own lines. The costs of transmission are therefore
13 embedded in other Chugach rates.

14
15 **Definitions**

16 A few terms of art regularly appear throughout the following contract
17 summaries. While working definitions are provided for reference, particular
18 contracts may use these terms somewhat differently.

19
20 All Requirements

21 An “all requirements” contract generally requires the contracting
22 purchaser to meet all of its energy or power needs from the contracting
23 supplier. Neither minimum nor maximum purchases are specified. In
24 consequence, the purchaser pays only for what it uses and may not shop
25 for other supply.

26 Most Favored Nation

27 Generally, a contract with a “most favored nation” clause gives the
28 purchaser the right to elect the terms of trade, in total, that are offered to
29 any third party.

30 Take Or Pay

31 A “take or pay” contract generally requires the contract purchaser to take a
32 fixed quantity of energy or power from the contract supplier. If the
33 purchaser fails to actually need the contracted minimum, it must pay for it
34 nevertheless. The customer may or may not have the right to purchase an
35 additional amount.

36
37 Net Requirements

38 A “net requirements” contract requires the contracting purchaser to meet
39 its energy or power needs above that received from identified sources
40 other than those of the contracting supplier. This arrangement differs for
41 an “all requirements” contract in that not all of the requirements come
42 from the contracting supplier.

1 **Chapter 2. Chugach and Beluga Field Producers Contract**
2

3 *Note:* The following contract description refers occasionally to “ARCO”. This is a
4 consequence of lifting language from the particular wholesale contract between ARCO
5 and Chugach. Chugach has essentially identical contracts with the other Beluga Field
6 producers (now Phillips, Chevron and ML&P). Thus, “ARCO” in this memo should be
7 read as referring to a generic Beluga Field producer.

8
9 Gas Contracts Between Chugach & Beluga Field Producers

10 There are two Agreements governing sales:

- 11 * The Basic Agreement (4/21/89)
- 12 * Supplemental Gas Agreement (Fall, 1991).

13 If total deliveries on a given day are less than 60,000 MCF then deliveries are under the
14 Basic Agreement. If total deliveries on a given day exceed 60,000 MCF then the
15 Supplemental Agreement kicks in. The terms of these two agreements are outlined below.

16
17 I. Basic Agreement (APUC approved 12/20/89)

18 Contract runs through 2025, until Period #1 Gas plus 300 Bcf (100 per producer) is
19 delivered, or until the Beluga field ceases to produce -- whichever is earliest. These are
20 “net requirements”, not “all requirements”, contracts. There are four “types” of gas
21 covered in the contract. Terms for each are described, below.

22
23 A) **Period #1 Volume** is equal to the total volume of Old Beluga Gas remaining to be
24 taken.

25
26 i) *Time Horizon*

27 “Old Beluga Gas” is gas that was contracted for under the “Old” (1973) Beluga
28 contract. Old Beluga Gas has been exhausted since 1996.

29
30 B) **Period #2 Volume** is 180 Bcf (60 per producer) of Contract Gas in addition to Period
31 #1 volume.

32
33 i) *Time horizon*

34 We are now in Period #2 of the Basic Agreement and will be until either 180 Bcf
35 is used or 1/1/2014, whichever comes first.

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1 ii) *Chugach consumption requirements*

2 Chugach *must* purchase 60 percent of its daily and annual gas needs at Beluga
3 from the Beluga Field Producers. (It is understood, under the terms of the
4 Contract, that Marathon will supply up to 40 percent of the Beluga plant’s needs.)

5 1) This percentage is not calculated with reference to gas that Chugach
6 purchases under its Marathon Contract to:

7 a) generate power to sell under the GVEA Contract or for either
8 Incremental or Displacement sales to other utilities;

9 b) meet increased requirements at Beluga that result from
10 consolidation of Chugach and ML&P.

11 2) Chugach is prohibited from entering into contracts that would reduce,
12 displace, or defer Chugach’s use of gas supplied by ARCO under the
13 agreement, unless Chugach obtains ARCO’s consent.

14 There are exceptions to this prohibition. Chugach can purchase electricity from:

15 a) a utility that relies on gas purchased from ARCO;

16 b) PURPA resources;

17 c) conservation or load management efforts;

18 d) renewable (solar, wind, hydro, geothermal, biomass) resources

19 The upshot is that the contract is *not* “take or pay” in the usual sense.
20 Rather, it locks Chugach into the Beluga providers for meeting 60 percent of its
21 “normal” needs at the Beluga generation station (up to deliverability limits of the
22 Contract).

23 There are provisions in the contract that seem to try to “lock in” current
24 levels of Beluga Plant use. Chugach is prohibited from making new purchases of
25 electricity generated by fossil fuels (besides the aforementioned allowed
26 purchases). And while this Agreement expressly reserves Chugach the right to
27 dispatch its generators in the most efficient and safe manner, it prohibits Chugach
28 from operating its system for the “principal” economic purpose of displacing gas
29 supplied by the Beluga Field producers.

30
31 iii) *Producer deliverability limits*

32 ARCO’s daily deliverability limits for New Beluga Gas during Period #2 are:

33 1) 1.39 x (Chugach’s Projected Take/365)

34 but not to exceed 22,000 Mcf/day;

35
36 2) 1.55 x (Chugach’s Projected Take/365)

37 if Chugach’s waste heat recovery unit (Beluga #8) is not in
38 continuous operation.

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1 The factors 1.39 and 1.55 would seem to capture the degree to which ARCO is
2 obligated to respond to Chugach's *possible* "load profile".

3
4 iv) *Price*

5 1) The Contract Price for Period #2 gas is determined by the following formula:

6
7 Contract Price = A x \$1.35 x
8 [{(Reference Natural Gas - 84.54 ¢/Mcf)/84.54 +
9 (Reference Fuel Oil - 74.93 ¢/Gallon)/74.93 +
10 (Reference Crude Oil - \$17.08/Bbl)/17.08} / 3]

11
12 where A equals 0.88 for Philips and ML&P and equals 1.10 for Chevron.

13 "Reference" prices are published by the Bureau of Labor Statistics in the case of
14 gas and fuel oil, and the Wall Street Journal "Settle" prices for monthly future's
15 contracts in the case of crude oil.

16
17 2) Contract Prices in a given quarter may not change more than the Adjusted Price
18 Limit (APL).

19 a) The APL is calculated every two years;

20 b) The APL is the greater of

21 - 2 percent

22 - (Percentage change in Contract Price for previous two
23 years)/8

24
25 However, Chugach has the right to waive the price limitation mechanism. It has
26 generally exercised that right and considers the provision unused and
27 nonfunctional.

28
29 3) Were the APL used, then price adjustments would be trued-up to "correct" for
30 past limits that the APL has imposed, so long as true-ups do not cause the APL to
31 be exceeded. However, if after two years true-ups have not exhausted the balance
32 of the account created by prices that exceed the APL, then the entire amount of
33 the remaining accrued price adjustment would be applied to produce an actual
34 price adjustment.

35 The consequences of possible semi-annual rate shocks have lead Chugach
36 to abandon application of the APL.

37 4) The *Actual Price* that Chugach pays is the Contract Price *plus* any severance or
38 ad valorem tax.

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1 C) **Period #3 Volume** is a total volume of 120 Bcf (40 per producer) in addition to
2 Periods #1 and #2 volumes.

3
4 i) Period #3 begins after Period #2 gas is used up, or on 1/1/2014.

5
6 ii) *Buyer and Seller Obligations*

7
8 While the volume of Period #3 Gas has been reserved, the terms and
9 conditions for sale thereof have been left for future negotiations. (The contract
10 states that such terms may need agency approval.)

11
12 Both parties can readily avoid any obligation either to purchase or to sell
13 Period #3 gas:

- 14
15 • ARCO is relieved of obligation to provide Period #3 gas to Chugach if: (a)
16 ARCO receives a competing offer to buy such gas from another party; (b)
17 ARCO notifies Chugach of the offer; and (c) Chugach and ARCO do not
18 agree within 90 days to mutually acceptable terms.
19
20 • Both ARCO or Chugach are released from obligations concerning Period #3
21 gas upon the earlier of: (a) Chugach consuming 135 Bcf (45 Bcf per producer)
22 of Period #2 gas, (b) December 31, 2008; provided that (a) the two parties
23 have not previously agreed to terms, and (b) at the request of either party in
24 the 12 months previous the two parties have met and negotiated in good faith
25 to try to reach mutually acceptable terms and conditions.

26
27 If obligations concerning Period #3 volumes are released because the
28 “expiration date” in the previous paragraph has been triggered, and if Chugach
29 contracts with a third party for new gas supplies beyond Period #2 volumes, then
30 ARCO has a right of first refusal to meet contract terms.

31
32 D) **Replacement Gas Volume** is gas that Chugach has contracted from Marathon but
33 which Marathon cannot deliver (either because of supply or pipeline constraints).

34 i) *Deliverability*

35 Each of the Beluga Field Producers is entitled to supply 1/3 of Chugach’s need for
36 replacement gas.

37 ii) *Price*

38 Replacement Gas will be priced the same as under the rest of the Basic
39 Agreement so long as the volume does not exceed what the Producers committed
40 under the agreement. If the volume needed cumulatively exceeds the volume of

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1 Contract Gas, then the price will be 125 percent of the Contract Price for Period
2 #2 Gas.

3
4 II. Supplemental Gas Agreement (APUC approved 11/8/91)

5 1) "Supplemental Gas" is Gas in excess of volumes delivered under the Basic
6 Agreement i.e. above 60,000 Mcf in any given day.

7
8 2) Chugach's need for gas in excess of 60,000 Mcf *must* be purchased under the
9 Supplemental Gas agreement. The exception is that Chugach may buy gas from
10 Marathon for the sole purpose of providing nonfirm energy to GVEA.

11
12 3) Supplemental Gas Prices:

13 a) Base price for Supplemental Gas is 13.6364 percent more than the value
14 of Period #2 Gas in the Basic Agreement;

15 b) in addition, Chugach pays full amount of Taxes;

16 c) buyer pays excess royalties caused by price of Supplemental Gas
17 exceeding the Basic Price (note that Basic Price gas *excludes* royalties).

18 4) Either party may terminate the agreement on 60 days' notice, except that notice
19 may only be given between March and June.

1 **Chapter 3. Chugach and Marathon Contract**
2

3 Overview

4 Marathon supplies gas to four different Chugach facilities: Bernice Lake, International,
5 Beluga and Nikiski. The basic agreement has been amended five times.

6
7 Term

8 The Agreement will continue until 12/31/2015, or until Marathon has fulfilled its delivery
9 obligations (which ever is earlier).

10
11 Chugach Consumption Requirements

12 1) Chugach must buy gas to meet:

- 13 a) total gas requirements at Bernice Lake;
14 b) total gas requirements at International;
15 c) 40 percent of Chugach’s total daily and total annual gas requirements at Beluga
16 (other than for the GVEA Contract and any Incremental Sale);
17 d) total gas requirements for the GVEA contract, supplied at the regular Marathon
18 contract price.

19
20 2) Gas purchased by Chugach may be used in any of its facilities.

21
22 3) Chugach must not make new electric power purchase agreements that would displace,
23 reduce, or defer Chugach’s use of gas supplied by Marathon, unless Chugach obtains
24 Marathon’s consent. There are exceptions to this prohibition. Chugach can purchase
25 electricity from:

- 26 a) a utility that relies on gas purchased from Marathon;
27 b) Renewable and PURPA resources;

28 Chugach may also engage in conservation or load management efforts.

29
30 4) If Chugach makes wholesale sales to another utility, and those sales displace gas that
31 the other utility would have bought from Marathon to meet that utility’s own loads, then
32 Chugach must purchase the displaced gas. The price for this displaced gas is the lower of
33 the Annual Base Price or Limited Base Price under Section 10.2 of the Gas Purchase
34 Agreement between Marathon and Alaska Pipeline Company (ENSTAR).

35 The “no displacement” clause carves out an exception for sales to HEA through
36 AEG&T; there is no exception to the “no displacement” clause for sales to MEA.

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1 5) If the Beluga River Field producers cannot meet their Period #2 obligations, then:

2 a) Chugach must first offer to purchase gas from Marathon;

3 b) such purchases may come from Marathon's Initial Commitment to Chugach, if
4 available;

5 c) Marathon may choose instead to sell new gas not covered by the Initial
6 Commitment.

7
8 6) Gas is to be used only for electricity generation. No reselling of gas is allowed without
9 Marathon's consent.

10
11 Marathon Delivery Obligations

12 1) Marathon's total obligation limit is:

13 a) an Initial Commitment (gas that Marathon *must* sell to Chugach) of 215 Bcf

14 b) a Contingent Commitment (gas that Marathon *may* elect to sell to Chugach,
15 provided that Marathon makes a commitment to do so at least 10 years before the
16 projected exhaustion of the Initial Commitment) the size of which is determined
17 by Marathon.

18 c) Incremental Commitments (those Commitments of at least 2 Bcf requested by
19 Chugach and accepted as Incremental Commitments by Marathon within a 60-120
20 day window).

21
22 2) Marathon's delivery obligation rate is:

23 a) *On Aggregate Basis* $1.39 \times (\text{Annual Volume of Chugach's projected needs at}$
24 $\text{Bernice} + \text{Beluga})/365$.

25 b) *Disaggregate Basis* 60,000 Mcf/day at Beluga; 45,000 Mcf/day at Bernice.

26 c) *Sufficient to meet GVEA Needs* Capacity that Chugach needs to displace
27 GVEA's North Pole facilities during November through February, provided that
28 Marathon may reduce such deliverability obligations given 5 years' written
29 notice.

30
31 3) Gas must come from Marathon properties.

32
33 4) If Marathon's Available Gas Reserves are insufficient to permit it to make deliveries
34 under this contract and to meet its obligations to ENSTAR under its 5/1/88 agreement,
35 then gas deliveries to Chugach may be reduced or terminated according to Marathon's
36 discretion.

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1 Delivery

2 Gas must be delivered by Marathon to the outlet side of Marathon's meters at Beluga,
3 Bernice Lake, and International.

4
5 Price

6 1) Gas used for Chugach generation is priced as follows:

7 a) The Base Price of gas will be:

8 (\$1.35) x

9 { (Reference Natural Gas - 84.54 ¢/Mcf)/84.54 +

10 (Reference Fuel Oil - 74.93 ¢/Gallon)/74.93 +

11 (Reference Crude Oil - \$17.08/Bbl)/17.08} / 3

12 "Reference" prices are published by the Bureau of Labor Statistics in the case of gas and
13 fuel oil, and the Wall Street Journal "Settle" prices for monthly future's contracts in the
14 case of crude oil.

15
16 b) The actual (or "Adjusted") Price that Chugach pays is the Base Price *plus* any
17 severance or ad valorem tax. Such taxes are the same for gas used at Bernice
18 Lake, International, and Nikiski; gas used at Beluga may be subject to different
19 effective tax rates.

20 c) Prices for gas used at Beluga, Bernice Lake, and Nikiski reflect final delivery.

21 d) For gas delivered to the International plant, Chugach must pay ENSTAR an
22 additional transportation fee of \$.6311 per Mcf. The effective price of gas used at
23 International is therefore higher than at Beluga or Bernice Lake. Transportation
24 fees are reduced to \$.3036 per Mcf if gas used at International generates
25 electricity for nonfirm sales to GVEA; the lower rate reflects the fact that such
26 transport may be interrupted by ENSTAR without penalty. A minimum monthly
27 payment of \$2,600 is due to ENSTAR if Chugach fails to make deliveries of at
28 least 4120 Mcf. (Tariff approved in Letter Order L9300194, dated 3/23/1993,
29 regarding TA74-4).

30
31 2) Gas sold as nonfirm energy to GVEA is priced at Base Price rates.

32
33 3) Replacement Gas (gas purchased from Marathon to meet shortfalls resulting from
34 inability of Beluga River Field Producers to deliver) will be priced at 110 percent of the
35 Adjusted Base Price.

1 **Chapter 4. ML&P and Beluga Producer Contract**
2

3 Overview

4 ML&P has “substantially similar” contracts with each of the Beluga Field
5 Producers. Since ML&P purchased a 1/3 interest in the field from Shell, ML&P
6 now effectively has a contract with itself; that arrangement is currently the subject
7 of U-96-36. Nevertheless, because the contracts with the other producers are
8 understood to be “substantially similar”, the terms of the Shell contract are
9 reported here. Thus, while “Shell” appears in the following for ease of reference
10 to the contract document, the reader is advised that the following contract
11 description applies also to ML&P’s separate contracts with Phillips and Chevron.

12 Beluga Producer gas supply contracts with ML&P are not “take or pay”,
13 but rather are “all requirements”.

14
15 Term

16 The contract expires on the earliest of the following:

- 17 a) the date on which ML&P receives 15 Bcf;
18 b) 12/31/2005;
19 c) when Shell stops producing from Beluga.

20
21 ML&P Obligations

22 a) ML&P agrees to obtain 1/3 of its gas supplies from each of the Beluga field
23 producers. Note that this precludes ML&P from obtaining gas from Marathon (or
24 any other non-Beluga producer), unless:

25 i) ML&P needs additional gas on a long-term basis in excess of applicable
26 Deliverability Limits, then ML&P will first offer to purchase 1/3 of its
27 additional requirements from Shell *under the terms of this agreement*. If
28 Shell declines the offer, ML&P can go elsewhere; or

29 ii) ML&P needs additional gas for off-system interruptible power sales,
30 then ML&P will first offer to purchase 1/3 of its additional requirements
31 from Shell under a *separate interruptible supply contract* on terms as
32 favorable as any that exist between Chugach and Shell. If Shell declines
33 the offer, ML&P can go elsewhere.

34 b) ML&P will not enter into any power purchase agreement greater than
35 60,000,000 kWh/year unless ML&P first obtains Shell’s written consent,
36 *excepting*:

- 37 i) a utility that relies on gas purchased from Shell;
38 ii) renewable resources;
39 iii) conservation or load management efforts.

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1 Should ML&P pursue under either “i” or “ii”, it must release its claim on gas
2 displaced.

3
4 Delivery

5 Delivery will be at the outlet side of Shell’s meters at the Beluga River Field.
6 Thus, ML&P must contract with ENSTAR to bring the gas to Plants 1 and 2 in
7 Anchorage.

8
9 Price

10 a) The Contract Price is:

11
12 Contract Price (\$/Mcf) = \$1.50 x
13 (Light Sweet Crude Oil Futures for the quarter ending 9/30)/18.00
14 +Accrued Price Adjustment
15

16 where the price of Light Sweet Crude is determined by the daily average settle
17 prices reported in the Wall Street Journal for the quarter ending September 30 of
18 the year prior to the year for which the Contract Price is calculated.

19 The Accrued Price Adjustment is described below.

20
21 b) The Contract Price is limited in its rate of change. This limitation is what
22 produces the Accrued Price Adjustment.

23 i) The maximum change in the Contract price from one calendar year to
24 the next will be 20 percent;

25 ii) limits in price changes will be added to an Accrued Price Bank;

26 iii) the Accrued Price Adjustment is the size of the Accrued Price Bank
27 divided by the remaining volume of gas projected to be purchased during
28 the remainder of the contract, but is limited by the 20 percent maximal
29 change rule in (i).

30 c) The Total Price of gas is the Contract Price plus severance, production, and ad
31 valorem taxes paid by Shell.

32
33 Shell Deliverability Obligations

34 I. Total Volume

35 Shell is obligated to deliver 1/3 of 45 Bcf over the life of the contract, except that
36 portions of gas not taken by ML&P by specific dates are released back to Shell.

37

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1 II. Daily Volumes

2 a) Shell's normal daily delivery obligation is:

3
4
$$D (\text{Mcf/day}) = 1.40 \times V_a/365$$

5 such that:

6 $D < 1/3$ of 40,000 Mcf/day through 12/31/2000;

7 $D < 1/3$ of 44,000 Mcf/day from 1/1/2001 through termination
8 date;

9 V_a is the total annual volume of ML&P's projected take from
10 Shell.

11 Note that the idea here is to limit the degree to which ML&P's "load profile" can
12 vary.

13 b) If:

14 i) ML&P's Unit #6 (waste heat recovery) is down for more than 4 hours,
15 or

16 ii) ML&P wishes to make economy energy sale in excess of Deliverability
17 Limits, or

18 iii) cold weather or other exigency causes ML&P's total gas requirements
19 to increase significantly, then Shell may increase delivery to:

20
$$D (\text{Mcf/day}) = 1.55 \times V_a/365$$

21 c) If Shell cannot meet ML&P's delivery needs, then ML&P can go elsewhere for
22 gas.

23

1 **Chapter 5. AEG&T and ANP Contract**
2

3 The parties to this contract have requested that its terms be kept
4 confidential. The terms cannot be described until the Commission rules on this
5 request.

6 That said, Unocal may supply natural gas to AEG&T for use in the Nikiski
7 plant in exchange for steam heat generated by the plant. AEG&T in turn may
8 receive compensation from Chugach for a portion of this gas. See the Nikiski
9 Dispatch Agreement (electricity) between AEG&T/HEA and Chugach for details.

10

1 **Chapter 6. Coal Contract Between GVEA and Usibelli Mines**
2

3 Overview

4 This contract governs the terms under which GVEA buys coal for its Healy I plant
5 from Usibelli Mining Company (UCM). The contract is “take or pay”; if GVEA
6 runs its Healy I plant too little to consume all of the coal contracted for, it must
7 nevertheless pay UCM for the coal contracted. The contract has not been
8 approved by the Commission. The Commission came by a copy of this contract as
9 supporting information for GVEA’s COPA filing in TA109-13.

10
11 Term

12 The agreement runs from 01/01/1994 through 12/31/2007.
13

14 Delivery

15 Under the contract terms, prices include delivery by UCM to the Healy 1
16 generating plant at Healy, Alaska.
17

18 GVEA Obligations

19 GVEA must take 2,100,000 million Btu of coal in each year of the contract.
20 GVEA must pay UCM for any coal not taken. This amount may be reduced to
21 1,600,000 million Btu if GVEA is meeting the minimum requirements of the
22 Agreement for Purchase and Sale of Coal for Healy Clean Coal Project.
23

24 UCM Obligations

25 1) UCM may deliver two types of coal to the Healy I plant, Run of Mine and
26 Waste Coal.
27

28 *Run of Mine*

- 29
- Monthly average Btu content of at least 7,800 Btu, as received.
 - A Run of Mine delivery may be rejected if the heat content is less than 7,600 Btu.
- 30
31

32 *Waste Coal*

- 33
- Waste Coal will have a monthly average Btu content of at least 6,100 Btu, as received.
 - A Waste Coal delivery may be rejected if the heat content is less than 5,800 Btu.
- 34
35
36

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No waste coal will be “assumed” to be delivered unless GVEA has requested that waste coal be delivered.

2) UCM will, at GVEA’s request, remove ash remaining after the combustion process.

Price

Run of Mine Coal

- 1) The Base Price for Run of Mine Coal is \$22 per ton (starting on 1/1/94).
- 2) If Run of Mine coal has an average monthly heat content of *less than* 7,800 Btu per pound, then the price will drop 2 percent for each 100 Btu/lb in deficiency. If Run of Mine coal has an average monthly heat content of *greater than* 7,800 Btu per pound, then the price will increase 2 percent for each 100 Btu/lb in excess.

Waste Coal

- 1) The Base Price for Waste Coal is \$8 per ton (starting on 1/1/94).
- 2) If Waste Coal has an average monthly heat content of *less than* 6,100 Btu per pound, then in effect the amount of Run of Mine coal, calculated on a monthly average, will decrease; if the average monthly heat content of Waste Coal *greater than* 6,100 Btu per pound, then the amount of Run of Mine coal effectively decreases. That said,

Ash Removal

The base price that GVEA pays UCM for ash removal is \$5 per ton.

Price Escalation

- Prices change 45 percent of the changes in the Bureau of Labor Statistics’ Producer Price Index for Industrial Commodities. Price changes that result from Index changes are adjusted with a six month lag; thus the January index only effects prices on July 1.
- In addition, prices reflect 45 percent of changes to labor costs that result from collective bargaining. These changes go into effect at the same time as the labor contract.
- Purchase, delivery, and hauling prices will be adjusted for changes in UCM’s costs of operation that result from changes in federal, state, or local laws. Such costs of operation include but are not limited to changes in royalties, reclamation, black lung, and taxes to be paid (except income taxes).

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- On 1/1/2000, a special escalation was made in the price; the new price for Run of Mine coal is calculated as if all escalations from 1/1/94 through 12/31/99 had been applied to a base price of \$23.24 per ton, instead of \$22 per ton.

1 **Chapter 7. Coal Contract Between Aurora Energy and Usibelli Mines**
2

3 Overview

4 This contract governs the terms under which Aurora Energy LLC buys coal for its
5 Chena facility from Usibelli Mining Company (UCM). The contract is “take or
6 pay”; if Aurora runs its Chena I plant too little to consume all of the coal
7 contracted for, it must nevertheless pay UCM for the coal contracted. The contract
8 has not been approved by the Commission. The Commission came by a copy of
9 this contract as supporting information for Aurora Energy’s petition, in
10 U-97-139/U-97-44, to deregulate its district heating operations.

11
12 Term

13 The agreement runs from 01/01/1998 through 01/31/2018.
14

15 Delivery

16 Contract prices do not include delivery; they are tippie prices.
17

18 Aurora Obligations

19 Aurora Energy must take 120,000 tons of coal in each year of the contract. Aurora
20 must pay UCM for any coal not taken. Aurora may purchase additional coal as
21 needed.
22

23 UCM Obligations

24 UCM will provide coal ordered to satisfy the request of the Buyer’s power plant.
25 In addition, UCM will meet various coal quality standards. These include:
26

- 27
- 28 • The maximum moisture content of the coal will not exceed 26 percent.
 - 29 • The maximum ash content of the coal will not exceed 12 percent by weight, as received.
 - 30 • Monthly average Btu content will be at least 7,800 Btu, as received.
- 31

32 Price

- 33
- 34 • The Base Price for Coal is \$23.50 per ton.
 - 35 • If delivered coal has an average monthly heat content of *less than* 7,800 Btu
36 per pound, then the price will drop \$.40 per ton for each 100 Btu/lb in
deficiency. If delivered coal has an average monthly heat content of *greater*

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Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

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than 7,800 Btu per pound, then the price will increase \$.40 per ton for each 100 Btu/lb in excess.

- Purchase, delivery, and hauling prices will be adjusted for changes in UCM's cost of operation that result from changes in federal, state, or local laws. Such costs of operation include but are not limited to changes in royalties, reclamation, black lung, and taxes to be paid (except income taxes).

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Chapter 8. Contracts Between GVEA and Williams

Overview

GVEA's Zehnder and North Pole facilities burn high atmospheric gasoil to generate electricity. This fuel is provided by Williams. The Commission does not know the terms governing these transactions.

1 **Chapter 9. Energy Contracts (Blank)**

1 **Chapter 10. MEA and AEG&T Wholesale Power Contract**
2

3 Overview

4 Under the terms of this contract AEG&T agrees to supply all electric power and
5 energy needed by MEA. AEG&T may use purchased power to meet this
6 obligation. Indeed, under the terms of the MEA/AEG&T and Chugach wholesale
7 power contract (see below), AEG&T purchases substantially all of MEA's power
8 and energy requirements from Chugach.

9
10 Term

11 The agreement will remain in effect until December 31, 2025, and thereafter until
12 terminated by either party given at least six month's notice.

13
14 MEA Obligations

15 MEA must purchase all of its power and energy needs from AEG&T.

16
17 AEG&T Obligations

- 18 1) AEG&T is responsible for the installation and maintenance of necessary
19 substation equipment at the points of connection.
20 2) AEG&T will read MEA's meters monthly.
21 3) AEG&T will test and calibrate meters annually.

22
23 Delivery

24 The points of delivery are: Pt. MacKenzie; Walter Teeland; Reed; Justine Parks;
25 Walter Pippel; Rusty Dow; Camp (Eklutna); Stevens.

26
27 Rates

- 28 • All fixed and variable costs will be paid by MEA, each month. Rates charged
29 by AEG&T is computed on the basis that revenues will be equal to the sum of
30 all AEG&T's costs of purchasing, producing, and transmitting power for
31 MEA, plus an amount which will provide TIER of at least 1.05.
32 • Costs incurred by AEG&T that benefit more than one member will be
33 allocated among the members in proportion to the benefits to each member as
34 determined by the AEG&T Board of Directors.

1 **Chapter 11. MEA/AEG&T and Chugach Contract**
2

3 Overview

4 Under the Agreement, Chugach sells to AEG&T power to supply all or a portion
5 of MEA’s requirements. AEG&T then sells to MEA this power from Chugach.
6 For administrative convenience, MEA can and does pay Chugach directly for the
7 undisputed portion of the AEG&T/MEA bill from Chugach to AEG&T.

8 Chugach (through AEG&T) is presently an all requirements supplier for
9 MEA’s needs. MEA can have Chugach supply less than all of MEA’s
10 requirements, given adequate notice, but the prices that MEA pays will then be
11 less favorable.

12
13 Term

14 The Agreement runs through December 31, 2014.
15

16 MEA/AEG&T Obligations

- 17 1) MEA must purchase all of its power and energy needs from Chugach.
18 2) MEA can move to a “net requirements” or “take or pay” relationship with
19 Chugach, given sufficient notice. The periods of notice for conversion to either
20 run only after Commission approval of the change.
21 3) MEA may not resell Chugach power.
22

23 MEA Rights

- 24 1) If Chugach is not made part of AEG&T, then MEA and AEG&T will be
25 afforded an opportunity to participate in Chugach’s long-range planning process
26 and to be heard by Chugach’s board with regard to long-range plans.
27 2) MEA enjoys a “Most Favored Nation” clause for any contract in which
28 Chugach offers to supply all or the major portion of firm power needs of any
29 other utility (other than HEA or SES) for at least five years. At present no
30 contracts meet these standards.
31

32 Delivery

33 AEG&T will deliver energy and power to the following substations:
34 Pt. MacKenzie; Walter Teeland; Reed; Justin Parks; Walter Pippel; Rusty Dow;
35 Camp (Eklutna); Stevens.
36
37

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Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

1 Prices

2 I. *All Requirements Supply*

3 Under the “All Requirements” arrangement Chugach must plan to meet MEA’s
4 load growth. All Requirements status obligates MEA to sell its Eklutna and
5 Bradley Lake resources on a net-billed basis to Chugach. (See: Bradley Lake
6 Contract Between Chugach and MEA/AEG&T for terms.)

7
8 Prices for All Requirements Service:

9
10 A. **Demand charges** are allocated to MEA such that:

11 The portion of Chugach’s wholesale revenue requirement to be
12 paid by Chugach’s ratepayers and by AEG&T/MEA . . . is divided
13 fairly and appropriately between Chugach and AEG&T/MEA so
14 that the cost of power to AEG&T/MEA under this Agreement and
15 the effective internal wholesale cost to Chugach for its own power
16 supply are as nearly as possible equivalent.

17 In other words, “wholesale rates” for Chugach retail should be set on the same
18 basis as wholesale rates to MEA.

19 Power supply costs are Chugach’s full Generation and Transmission
20 system costs, net revenues from wholesale transactions to third parties. Costs
21 include standard ratemaking costs plus margin -- “a return element on wholesale
22 power sales represented by an excess of revenues over all other costs included in
23 Power Supply Costs.”

24
25 B) **Energy charges** are, again, equal to Chugach’s embedded energy costs.

26
27 II. *Net Requirements Service*

28 If they provide Chugach at least five years’ notice, AEG&T/MEA may use some
29 of their own resources to meet MEA retail load. If such resources fail to deliver
30 the needed capacity/energy, Chugach can either i) not supply MEA’s additional
31 load; or ii) treat additional MEA load as an unauthorized increase. Unauthorized
32 increases in load are subject to a special “distinctly higher” rate.

33
34 Prices for Net Requirements Service:

35
36 A) **Demand charges** are allocated to MEA according to the greatest of:

37 a) MEA’s contribution to Chugach’s coincident system peak for that year;

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Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

b) MEA’s contribution to Chugach’s coincident system peak in “any” previous year. The historical maximum MEA contribution to Chugach’s coincident system peak will only be recalculated when rates are being changed;

c) 85.8 MW.

B) **Energy charges** are calculated in terms of the lesser of:

a) MEA’s total system energy requirements for that year; or

b) 95 percent of MEA’s Allocated Demand (see above) times Chugach’s total system Load factor,

III. *Take or Pay Service*

If AEG&T/MEA provide Chugach with seven years’ notice, they may move to “take or pay” service. In that instance:

A) **Capacity charges** will be based on the highest of:

a) 100 MW, or

b) MEA’s highest Allocated Demand.

B) **Energy charges** will be:

a) 54.22 percent of the Contract Capacity; or,

b) if MEA’s total system requirement is less, then MEA’s total system requirements; or,

c) if MEA uses its/AEG&T’s own resources and purchases less than 54.22 percent Capacity factor, then MEA will pay Chugach for the greater of actual energy used or energy reflected by a 45.66 percent load factor, *plus* (for energy not taken):

75 percent of energy rates for kWh between 45.66 - 48.52 percent load factor;

50 percent of energy rates for kWh between 48.52 - 51.37 percent load factor;

25 percent of energy rates for kWh between 51.37 - 54.22 percent load factor.

PURPA Resources

Unless MEA/AEG&T has moved to net requirements or take or pay service, they shall use their best efforts to persuade potential PURPA resources to deal directly with Chugach. If the PURPA developers sell directly to MEA, then MEA must

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1 sell all of the acquired resources to Chugach (unless MEA moves to net billing or
2 take or pay service).

3 That said, the contract does provide for a number of exceptions of MEA
4 planned purchases under PURPA, with a deadline for contract execution with
5 would-be PURPA-power developers of June 30, 1989. Only the Enerdyne
6 PURPA purchase took place (approved in TA 156-18).

1 **Chapter 12. MEA and Enerdyne**
2

3 Overview

4 This MEA/AEG&T and Chugach Wholesale Power Agreement acknowledges
5 possible MEA planned purchases under PURPA, with a deadline of June 30,
6 1989, for contract execution with would-be PURPA-power developers. Only the
7 Enerdyne PURPA purchase took place. The Enerdyne hydroelectric facility is
8 located on McRoberts Creek, near Palmer.

9
10 Term

11 The contract was approved by the Commission on February 5, 1991. It remains in
12 effect fifteen years after being approved until the parties mutually agree to
13 terminate.

14
15 Quantity

16 The Enerdyne project has a capacity of less than 100 kW. All energy is sold to
17 MEA.

18
19 Delivery

20 Energy is metered and delivered at MEA's distribution system located on Smith
21 Road near Palmer.

22
23 Price

- 24
- For the first ten years of operation, MEA pays \$.04 per kWh, delivered.
 - The price during the subsequent five years is based on the average kWh cost of power purchased or generated by MEA during the previous year.
- 25
26
27

1 **Chapter 13. MEA/AEG&T and Chugach (Bradley Lake & Eklutna)**
2

3 Overview

4 The agreements give Chugach rights to schedule the generation of, and to receive
5 from MEA/AEG&T, any power that is produced by Bradley Lake and Eklutna
6 hydropower projects and to which MEA/AEG&T are entitled. In exchange,
7 Chugach will reimburse MEA/AEG&T for all the costs that they actually incur
8 for their share of the Bradley Lake project. This reimbursement will function as a
9 credit against MEA/AEG&T's energy and power costs associated with their
10 requirements agreement with Chugach.

11 The contracts is called "net billing" agreements as MEA/AEG&T are
12 billed "net" of their Bradley Lake and Eklutna expenses. However, the term "net
13 billing" is often used to indicate arrangements in which a smaller entity receives
14 credit for the energy that it generates at a rate equivalent to which it is billed. In
15 this case MEA/AEG&T do not receive credit for their share of the energy and
16 power from Bradley Lake and Eklutna at a rate that is equal to the average
17 embedded cost of Chugach's system.

18
19 Term

20 The agreements last as long as Chugach remains an all requirements supplier for
21 MEA. Its terms are essentially the same as those of the net billing agreement
22 between Chugach and SES.
23

1 **Chapter 14. SES and Chugach Contract**
2

3 Term

4 The Agreement became effective on 3/1/98. While the original contract between
5 the parties was to end on 1/31/2008, in U-98-70(6) the Commission ordered that
6 the Agreement will expire on 9/11/2001.
7

8 Overview

9 This Agreement operates in conjunction with the Bradley Lake Hydroelectric
10 Project Agreement and the 1993 Alaska Intertie Agreement. The Bradley Lake
11 Agreement between Chugach and SES is a net billing agreement whereby SES is
12 credited for all of its Bradley Lake costs against its Chugach bills.
13

14 Under the Agreement Chugach is an all requirements supplier for SES. Chugach
15 has the right to interrupt SES load.
16

17 Delivery

18 Chugach will deliver all power to Daves Creek Substation and near the Lawing
19 Substation.
20

21 Chugach Obligations

22 1) Chugach is obligated to supply all of the power and energy necessary for SES
23 needs, except that Chugach may interrupt service up to 12 times per year for a
24 total of 72 hours.

25 2) Although not part of the Contract, in a responsive filing for U-98-70 Chugach
26 addressed staff concerns and stated that during an interruption Chugach would:
27 permit ML&P to supply power; provide access to its transmission system on a
28 nondiscriminatory basis; and charge wheeling fees that reflect fully allocated
29 costs.
30

31 SES Obligations

32 1) If Chugach provides two hours' notice, then SES must meet its demand from
33 its own generating resources.

34 2) Aside from when it is interrupted, SES must purchase all of its energy and
35 power requirements from Chugach.

36 3) SES must maintain the capability of meeting all of its system requirements.

37 4) SES may not resell electric power that it purchases from Chugach.

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1 5) SES must supply its own VAR at the point of delivery.
2

3 Rates

4 Reflect average embedded costs of Chugach’s entire generation and transmission
5 system and average monthly prices for fuel and purchased power.
6

7 **Demand**

- 8 • Demand in each month is determined in reference to SES’s actual peak
9 demand on the Chugach system for that month.
- 10 • SES receives a special “Available Capacity Rate” for Chugach’s permission to
11 shed that load. Thus, SES’s allocated demand charge is calculated by reducing
12 SES’s contribution to the overall system peak by 1/3, and then divided by the
13 sum of SES’s actual peak demand on the Chugach system in each month of
14 the test year.
- 15 • Chugach receives a monthly customer charge that reflects the number of
16 delivery meters. The contract sets charges at \$150 per SES meter per month.
17

18 **Energy**

19 Energy charges should reflect actual fuel and purchased power expenses. When
20 Chugach receives revenue from energy sales margins and wheeling, energy
21 charges are reduced. However, because the power SES receives is in effect
22 considered only “2/3 firm” (see “demand charges”, above) it receives only 2/3 of
23 the benefits to which it would otherwise have been entitled.
24

25 **Rates for Excessive Interruptions**

26 If Chugach interrupts SES for more than 72 hours, then Chugach will pay SES the
27 following rate for electricity that SES generates from its own resources:
28

29
$$\begin{aligned} & \$0.0658 \text{ kWh (labor and maintenance) +} \\ & \$ 0.0616 * (\text{per gallon fuel cost})/1.06 \end{aligned}$$

30

31
32 **Penalty for Failure to Interrupt**

33 If SES fails to interrupt when given adequate (two-hour) notice by Chugach, SES
34 must pay penalties as follows:

- 35 • If SES fails to interrupt at the requested time, it pays Chugach \$5,000.

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- If SES fails to interrupt within one hour of the time requested, it pays Chugach a further \$2,500.
 - If SES fails to interrupt within one-half hour of the time requested, it pays Chugach an additional \$2,500.
 - Thereafter, SES will pay \$1,000 for each additional ½ hour during it does not interrupt service.

1 **Chapter 15. SES and Chugach Contract (Bradley Lake)**
2

3 Overview

4 The agreement gives Chugach rights to schedule the generation of and to receive
5 from SES any power that is produced by Bradley Lake and to which SES is
6 entitled. In exchange, Chugach will reimburse SES for all of the costs that it
7 actually incurs for Bradley Lake. This reimbursement will function as a credit
8 against SES's energy and power costs associated with its wholesale power
9 agreement with Chugach.

10
11 The contract is called a "net billing" agreement as SES is billed "net" of its
12 Bradley Lake expenses. However, the term "net billing" is often used to indicate
13 arrangements in which a smaller entity receives credit for the energy that it
14 generates at a rate equivalent to which it is billed. In this case SES does not
15 receive credit for its share of the kWh and energy from Bradley Lake at a rate that
16 is equal to the average embedded cost of Chugach's system.

17
18 Term

19 The term of this agreement extends to the end of the term of the Wholesale Power
20 Agreement between Chugach and SES, or subsequent wholesale power
21 agreements between the parties. Its terms are essentially the same as those of the
22 net billing agreement between Chugach and AEG&T/MEA.

1 **Chapter 16. HEA and AEG&T Wholesale Power Contract**
2

3 Overview

4 Under the terms of this contract AEG&T agrees to supply all electric power and
5 energy needed by HEA. AEG&T may use purchased power to meet this
6 obligation. Under the terms of the HEA/AEG&T and Chugach wholesale power
7 contract (see below), AEG&T annually purchases from Chugach a minimum of
8 73 MW of power and 350 GWh of electricity for HEA.

9 The Contract was amended by the Amended Wholesale Power Contract
10 dated April 11, 2000 analysis of that filing is pending. Only terms of the original
11 contract are reported here.

12
13 Term

14 The agreement will remain in effect until December 31, 2025, and thereafter until
15 terminated by either party given at least six month's notice.

16
17 HEA Obligations

18 HEA must purchase all of its power and energy needs from AEG&T.

19
20 AEG&T Obligations

- 21 1) AEG&T is responsible for the installation and maintenance of necessary
22 substation equipment at the points of connection.
23 2) AEG&T will read HEA's meters monthly.
24 3) AEG&T will test and calibrate meters annually.

25
26 Delivery

27 The points of delivery are the Soldotna and Bernice Lake substations.

28
29 Rates

- 30 • All fixed and variable costs will be paid by HEA. Rates charged by AEG&T
31 are computed so that revenues will equal the sum of all AEG&T's costs of
32 providing power for HEA, plus a TIER of at least 1.05.
33 • HEA will be credited for sales to other utilities from the Nikiski Unit.

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- Costs incurred by AEG&T that benefit more than one member will be allocated among the members in proportion to the benefits to each member as determined by the AEG&T Board of Directors.

1 **Chapter 17. HEA/AEG&T and Chugach Contract**
2

3 Overview

4 The Contract is a “partial requirements” contract for 73 MW of capacity per year.
5 HEA is entitled to purchase all the energy associated with the 73 MW obligation,
6 but must purchase the 73 MW capacity and a minimum of 350 GWh of energy
7 per year. HEA may not resell energy it purchases from Chugach. Under the
8 Agreement, Chugach sells to AEG&T power to supply HEA’s requirements.
9 AEG&T then sells to HEA this power from Chugach.

10
11 Term

12 The Agreement runs until January 1, 2014.
13

14 Chugach Obligations
15

16 1) Chugach is obligated to meet 73 MW of HEA’s demand.

- 17 • Chugach may reduce AEG&T/HEA’s capacity entitlement by 80 percent of
18 the nominal ratings of Bernice Lake Units #1 through #4 should Chugach
19 remove any of these from service. Chugach must provide HEA/AEG&T
20 written notice three years in advance of doing so. According to the Black and
21 Veatch Study, Unit #1 has been removed from service. The terms of the
22 Nikiski Dispatch and Power Agreement indicate that Chugach has not reduced
23 its capacity obligations to HEA/AEG&T, however.
- 24 • Should any of Chugach’s other generating units be permanently removed from
25 service, Chugach may reduce HEA/AEG&T’s Contract Capacity by 10
26 percent of the nominal rating of those units. Again, Chugach must provide
27 HEA/AEG&T written notice three years in advance of doing so.

28 2) Chugach is obligated to provide all of HEA/AEG&T’s energy needs whenever
29 its demand is less than 73MW.

- 30 • If HEA/AEG&T’s Contract Capacity changes (see above), then Chugach’s
31 obligation to provide energy to HEA/AEG&T will be calculated by
32 multiplying the modified Contract Capacity by 55 percent and by 8760 to
33 equal annual MWh.

34 3) The points at which electric power and energy are measured are the Soldotna
35 and Bernice Lake Substations and (as amended by the Nikiski Power and
36 Dispatch Agreement) at the Nikiski Plant.
37

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Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

1 HEA/AEG&T Obligations

2 1) Each year, HEA/AEG&T is to take or pay for 73 MW of capacity from
3 Chugach, unless its Contract Capacity is reduced.

4 2) HEA/AEG&T is obligated to take or pay Chugach annually for 350 GWh,
5 unless HEA/AEG&T's Contract Capacity is reduced. If the Contract Capacity is
6 reduced, then the minimum is 8760 x 55 percent of the revised Contract Capacity.

7 3) If HEA/AEG&T's capacity requirements exceed its contract capacity, if
8 HEA/AEG&T requests Chugach to meet those requirements, and if Chugach
9 chooses to do so, then HEA/AEG&T "shall pay Chugach a premium for the
10 excess capacity and associated energy" (Section 5.4). The size of this premium is
11 not described.

12
13 Delivery

14 The Points of Delivery for power that is ultimately supplied by Chugach are the
15 Bernice Lake and Soldotna Substations and the Nikiski Power Plant. (Note that
16 until the recent Nikiski Agreement delivery was made to Bernice Lake Power
17 Plant.)

18
19 Rates

20 The contract has very little to say about rates for power and energy. It only
21 provides that:

22 1) rates will be determined by the Commission in accordance with
23 applicable statutes, regulations and procedures;

24 2) rates will be based upon the revenue requirements for those generation
25 and transmission facilities listed in the agreement -- the better part of
26 Chugach's generation, transmission, and bulk distribution system;⁵

27 3) rates will include a TIER component based on required TIER for
28 Chugach's debt on its system.

29
30 Under Commission order U-87-35(9), HEA/AEG&T' demand charges (unlike
31 MEA's) are not based on coincident system peak. This is because HEA/AEG&T

⁵ The Bradley Lake Transmission Line Sharing Agreement between HEA, Chugach, ML&P, and GVEA carves out an exception. That Agreement prevents Chugach from charging HEA for Chugach's leased portion of the Bradley Lake Transmission line (which HEA/AEG&T constructed and owns).

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1 purchases capacity on a partial requirements basis. The demand allocator is based
2 upon the proportion that the Contract Capacity (73 MW) plus the reserves
3 necessary to support that capacity (30 percent, or 21.9 MW) bears to the total
4 capacity of the generation listed in the contract (approximately 536 MW).

1 **Chapter 18. Nikiski Dispatch Agreement Between HEA/AEG&T and**
2 **Chugach**
3

4 Overview

5 AEG&T owns and HEA operates the Nikiski Cogeneration Unit, while
6 Chugach dispatches it.

7 Although AEG&T owns the Unit, its contractual obligations mean that it
8 does not own all electricity generated. AEG&T is required to take or pay for
9 annually, on behalf of HEA:

- 10
11 i) HEA's share of Bradley Lake (43.8 GWh/year)
12 ii) Chugach purchased electricity (350 GWh/year)(75MW)
13

14 AEG&T is required to purchase from Chugach substantially all of HEA's
15 additional energy requirements up to 320 GWh. Hence, rights to the electricity
16 generated by the Unit, which will be base-load operated, are shared between
17 AEG&T/HEA and Chugach. The specific shares to which each entity is entitled
18 change according to HEA's demand needs. Details are outlined, below.
19

20 Term

21 The Nikiski Cogeneration Plant System Use and Dispatch Agreement expires
22 01/01/2014, along with the AEG&T - HEA - Chugach Tripartite Agreement.
23

24 Rights Enjoyed by Chugach

25 1) Chugach receives rights to the first 350 GWh of electricity generated by the
26 Nikiski Unit, unless HEA's demand exceeds 73 MW.

27 2) HEA must purchase 320 GWh from Chugach for energy needs in excess of its
28 350 GWh obligation to Chugach before HEA can purchase from other sources
29 (other than its Bradley Lake share). However, this incremental obligation
30 excludes energy needed by HEA when its demand exceeds 73 MW. This
31 circumscribes HEA's obligations to purchase energy only from Chugach.

32 3) Chugach can use energy generated by the Unit, in excess of HEA/AEG&T
33 priority use, for Chugach's own systemwide needs including meeting HEA's
34 loads when demand is less than 73 MW.

35 4) When HEA uses the Unit to meet its capacity needs when demand exceeds 73
36 MW, Chugach is allocated all spin not needed by AEG&T. If Chugach does not
37 acquire the spin, AEG&T may sell the spin to others.
38

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Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

1 Rights Enjoyed by HEA

2 1) When HEA's demand exceeds 73 MW, it is entitled to first crack at Nikiski
3 Unit power. Under such circumstances it must "pay" for all gas and O&M costs.

4 2) Chugach must compensate AEG&T for fuel that AEG&T provides to the unit,
5 plus a certain portion of the unit's O&M.

6 i) AEG&T is entitled to provide fuel used at the unit according to:

7 a) the ratio of energy that HEA/AEG&T purchases from Chugach
8 in excess of 350 GWh to the total amount of energy generated by
9 the Unit (save for energy taken by HEA when its demand exceeds
10 73 MW);

11 *multiplied by*

12 b) the total amount of fuel used at the unit (save for energy taken
13 by HEA when its demand exceeds 73 MW).

14
15 ii) Chugach is responsible for paying O&M on MWh generated by the
16 Unit when HEA's demand is less than 73 MW. Such electricity is
17 considered Chugach system energy.

18
19 Prices/Costs

20 Rights to the electricity generated at Nikiski change depending upon contractual
21 obligations and HEA system loads. The fuel available changes depending upon
22 gas contractual obligations and who has rights to the electricity generated. This
23 generates three different price/cost profiles.

24
25 All energy purchased by HEA/AEG&T from Chugach is purchased at rates set by
26 the Commission under the Chugach-AEG&T-HEA TriPartite Agreement. That
27 agreement stipulates only that rates will be based on a revenue requirement,
28 determined by the Commission, that reflects the embedded costs of Chugach's
29 system as listed in the Agreement. The Chugach Wholesale Power Agreement is
30 silent on allocation of demand versus energy costs and on how demand charges
31 are determined; the Commission is the final arbiter as to that issue.

32
33 Against HEA payments to Chugach for energy under the TriPartite Agreement,
34 Chugach makes offsetting payments to HEA/AEG&T for O&M and a portion of
35 the fuel used at the Unit.

36
37 The "price profiles" for electricity generated by the unit are as follows.
38

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Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

1) If HEA/AEG&T has purchased less than 350 GWh from Chugach, and when HEA/AEG&T's demand is less than 73 MW, then the effective wholesale price of Nikiski energy to HEA/AEG&T is just the Chugach Wholesale Power Agreement price *less Chugach payments for the Unit's O&M*.

- O&M rates have a base price of \$5/MWh. Beginning 1/1/99 this rate is adjusted yearly by a weighted average of 20 percent times the producer price index and 80 percent times the consumer price index.

2) If HEA/AEG&T has purchased at least 350 GWh from Chugach, but HEA/AEG&T's demand is less than 73 MW, then the effective wholesale price of Nikiski energy to HEA/AEG&T is just the Chugach Wholesale Power Agreement price *less Chugach payments for the Unit's O&M and (at HEA's discretion) for HEA-supplied fuel*.

- O&M rates are as above.
- Chugach has the primary obligation to supply the fuel for the Unit.
 - AEG&T has the option to supply fuel, subject to the quantity limitation, above. Chugach must pay for all HEA-supplied fuel that is burned. The price will be set at the Chugach-Marathon contract price of Bernice Lake gas, until such gas is exhausted. After that, Chugach will pay fuel prices that are the highest of:
 - a) Chugach's average gas price, less transportation charges;
 - b) Chugach's average gas price at the Beluga facility, less transportation;
 - c) Chugach's cost of supplying fuel for HEA's use.
 - If AEG&T chooses not to supply fuel, then it does not get paid by Chugach for same. In this instance AEG&T/HEA could conceivably market its gas to the highest bidder.

3) If HEA's demand exceeds 73 MW, then AEG&T sells the unit's output to HEA under the terms of the AEG&T/HEA wholesale power agreement. O&M costs will presumably be those approved by the Commission pursuant to AEG&T's revenue requirement. At least a portion of the fuel used by AEG&T at the Nikiski Unit may be provided in kind by ANP in exchange for process steam generated by the unit. It is not clear how such in-kind gas will be priced.

4) For electricity generated by the unit that is not needed by AEG&T/HEA, and that Chugach takes for its systemwide needs, generating costs to Chugach equal the cost of gas plus O&M payments to AEG&T. The cost of gas, whether supplied by AEG&T or by Marathon, will equal the cost of Marathon-supplied gas to Bernice Lake.

1 **Chapter 19. GVEA and Chugach Contract**
2

3 Overview

4 The Contract covers sales of nonfirm energy from Chugach to GVEA. It consists
5 of a Basic Agreement, the Tier II Agreement (dated 1/18/96), and the Amendatory
6 Agreement No. 2 (dated 2/8/99). The Tier II Agreement, which allowed for “Tier
7 II” sales of energy at a reduced rate, expired on 1/1/2001.

8 At present GVEA must purchase 2/3 of its first 450 GWh, and 4/5 of its
9 subsequent, nonfirm energy needs from Chugach. Other sales take place on the
10 “Spot Market”, and prices are subject to competitive bidding.

11
12 Term

13 The Basic Agreement and the Amendatory Agreement No. 2 expire 4/1/2009.
14 Again, the Tier II Agreement, which allowed for “Tier II” energy sales, expired
15 on 1/1/2001.

16
17 Delivery

18 Chugach shall bear the costs, including line losses, incurred in transmission of
19 Nonfirm Energy over Chugach’s transmission system to the Teeland Substation.
20 These costs need not show up in the contracted rate that Chugach charges,
21 however. In U-86-11(8) the Commission ruled that Chugach need not charge
22 itself for use of its transmission system when making economy energy sales.
23 Hence, even though Chugach is responsible for picking up the O&M and line-loss
24 costs (payable to HEA under the Bradley Lake Transmission Sharing Agreement)
25 for wheeled Bradley Lake energy, these costs would not be explicit.

26
27 Chugach Obligations

- 28 1) Chugach will produce nonfirm energy with gas from Marathon, except insofar
29 as Marathon deliveries are insufficient.
- 30 2) Chugach will operate its available generating capacity to follow GVEA’s load
31 requirements for Nonfirm Energy.
- 32 3) Chugach must offer GVEA “first crack” at nonfirm energy that it produces
33 from spinning reserves.

34
35 GVEA Obligations

36 GVEA’s purchases of nonfirm energy from Chugach have priority over GVEA’s
37 purchases of nonfirm or economy energy from any other source.

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1) *Firm Power*

GVEA has the right to purchase firm power from sources other than Chugach. However, this contract requires that such power have particular characteristics:

- i) the capacity of a given machine is dedicated to sales to GVEA;
- ii) this capacity is in excess of the owner’s generation or reserve needs;
- iii) if ML&P supplies firm power, then Chugach will be provided with a ruling from the IRS or an opinion by ML&P’s bond counsel that the contract to do so is consistent with ML&P’s obligations under the tax code; and
- iv) the firm power was secured as a result of a competitive bidding process and selected on the basis of lowest cost.

2) *Economy Energy*

GVEA must purchase 2/3 of the first 450,000,000 kWh of its nonfirm energy needs, and at least 80 percent of all subsequent nonfirm energy needs, from Chugach. If GVEA purchases less than this, it must make up the difference in the following year.

3) *Spot Market Economy Energy*

Nonfirm energy purchased outside of GVEA’s minimum required take of economy energy (outlined above) is defined as “Spot Market Economy Energy”.

Prices

Prices of nonfirm energy sold under the Nonfirm Agreement consist of gas cost, variable O&M, and a margin. Chugach bears the cost of line losses for GVEA sales, as well as transmission charges to the point of delivery at the Teeland Substation. Prices are determined as:

$$\text{Price/kWh} = \text{Gas Price/Btu} * \text{Heat Rate} + (\text{O\&M})/\text{kWh} + \text{Margin/kWh}$$

A) The bulk of the cost is from **gas**. The base price for gas is determined by the Chugach-Marathon gas sales agreement, and is:

$$(\$1.35) \times \left\{ \begin{aligned} &(\text{Reference Natural Gas} - 84.54 \text{ ¢/Mcf})/84.54 + \\ &(\text{Reference Fuel Oil} - 74.93 \text{ ¢/Gallon})/74.93 + \\ &(\text{Reference Crude Oil} - \$17.08/\text{Bbl})/17.08 \end{aligned} \right\} / 3$$

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Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

1 “Reference” prices for gas and fuel oil are published by the Bureau of Labor
2 Statistics, and for crude oil are the Wall Street Journal “Settle” prices for monthly
3 future’s contracts.

4 From time to time, Chugach has been able to arrange to obtain gas at a
5 reduced price for a portion of its sales under this agreement. Reduced prices do
6 not obtain at present.

7
8 B) The **Heat Rate** is the weighted average incremental heat rate of the generating
9 units used to produce energy.

10 Nevertheless, the average daily heat rate is stipulated not to exceed a
11 Ceiling Heat Rate of 11,000 Btu/kWh. The heat rate is also stipulated to not fall
12 below a floor rate: When the actual rate is 9,000 Btu/kWh or less, then the floor
13 heat rate is 9,000 Btu/kWh less one-half the difference between 9,000 Btu/kWh
14 and the actual rate. The floor heat rate can be relaxed, however: if more than
15 50 percent of GVEA’s purchases are generated at heat rates lower than the floor
16 rate, then purchases in excess of 50 percent will be priced according to the actual
17 heat rates.

18
19 C) **O&M** is priced to exclude start-up costs. It is:

20 1.6 mills * (GNP Price Deflator for October of the preceding year)/ (GNP
21 Price Deflator for October of 1988.)

22 D) **Margin** is:

23 10 mills * (GNP Price Deflator for October of the preceding year)/ (GNP
24 Price Deflator for October of 1992)

25
26 III. *Spot Market Sales*

27 These sales comprise up to 1/3 of GVEA’s purchases of the first 450,000,000
28 kWh, and 20 percent of amounts over that benchmark. Chugach can sell “at such
29 price as Chugach determines”, so long as a supplier other than Chugach has
30 offered sales of incremental generation from otherwise operating generation
31 facilities in quantities sufficient to meet GVEA’s request for non-firm power.

1 **Chapter 20. GVEA and Aurora Contract**
2

3 Overview

4 Aurora Energy purchased the Chena plant in Fairbanks from the Fairbanks
5 Municipal Utility System. Aurora sells three different “types” of contractual
6 electricity to GVEA. Tier I and Tier II energy are so named in the Contract.
7 Contract Section 3.6.1 refers to energy in addition to Tier I and Tier II. For
8 consistency and record keeping purposes this is referred to as Tier III.
9

10 Term

11 The contract became effective on 12/11/1997. It expires 20 years after that date.
12

13 GVEA Obligations

- 14 1) GVEA is obliged to purchase 120,000 MWhs from Aurora on a take or pay
15 basis. This is referred to as *Tier I* energy.
- 16 2) GVEA may purchase energy in excess of 120,000 MWh; this is deemed *Tier II*
17 energy, if GVEA requests Aurora to supply the power and if Aurora can do so
18 without incurring additional start-up costs.
- 19 3) GVEA may purchase energy from Chena 1, 2, or 3 at spot market prices as
20 demand warrants.
- 21 4) GVEA and Aurora shall develop a dispatch protocol to allow to the full extent
22 the flat operation of the Chena Facility within its physical capabilities.
23

24 Aurora Obligations

- 25 1) Aurora is required to make deliveries based upon a mutually agreed upon
26 dispatch protocol.

27 If the Chena plant is unable to produce output as originally predicted, then
28 Aurora may request to increase the Facility’s operating level to make up for
29 energy not delivered. If Tier I energy deliveries are not made up within 60 days,
30 the amount of Tier I energy sold to GVEA will be reduced. The exception is that
31 Aurora may reschedule such deliveries after 60 days if the cause of GVEA not
32 taking Tier I energy is due to a failure in GVEA’s interconnection facilities.

- 33 2) Aurora must pay all GVEA’s O&M costs of interconnection.
34
35

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1 GVEA Rights

2
3 1) GVEA may limit hourly deliveries of Tier I and Tier II energy to its needs in
4 excess of the combined output of Healy I and Healy II plants, and GVEA's
5 portion of Bradley Lake power.

6 2) GVEA will have dispatch rights over the facility, including the right to dispatch
7 VAR support.

8 3) If there is available capacity without having to start up a unit and if GVEA
9 needs more electricity than provided for in the Dispatch Protocol, then it may
10 request same from Aurora. Such energy will be sold as Tier II energy.

11 4) If GVEA needs more electricity than provided for in the Dispatch Protocol and
12 if additional capacity is available contingent upon starting up an additional unit,
13 then it may request same from Aurora. GVEA will pay start up and fuel costs,
14 plus a premium of \$.001 per kWh.

15
16 Aurora Rights

17 If Aurora provides twelve months' notice that it will operate Chena solely as a
18 cogeneration facility, then it may reduce the Tier I and Tier II electricity it
19 supplies to GVEA. The amount of the reduction will be "mutually agreed upon".

20
21 Rates

22 If Aurora fails to provide 120,000 MWhs of contracted Tier I energy for any other
23 reason than force majeure, then GVEA will pay \$.005 per kWh less for its Tier I
24 energy in the following contract year.

25
26 *Tier I Energy*

- 27 • Until the Healy-Fairbanks 230 kV intertie line is operating and carrying power
28 to GVEA:
29 4.0 cents/kWh
- 30 • Once the Healy-Fairbanks 230 kV intertie is carrying such power:
31 3.7 cents/kWh

32 This rate will remain in effect between eighteen and thirty months. After that,
33 rates for Tier I energy will be adjusted annually by the percentage by which prices
34 from GVEA's other power sources change. Specifically:

- 35 - Price will change according to the average price per kWh paid by GVEA
36 for all sources of purchased power (excluding purchases from Aurora) and
37 the cost of fuel for GVEA self-generated power.

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Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

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Tier II Energy

- Until the Healy-Fairbanks 230 kV intertie line is operating and carrying power to GVEA:
 2.6 cents/kWh
- Once the Healy-Fairbanks 230 intertie is carrying such power:
 Avoided cost, using specified computer routines for calculating that quantity.

Tier III Energy

- Section 3.6.1 of the contract states that the price “shall be as agreed in advance by the Parties”.
- Tier III Energy is not “economy spot market” energy, as defined in U-97-188 (6). Rather, the price will be determined as agreed in advance by the Parties.

1 **Chapter 21. GVEA and AIDEA: Healy Contract**
2

3 Overview

4 This contract governed the terms under which GVEA would pay for power
5 generated by the Healy Clean Coal Project. Under its terms, the Contract
6 terminates if the Project failed to be in Commercial Operation by 1/1/2000. This
7 transpired. There are several outstanding issues that remain between GVEA and
8 AIDEA. At present, engineers are preparing a report regarding a potential retrofit
9 of the Healy Clean Coal Project. In the interim GVEA and AIDEA have
10 suspended performance of the power sales agreement. No deliveries are being
11 made at this time.

12
13 Delivery

14 AIDEA will deliver power to the high voltage side of the Project's main
15 transformer where it can be metered.

16
17 GVEA Obligations

18 1) During the test period GVEA must use Project energy first in meeting its
19 energy requirements, subject to normal reliability criteria and requirements of
20 minimum run times of other resources used when the Project is not operating or is
21 operating at reduced capacity. GVEA must pay for all Test Energy delivered from
22 the Project.

23 2) GVEA was responsible for the management, operation, maintenance, and
24 improvement of the Project.

25 3) GVEA was obligated to use its best efforts to ensure that the Project provides
26 power at the lowest reasonable cost.

27
28 GVEA Rights

29 GVEA had the right, on six months' written notice, to undertake Optional Project
30 Work at its own cost and expense. The right was circumscribed by the
31 requirement that such work would need to be reviewed by a consultant to ensure
32 that it did not adversely affect GVEA's ability to meet its other obligations under
33 the Agreement.

34
35 AIDEA Obligations

36 AIDEA is obligated to use best efforts to complete the Project expeditiously and
37 in accordance with Prudent Utility Practice and sound engineering practice. This
38 obligation is contingent upon its receiving adequate funding for the purpose.
39

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1 Rates for Energy Prior to Commercial Operation

2 Rates are based on GVEA's avoided costs during the hour in which energy is
3 received. Avoided costs are calculated primarily in reference to GVEA's
4 economy energy contracts with Chugach. The formula for avoided costs is:

5

6 Avoided cost (kWh) =

7 ([Heat Rate { 12,000 Btu/kWh, or demonstrated actual heat rate}]

8

 * Gas Cost/MBtu

9

 + O&M {pursuant to the GVEA/Chugach nonfirm energy contract}

10

 + Margin {pursuant to the GVEA/Chugach nonfirm energy contract}

11

 + 4.9 mill {for wheeling, in 1991 dollars using GNP price deflator})

12

 / .95 {reflects line loss}.

1 **Chapter 22. Bradley Lake Power Sales Contract**
2

3 Overview

4 The Bradley Lake Project is owned by the State through the AEA (now housed
5 within AIDEA), and its expenses -- including capital costs -- are paid for by the
6 Purchasing Utilities (HEA, MEA, Chugach, GVEA, ML&P, and SES). Payment
7 confers rights to power and energy from the project. The Power Sales Agreement
8 operates in conjunction with a “Services Agreement”, as well as Dispatch,
9 Operating, and Maintenance Agreements. Only the Power Sales Agreement will
10 be described herein.

11 The Bradley Lake Project consists of two generating units that have a
12 name-plate capacity of 60 MW each (although actual capacity has been tested to
13 67 MW) and 115 kV transmission facilities to move power to the switching
14 station at Bradley Junction on the Fritz Creek - Soldotna transmission line. By
15 statute, the Commission’s jurisdictional authority over the Bradley Lake Project is
16 circumscribed.

17
18 Term

19 The Agreement was signed on December 8, 1987, and terminates at the later of:

- 20 a) 50 years after the date of commercial operation (September, 1991);
21 b) when no bonds used to finance the project remain outstanding.

22 Purchasers have the option to renew upon contract expiration.
23

24 Delivery

25 Power from the project is delivered to the point where the 115 kV project
26 transmission lines connect to the 115 kV switching station at Bradley Junction on
27 the Fritz Creek - Soldotna transmission line.
28

29 Purchaser Obligations

30 1) The following percentages outline both the obligation for annual project costs
31 and the privilege of project capacity:

- | | | |
|----|---------------|-------|
| 32 | • AEG&T | 25.8% |
| 33 | • MEA - 13.8% | |
| 34 | • HEA - 12.0% | |
| 35 | • Chugach | 30.4% |
| 36 | • GVEA | 16.9% |
| 37 | • ML&P | 25.9% |
| 38 | • SES | 1.0% |

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1 Thus, the Bradley Lake project could be understood as a “take-or-pay” endeavor.
2

3 Management Rights

4 Purchasers (not including AEG&T *but* including MEA and HEA separately) each
5 have a representative on the Project Management Committee (PMC). Purchasers
6 are responsible for the management, operation, maintenance, and improvement of
7 the Project. Both dispatch and operation and management functions were
8 determined by the Committee and codified in separate Agreements. It should be
9 noted that AIDEA has veto authority over the annual budget. The amount of
10 energy available each year depends upon weather and watershed conditions and is
11 monitored for the PMC by the operator (HEA). The Commission currently does
12 not have these subordinate agreements in its files.
13

1 **Chapter 23. Eklutna Power Agreement: ML&P, MEA, and Chugach**
2

3 Overview

4 The Eklutna hydroelectric plant consists of two 15 MW generating units, a
5 115 kV transmission line connecting the power plant with Palmer and Anchorage,
6 Anchorage, Palmer and Reed Substations, and other associated facilities. The
7 estimate for firm energy supply is 153 GWh per year, with an additional 11 GWh
8 of non-firm energy. The plant was purchased from the Federal Government by
9 ML&P, MEA, and Chugach for \$5,953,000 in October, 1997. Ownership
10 allocations are 53.33 percent, 30 percent, and 16.67 percent, respectively. An
11 Eklutna Purchaser cannot transfer or modify interest in the Project without
12 consent of the other Purchasers. Transfer of a Purchaser's interest to an entity
13 other than an existing Purchaser is subject to right of first refusal by remaining
14 purchasers.

15 Under an agreement among the three utilities, responsibilities for Eklutna
16 are shared. MEA takes care of operations, keeps books, and does budgeting;
17 budgeting and bookkeeping costs are then billed to the other owners. Chugach
18 maintains the dam, does inspections, and handles environmental compliance.
19 ML&P does maintenance and dispatching. The three utilities each have
20 responsibility for operation, maintenance, and repair of different portions of the
21 Eklutna transmission segments and substations. Such costs are borne by the
22 individual utilities and are not shared.

23 The Eklutna Operating Committee (EOC) meets as required, usually once
24 a month but at least quarterly, to decide O&M and budgeting issues. The EOC is
25 made up of one representative from each utility with the chair rotating between
26 the utilities. Decisions by the EOC will be by double majority (a vote of two of
27 the three Eklutna Purchasers whose shares total at least 51% of the Project shares)
28 unless otherwise agreed to by the Eklutna Purchasers.

29 The AEA will maintain an energy account for each contracting utility, and
30 track energy credits and deliveries. Available energy for the year is determined on
31 November 1 and allocated fully among the purchasing utilities. Spinning reserves
32 are allocated on a pro rata basis according to the share of project capacity net of
33 project generation scheduled. Three percent of net plant output will be delivered
34 to purchasing utilities to cover utility system losses and will not be counted as
35 energy delivered to the utilities.

36 Each owner has the right to schedule during any hour its share of the plant
37 capacity to meet its own system loads provided its energy account is not less
38 negative than 22500 times its share of capacity. A contracting utility may
39 schedule its full capacity share by scheduling at least 5 MW for that hour. If spill
40 conditions occur, then the reduction in spilled energy is generally allocated
41 according to the fraction of each utility's account to the sum of all accounts at the
42 time of the spill.

1 **Chapter 24. Transmission Agreements (Blank)**

1 **Chapter 25. Chugach and GVEA Wheeling Rates**
2

3 Overview

4 Opening the Intertie created opportunities and need for third parties to wheel
5 energy over both Chugach and GVEA transmission systems. The above parties
6 stipulated to rates for the use of Chugach and GVEA systems for economy energy
7 transactions over the Alaska Intertie. The Commission approved the stipulated
8 rates in U-86-11(5) (temporary) and U-86-11(8) (permanent). In U-86-11(13) the
9 Commission ruled that neither Chugach nor GVEA need charge itself the 1.5 mill
10 wheeling rate when it is making economy energy sales.

11
12 Rates are set at 1.5 mills/kW for each hour of the transfer (\$1.50 per MWh).

13
14 This rate may be lowered by agreement of the affected parties and filed with the
15 Commission.

16
17 The stipulation says nothing about rates for wheeling firm power.

1 **Chapter 26. Bradley Lake Services Agreement Between Chugach and**
2 **GVEA-ML&P-SES-AEG&T-HEA-MEA**
3

4 Overview

5 Chugach has dispatch control over Bradley Lake energy. When a wheeling
6 utility desires to use its Bradley Lake entitlement, it notifies Chugach. However,
7 Bradley Lake energy needs to be wheeled over the Chugach transmission system.
8 This agreement concerns the terms under which wheeling occurs. The agreement
9 also describes services that Chugach provides when transmission constraints
10 prevent the wheeling of energy to which a party is otherwise entitled. These
11 services include energy purchases and energy storage in Chugach’s Cooper Lake
12 Reservoir.

13 All purchasers of Bradley Lake energy are parties to the services
14 agreement. However, because Chugach has net billing arrangements with most of
15 these entities, wheeling and other services need only be purchased by a *Wheeling*
16 *Utility*. The language defining a Wheeling Utility is complex. In the end, a
17 wheeling utility is one that *does not* have a wholesale contract with Chugach
18 under which Chugach reimburses that Party’s costs of purchasing Bradley Lake
19 Energy. In short, only ML&P and GVEA are wheeling utilities.

20
21 Term

22 The Services Agreement expires at the *earlier* of 50 years from the beginning of
23 the Bradley Lake Power Sales Agreement or the date on which the AEA
24 terminates the Power Sales Agreement. That said, either Chugach or a Wheeling
25 Utility could terminate the services agreement if alternate transmission facilities
26 are capable of carrying the wheeling utility’s Bradley Lake energy.

27
28 Chugach Rights

29 I. Chugach may schedule its resources to meet as a first priority the safety,
30 efficiency and economic needs of Chugach’s own system. This priority is
31 circumscribed:

- 32 i) Chugach may not deny wheeling, storage, or purchase service from
33 another utility for any other reason;
- 34 ii) Chugach may not operate its system differently from how it would have
35 operated if the Bradley Lake Energy of the Wheeling Utilities did not
36 exist.

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1 Chugach Obligations

2 I. Chugach must:

- 3 1) dispatch Bradley Lake power;
4 2) schedule wheeling, storage, and energy purchase services for Wheeling
5 Utilities;
6 3) coordinate with HEA to minimize potential conflicts between:
7 i) HEA operations
8 ii) Chugach Operations
9 iii) Dispatch of Bradley Lake generation.

10
11 *Wheeling*

12 A Wheeling Utility can request “Assured Delivery” of Bradley Lake energy for a
13 period of up to two weeks. Chugach is obligated to perform assured delivery,
14 subject only to forced outage. Wheeling rates for “Assured Delivery” are higher
15 than normal wheeling rates (see below).

16
17 *Storage*

18 If transmission constraints prevent wheeling of Bradley Lake energy and if that
19 energy can no longer be stored at Bradley Lake, then a Wheeling Utility may
20 request storage at Chugach’s Cooper Lake Reservoir. Chugach is not obligated to
21 store such energy if it can be wheeled.

22
23 If Chugach needs to spill water from Cooper Lake, it will spill other utilities’
24 energy first, *unless* the utility has a “Protected Storage Agreement”. Protected
25 storage is subject to fees, to be negotiated with Chugach.

26
27 *Purchases*

28 If a Wheeling Utility’s Bradley Lake energy can be neither wheeled nor stored,
29 Chugach will purchase that energy if it can use it for Chugach loads. Chugach
30 need not make such a purchase if:

- 31 i) it is more expensive or -- in Chugach’s reasonable determination -- less
32 useful to Chugach. (Chugach is permitted to offer to buy such energy at its
33 avoided system cost.)
34 ii) would conflict with a prior Chugach contractual obligation.
35 iii) would conflict with a Chugach legal obligation.

Regulatory Commission of Alaska

Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

1 Service Rates

2 *Basic Wheeling Rates*

3 Wheeling rates are charged for energy delivered to the Soldotna Substation.
4 However, actual energy received by Wheeling Utilities is reduced by line losses
5 to the extent that such deliveries are made by Direct Transmission. (Line losses
6 are calculated as the percentage of line losses on Chugach’s wholesale system.)
7 To the extent that deliveries are made by Offsetting Flows, such deliveries are not
8 reduced for line losses. (Offsetting Flows of energy are those that do not
9 physically travel from Bradley Lake.)

10 Wheeling rates reflect the portion of Chugach’s system over which
11 wheeled energy may flow. Rates are set as the cost of Chugach’s transmission
12 system (less the portion running from Beluga to Point MacKenzie) divided by the
13 sum of Chugach kWh (generated and purchased) and Wheeled Bradley Lake
14 energy, multiplied by a fraction (less than one). Formally:

15
16
$$\text{Rates} = K * \text{Base} /$$

17
$$[\text{Chugach generated and purchased kWh} + \text{Wheeled Bradley Lake Energy}]$$

18
19 where *Base* is composed of the costs of Chugach’s transmission system, excepting
20 the portion of the system from Beluga to Point MacKenzie (but including the
21 Pt. MacKenzie Substation). That is,

22
23
$$\text{Base} = (\text{O\&M} + \text{A\&G} + \text{taxes} + \text{Depreciation} + \text{Interest and TIER}).$$

24
$$K = 0.5 \text{ per Intertie Participants Agreement.}$$

25
26 “Chugach generation” excludes its economy energy sales, but includes the
27 Bradley Lake energy that Chugach receives from SES and MEA under its net
28 billing agreements with these utilities.

29
30 *Assured Delivery Wheeling Rates*

31 Wheeling rates for “Assured Delivery” are 15 percent higher than base rates and,
32 in addition, include an “outage premium” that applies if:

- 33 a) Chugach suffers a forced outage during the period of Assured Delivery,
34 and as a result
35 b) must start back-up generation which is more costly than it otherwise
36 would have operated if it didn’t have to provide Assured Delivery, and
37 c) the Wheeling Utility chooses not to cancel its Assured Delivery.

Regulatory Commission of Alaska

Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

1 The premium will be the incremental difference between generation options
2 available to Chugach.

3 *Storage*

4 Is not subject to charge, contingent upon availability. Rates for Protected Storage,
5 which protect against spill, are subject to terms negotiated with Chugach.

6
7 *Purchased Energy*

8 Rates differ depending upon system conditions.

9 i) *Condition #1* exists when the Chugach energy displaced from its Kenai
10 resources costs less than the sum of Bradley Lake energy and wheeling
11 charges necessary to move the power to the Soldotna substation. Under
12 Condition #1, Chugach will pay 95 percent of the cost of energy from the
13 particular displaced resource.

14 ii) *Condition #2* exists when the Chugach energy displaced from its Kenai
15 resources costs more than the sum of Bradley Lake energy and wheeling
16 charges necessary to move the power to the Soldotna substation. Under
17 Condition #2, Chugach will pay the lower of:

- 18 • 95 percent of the cost of the energy displaced from the particular
19 resource;
- 20 • (Bradley Lake Energy + Wheeling charges to Soldotna Substation
21 + Displaced Chugach energy)/2

22
23 Other provisions

24 I. New Transmission

25 If any Party, alone or with other entities, constructs a new transmission
26 capacity linking the Kenai Peninsula with Anchorage via a different transmission
27 corridor, then each other Party will have the opportunity to own a share of that
28 transmission capacity in proportion to its share of Bradley Lake energy.

29
30 II. Operation and Maintenance

31 The Parties agree that AEG&T/HEA are the appropriate entities to operate
32 and maintain the Project.

33

1
2 **Chapter 27. Bradley Lake Transmission Sharing Agreement Between**
3 **HEA and Chugach - GVEA - ML&P**

4 Overview

5 The Bradley Lake project required construction of a transmission line between
6 Bradley Junction and the Soldotna Substation, a distance of roughly 47 miles.
7 HEA agreed to construct that 115 kV line. Because parties to the Bradley Lake
8 Power Sales Agreement cannot get their electricity without making use of that
9 line, they entered into sale and lease arrangements of portions of the line. The
10 terms of these agreements are set out in this contract.

11
12 Term

13 The contract expires at the earliest of:

- 14
15 i) when the line is no longer used and useful *and* all costs have been paid;
16 ii) when the Bradley Lake Power Sales agreement ends;
17 iii) any other date mutually agreed upon by the parties.
18

19 HEA Obligations

20 1) HEA is obliged to sell or lease portions of the transmission line in proportion to
21 the Purchaser's share of Bradley Lake energy. (Given its net billing arrangements,
22 Chugach's share is deemed equal to the sum of Chugach, MEA, and SES shares.)

23 2) HEA must provide voltage support to the extent economically feasible so that
24 the operational capacity of the line remains at least 135 MW. If its support is
25 insufficient, HEA's rights to Bradley Lake energy will be subordinate to all other
26 parties.
27

28 HEA Rights

29 1) HEA will be compensated for line losses that it experiences as a result of
30 carrying Purchaser's power.

31 2) In each month, HEA will receive payment for O&M expenses on the
32 transmission line -- including all expenses of providing voltage support, and
33 income taxes (if any) which arise from selling transmission capacity -- in
34 proportion to the purchaser's share of Bradley Lake capacity.

1 **Chapter 28. Alaska Intertie Agreement Between the AEA and**
2 **ML&P - Chugach - AEG&T - GVEA - FMUS**
3

4 Overview

5 The Intertie Agreement establishes individual rights for transfer capability of the
6 Intertie and means of determining costs thereof. The maximum Intertie transfer
7 capability is 70 MW. Participants have the right to request additions, deletions, or
8 changes to the Intertie, which the AEA may not unreasonably refuse.

9
10 Term

11 Entered into on 12/23/1985, the Agreement remains in effect until all Parties
12 mutually agree to terminate it. Any Party may terminate its participation on four
13 year's notice. The AEA may terminate the Agreement on four years' notice if it
14 determines that doing so is required to improve Railbelt power systems.

15
16 Intertie Operating Committee

17 The Agreement creates the Intertie Operating Committee (IOC). The IOC
18 establishes operating procedures and standard practices for the Intertie. These
19 guide dispatchers and others on matters that affect Intertie operations. All
20 Participants have a representative, all representatives have equal authority, and all
21 decisions must be by 75 percent majority.

22
23 Obligations of Participants

24 Participants have a number of specific obligations to ensure safe and reliable
25 Intertie operation. These include: keeping the frequency of the interconnected
26 systems as closely as practical at 60Hz; maintaining standards for control of time
27 error; supplying sufficient reactive power; refraining from imposing abnormal
28 loads upon facilities of another Participant; agreeing to the Reserve Capacity and
29 Operating Reserve Responsibility Agreements; scheduling all intentional power
30 and energy deliveries in advance; working to minimize inadvertent flows; among
31 others. In addition, each Participant will have an automatic load shedding system,
32 in accordance with criteria developed by the IOC.

33
34 Intertie Operations

35 AEA delegates operation responsibility to ML&P and GVEA, under guidelines
36 from the IOC.

Regulatory Commission of Alaska

Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

- ML&P operates the southern half of the Intertie. It is delegated AEA’s responsibility under the AEA-MEA Agreement governing MEA’s transmission facilities between Douglas and Teeland Substations.
- GVEA will operate the northern half of the Intertie.

ML&P and GVEA will, in concert, work to ensure smooth operation of the Intertie. This includes:

- a) developing procedures for restoration of service;
- b) operating the Intertie in a safe and responsible manner consistent with Prudent Utility Practices and the directives of the IOC.

Allocation of Capacity

The Intertie transfer capacity rights are specified as Minimum Intertie Transfer Capability Rights (MITCR), which are calculated once per year. MITCR is based on the average of the last three Annual System Peak Demands of the utility Participants; it is calculated with reference to whether a utility is in the Northern (GVEA) or Southern (ML&P, Chugach, AEG&T) portion of the Intertie. Thus, a utility’s MITCR is its average peak system demand, divided by the sum of average peak system demands of other members of its group (Northern or Southern), times Intertie transfer capability.

If a Participant is not using all of its MITCR in each direction, other utility participants have the right to use the unused part to make transfers across the Intertie. Unused MITCR will be allocated based on proportion of a utility’s MITCR to total group (northern or southern) MITCR. Monthly compensation for unused MITCR will be:

$$P = \text{Intertie Capacity Rate}/12 * \text{Capacity used} * \\ (\text{Fraction of month that the capacity is used})$$

Intertie Costs

Construction costs of initial Intertie facilities were paid through direct appropriation from the legislature. Thus, rates for Intertie use reflect only Operations and Maintenance Costs, debt costs for bonds (if any) issued by AEA, and costs for using Intertie transmission facilities owned by MEA.

Intertie costs are shared in proportion to estimated Intertie use. Payments are based on both energy and capacity. The costs of the Intertie will be recovered as follows: 83.5 percent through energy charges and 16.5 percent through demand charges. When there is a scheduled Power and Energy delivery on the Intertie, and the contract path does not equal the physical path, the contract path is assumed.

Regulatory Commission of Alaska

Railbelt Contract Summary: Fuel, Wholesale Electric, and Transmission

- 1 • The rate for energy use -- in cents per kWh -- is set by dividing total annual
2 Intertie costs by the sum of all Parties' *projected* kWh usage. (Total usage is
3 stipulated to be at least 30 percent of total Intertie capacity -- based on
4 continuous use -- or actual use, whichever is larger). The result is then
5 multiplied by .835.
- 6 • The rate for capacity use -- in dollars per kW -- is set by dividing total annual
7 Intertie costs by the sum of all Parties' MITCR. (Again, each Party's MITCR
8 is the average of the *past* three years' data.) The result is then multiplied by
9 .165.
- 10 Over-collections are trued up at year end through refunds in proportion to a
11 Participant's Intertie dollars billed. Under-collections are billed to Participants' in
12 the same proportion as their MITCR share.

1 **Chapter 29. Alaska Intertie Maintenance Agreement Between the AEA**
2 **and AEG&T**
3

4 Overview

5 The Agreement makes AEG&T responsible for maintaining the Southern portion
6 of the Intertie Facilities. AEG&T is responsible for the Douglas Substation, and
7 the Intertie transmission line from Teeland Substation to the Midpoint of the
8 Intertie. The AEA will reimburse AEG&T for these maintenance costs.

9 AEG&T subsequently assigned the Maintenance Agreement to MEA.
10 Under the terms of the Maintenance Agreement, MEA becomes responsible for
11 all of AEG&T's duties and rights.

12 The costs of maintenance are paid by the AEA, and ultimately charged to
13 users of the Intertie.

14
15 Term

16 The Agreement expires upon 12 months' written notice by either party, or by
17 90 days' notice given a material breach of the Agreement.

18
19
20 Obligations of AEG&T

21 Among other specific enumerated obligations, AEG&T must:

- 22 • Maintain the Southern portion of the Intertie, including the Douglas
23 Substation.
- 24 • Coordinate maintenance schedules with all participants of the Alaska Intertie
25 Agreement.
- 26 • Schedule inspections and inspections required by the annual maintenance
27 plan. It will provide an inspection report to the AEA.
- 28 • Maintain and read all meters.

29
30 Rates

31 The AEA will provide AEG&T with an annual budget sufficient to satisfy the
32 Intertie maintenance costs incurred by AEG&T. It will reimburse AEG&T for
33 labor, materials, supply, equipment, and training costs. These costs are then
34 passed through wheeling rates over the Intertie.

35

1 **Chapter 30. Transmission Service Agreement Between MEA and AEA**
2

3 Overview

4 MEA owns and operates a 138 kV transmission line between Douglas and
5 Teeland substations. Utilities must use this line to make use of the Intertie. This
6 Agreement concerns terms under which the AEA purchases transmission capacity
7 from MEA so that the Intertie can be used.
8

9 Term

10 The agreement may be terminated by mutual consent at any time. It may be
11 unilaterally terminated on July 1, 2004, or on July 1 of any subsequent year if
12 twelve months' advance notice is provided.
13

14 Obligations of MEA

- 15 • MEA is obligated to make all excess transmission capacity to AEA. Excess
16 capacity will be reported to AEA at least monthly and whenever it is changed
17 during normal operations.
- 18 • MEA is responsible for the line's maintenance.
19

20 Rates

- 21 • Energy losses shall be made up for by the Party supplying the power. There is
22 no financial compensation for losses due to others' use of the line.
 - 23 – MEA losses are calculated using MEA transfers on the line as the base
24 load of the transmission line.
 - 25 – Losses of Intertie participants are calculated using participant transfers as
26 an addition to MEA base load.
- 27 • Transmission service rates are derived from the portion of the annual
28 projected costs for providing excess capacity transmission service.
- 29 • MEA reinsulated a portion of the transmission line and recovers the cost
30 through the transmission rate it charges. Thus, the total rate per kWh is
31 determined by the following formula:
32

33 Transmission Rate =

34
$$[\text{O\&M} + \text{A\&G} + \text{taxes} + (\text{annual depreciation} + \text{capital costs})/4]/(\text{total kWh})$$

35
$$+ [\text{annual depreciation and capital costs of reinsulation}]/(\text{total kWh}).$$

1 **Chapter 31. Transmission over Eklutna Project System**
2

3 Overview

4 The following information comes from comments submitted by MEA in
5 response to Order 5 of R-97-10.

6 Electric energy, in addition to that generated by the Eklutna Project, is
7 wheeled through the Eklutna Project transmission system. The wheeling service is
8 apparently not performed according to any written agreement. In general,
9 wheeling allows transmission of energy generated by Chugach for MEA. It is
10 scheduled through ML&P dispatch, and costs are administratively allocated
11 among the project owners according to the “Agreement for Extension of the ‘1996
12 Eklutna Hydroelectric Project Transition Plan’”.