

**Report to the Twenty-Third Legislature
2005 Regular Session**

Pursuant to
House Concurrent Resolution No. 172 HD 1, Regular Session 2003

**Department of Commerce and Consumer Affairs'
Report of the Ad Hoc Advisory Group**

On
The Development and Implementation of Standard Offer Contracts And
Standardized Interconnection Agreements to Reduce the Approval
Process Time for the Implementation of Renewable Energy Systems and
to Facilitate the Purchase of Electricity from Renewable Energy
Producers in Hawaii

**Department of Commerce and Consumer Affairs
State of Hawaii**

December 2004

House Concurrent Resolution No. 172, HD 1 (Resolution), Regular Session of 2003, requested the Consumer Advocate to form an ad hoc advisory group to investigate and make recommendations regarding the development and implementation of standard offer contracts and interconnection agreements to: (1) reduce the approval time to implement renewable energy systems; and (2) to facilitate the purchase of electricity from renewable energy producers in Hawaii.

The Division of Consumer Advocacy (Division) held three meetings of the ad hoc advisory group in 2003. A summary of those meetings can be found in the December 2003 Report to the Legislature entitled, *Department of Commerce and Consumer Affairs' Interim Report of the Ad Hoc Advisory Group*.

The Resolution requested that the ad hoc advisory group make recommendations regarding the development of a standard Power Purchase Agreement (PPA), however, after discussions held in the first two meetings, it appeared that the members appreciated that a standard, one-size-fits-all contract cannot be developed. At that time, rather than disband, the advisory group members agreed to continue meeting to determine whether there were some provisions that could be standardized, and which ones must be negotiated on a case-by-case basis.

Following the three meetings held in 2003, there were no further efforts to schedule other meetings during the 2004 Legislative Session, because of time constraints on most of the members of the advisory group. Furthermore, in May of 2004 a new Executive Director was appointed to head the Division. The new Executive Director reviewed the requests set forth in the Resolution, the progress of the group up to that point, and the likelihood that additional meetings would be productive. Various members of the advisory group were questioned as to whether they thought further meetings would be productive and what their priorities were. It became apparent that many of the advisory group members felt that continuing on would require great time and effort, and that further meetings were unlikely to produce meaningful results.

Additionally, many of the issues critical to developing standard PPAs and interconnection agreements, are currently being discussed and decided in other open proceedings before the Public Utilities Commission (PUC). For example, the appropriate rate at which power can be sold to a utility in order to produce a sufficient revenue stream to secure project financing is an issue that is being addressed in the PUC's competitive bid proceeding (Docket No. 03-0372). Also, as part of the ongoing distributed generation proceeding (Docket No. 03-0371) the PUC is considering interconnection issues and how to assure that the interconnection agreement process takes no longer than is necessary, while continuing to ensure the prevention of negative impacts on our island utility systems.¹ Many of the members of the advisory group are also parties to both the competitive bid and distributed generation proceedings. Because these proceedings are

¹ While HECO, HELCO and MECO established interconnection standards and an agreement process under their Rule No. 14 H (effective on March 23, 2003) after review and input from the Division and the PUC, the distributed generation proceeding is looking at whether more can/should be done. KIUC has not yet adopted interconnection standards.

labor and time intensive, a number of members believed their limited resources and efforts would be best spent on participation in these dockets, rather than on continuing efforts as members of the advisory group, considering the slim likelihood of accomplishing the objectives of the Resolution in a meaningful way within the timeframes set forth. Therefore, this report will not set forth any specific recommendations to the Legislature regarding the development and implementation of standard offer contracts and standard interconnection agreements.

The Division and members believe that the issues the Resolution asked the advisory group to investigate are important to the implementation of renewable energy systems and to the advancement of the State's energy policies. The Division will continue to investigate and play an active role in these issues in applicable proceedings and through general advocacy. The Division's overarching objective is to protect the interests of and promote what is best for utility consumers in both the short and long term.

The Resolution also requested the Division to create a spreadsheet with certain information for all existing power purchase agreements, and, to the extent possible, for those under negotiation. That spreadsheet is attached to this report.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	HECO	HECO	HECO	HECO	HECO
Power Producer	AES Hawaii, Inc.	HPOWER (C&C of Honolulu)	Kalaieola Partners, L.P. ("KPLP")	HECO	HECO
1. PUC Docket Number	6177 (PPA) 6681 (interconnection) 03-0126 (Amendment 2 - AES Refinancing)	5514 (PPA) 6983 (Firm Capacity Amendment)	6378 (PPA) 6367 (Kalaieola Unit #1 Interconnection) 6459 (Kalaieola Units 2 & 3 Interconnection) 00-0001 (Amendment 4)		8717 Chevron U.S.A., Inc.
2. PUC Decision and Order	10286 (Jul 28, 1989) (Docket 6177) conditional approval 10448 (Dec 29, 1989) (Docket 6177) - approved contract 10696 (Jul 11, 1990) (Docket 6681) 20292 (Jul 1, 2003) (Docket 03-0126) Order 20310 (Jul 9, 2003) (Docket 03-0126) Clarifying D&O 20292	8698 (Mar 31, 1986) (Docket 5514) 11700 (Jun 30, 1992) (Docket 6983)	10824 (Oct 31, 1990) (Docket 6378) - Affirmed D&O 10369: Kalaieola contract, as amended, is approved except section 23.1 11494 (Feb 24, 1992) (Docket 6378) - Approved Amendment 3. 10372 (Oct 17, 1989) Docket 6367 10518 (Feb 14, 1990) (Docket 6459) 17647 (Mar 30, 2000) (Docket 00-0001) - Approved Amendment 4		10679 (Jun 22, 1990)
3. PUC Approval Date	See above.	See above.	See above.		Jun 22, 1990
4. PPA Expiration Date	Sept 1, 2022 (30 years)	Jul 31, 2015 (25 years)	May 23, 2016 (25 years)		Initial term of one (1) year from the date of PUC approval, and shall continue in effect after the initial term until terminated by either party.
5. On-peak/off-peak rates per kWh	Energy rates comprised of the following components: Fuel: based on formula as set forth in contract. Variable O&M: 0.05¢/purchased kWh. Fixed O&M: 1.1¢/available kWh. Fuel, Variable O&M, and Fixed O&M are in 1987 dollars; to be escalated by GNPIPD	For the first 644,000 kWh/day on-peak and first 250,000 kWh/day off-peak, the higher of 100% of HECO on-peak and off-peak avoided energy cost payment rates in cents per kilowatt-hour on file with the PUC pursuant to Subchapter 3 of the PUC's Standards for Small Power Production and Cogeneration in the State of Hawaii, Chapter 74 of Title 6 or a floor level of 7.210¢ on-peak and 5.600¢ off-peak. For purchases in excess of 644,000 kWh/day on-peak and 250,000 kWh/day off-peak, the higher of the rates set above or 6.700¢ on-peak and 5.190¢ off-peak (HECO avoided energy cost payment rates in cents per kilowatt-hour on file with the PUC for the first quarter of 1986).	Energy rates comprised of the following components: Fuel: based on formula as set forth in contract; minimum floor rate for 2 turbines in operation of 2.770¢/kWh. Nonfuel: 0.96¢/kWh. Additive: 0.144¢/kWh. Nonfuel and additive are in 1988 dollars; nonfuel escalated by GNPIPD, additive escalated by producer price index for magnesium ingots.		100% of HECO on-peak and off-peak avoided energy cost payment rates in cents per kilowatt-hour on file with the PUC, at the time the energy is delivered. Note: The kWh is adjusted to reimburse HECO for substation transformer kWh losses associated with Chevron's facility.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	HECO	HECO (C&C of Honolulu)	HECO	HECO
Power Producer	AES Hawaii, Inc.	HPOWER (C&C of Honolulu)	Kaiaeloa Partners, L.P. ("KPLP")	HECO
6. Other kWh payments, such as for capacity or avoided losses	Reactive power: The reactive power (in KVARh) in excess of 62% of the kWhs furnished to AES-BP by HECO for the applicable payment shall be charged to AES-BP at the rate of 0.2¢/KVARh. The reactive power (in KVARh) in excess of 62% of kWh furnished to HECO by AES-BP for the applicable payment period shall be credited to AES-BP at the rate of 0.2¢/KVARh. Reactive power is in 1987 dollars; to be escalated by GNIPPD. Capacity rate: 4.4095¢/available kWh.	Energy reactive adjustment: H-POWER credited at 0.2¢/KVARh for each KVARh furnished to HECO in excess of 0.62 x kWh. H-POWER credits HECO at 0.2¢/KVARh for each KVARh received when H-POWER operates in leading power factor mode. Capacity rate: 4.89¢/kWh available weekday on-peak.	Baseline Capacity: \$164.35/KW-yr. New Capacity, pending PUC approval of Amendments 5 and 6: \$112.00/KW-yr.	Chevron U.S.A., Inc. Energy reactive adjustment: The reactive kilowatt-hours less than 62% of the kilowatt-hours furnished to Chevron by HECO for the applicable payment period shall be credited at a rate of 0.2¢/KVARh and for kilowatt-hours greater than 62% of the kilowatt-hours furnished to Chevron by HECO for the applicable payment period shall be charged at a rate of 0.2¢/KVARh.
7. Allowable Frequency Fluctuation	Less than or equal to 0.1 Hz from 60 Hz except during unavoidable momentary fluctuations.	None specified, however underfrequency and overfrequency relay trip settings are being negotiated by the parties.	Less than or equal to 0.1 Hz from 60.0 hertz, except during unavoidable momentary fluctuations.	Not specified.
8. Allowable Voltage Fluctuation	Nominal operating voltage of 138 kV w/maximum limit of 145 kV and minimum limit of 130 kV or such change in standards as parties agree.	None specified.	Nominal operating voltage of 138 kV w/maximum limit of 145 kV and minimum limit of 130 kV or such change in standards as parties agree.	Not specified.
9. Required Ramping Rates	Less than 2.5 MW/min.	Less than 2 MW/min.	Less than 2.5 MW/min.	Less than 2.0 MW/min.
10. Length of time it took to complete:				
A. Interconnection Agreement	Approx. 6 months.	Approx. 2 yrs, 10 mos.	No separate agreement.	
B. Power Purchase Agreement	Approx. 6 months.	Dkt 5514: Approx. 6 mos. Dkt. 6983: Approx. 1 yr, 4 mos. Dkt. 5514: Approx 2 wks.	Approx. 1 yr. for initial PPA	Approx. 8 mos.
C. CA's review and recommendation	Dkt 6177: Approx. 1 yr, 7 mos. Dkt No. 6881: Approx. 1 wk. Dkt No. 03-0126: Approx. 3 wks.	Dkt. 6983: Approx. 6 mos.	Dkt. 6378: Information not available. Dkt. 6367: No CA Statement Of Position filed. Dkt. 6459: No CA Statement Of Position filed.	Approx. 1 mos.
D. PUC's review and Decision and Order	Dkt 6177: Approx. 1 yr, 7 mos. Dkt. 6681: Approx. 3 mos. Dkt 03-0126 : Approx. 2 wks.	Dkt. 5514: 3 wks. Dkt. 6983: Approx. 9 mos.	Dkt. 00-0001: Approx. 2 mos. Dkt. 6378: Information not available. Dkt. 6367: Approx. 10 mos. Dkt. 6459: Approx. 8 mos.	Approx. 1 mos.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	HECO
Power Producer	Tesoro
1. PUC Docket Number	5025
2. PUC Decision and Order	7872 (Mar 14, 1984)
3. PUC Approval Date	Mar. 14, 1984
4. PPA Expiration Date	Minimum term of one (1) year from date of PUC approval and continue on a year-to-year basis until terminated by either party.
5. On-peak/off-peak rates per kWh	100% of HECO on-peak and off-peak avoided energy cost payment rates in cents per kilowatthour on file with the with PUC, at the time the energy is delivered.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	HECO
Power Producer 6. Other kWh payments, such as for capacity or avoided losses	Tesoro Energy reactive adjustment: The reactive kilowatt-hours less than 62% of the kilowatt-hours furnished to Tesoro by HECO for the applicable payment period shall be credited at a rate of 0.2¢/kVArh and for kilowatt-hours greater than 62% of the kilowatt-hours furnished to Tesoro by HECO for the applicable payment period shall be charged at a rate of 0.2¢/kVArh.
7. Allowable Frequency Fluctuation	Not specified.
8. Allowable Voltage Fluctuation	Not specified.
9. Required Ramping Rates	Not specified.
10. Length of time it took to complete:	
A. Interconnection Agreement	
B. Power Purchase Agreement	Approx. 1 yr.
C. CA's review and recommendation	No CA Statement Of Position filed.
D. PUC's review and Decision and Order	Approx. 1 mos.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	HELCO	HELCO	HELCO	HELCO	HELCO
Power Producer	Hamakua Energy Partners, L.P. ("HEP")	Hilo Coast Power Company ("HCPC")	Puna Geothermal Venture ("PGV")	HELCO	HELCO
1. PUC Docket Number	98-0013	99-0346 (2nd Amended and Resiated PPA)	5525 (Unscheduled Energy)	5290 (PPA)	Apollo
2. PUC Decision and Order	17077 (Jul 14, 1999) Order 17089 (Jul 21, 1999) amending D&O 17077	17397	8692 (Mar 25, 1986) (Docket 5525) 10519 (Feb 14, 1990) (Docket 6498) 13876 (May 5, 1995) (Docket 95-0074) Interim D&O 15036 (Sep 27, 1996) (Docket 95-0074) 14840 (Aug 2, 1996) (Docket 96-0042)	6498 (Firm Cap Amend & Second Amend) 95-0074 (Third Amend/Transmission Line Agreement) 96-0042 (Fourth Amend)	To be filed soon Resiated and Amended Contract (RAC)
3. PUC Approval Date	See above.	Dec 7, 1999	See above.	See above.	See above.
4. PPA Expiration Date	Dec 31, 2030 (30 years from Phase 2 In-Service Date of the Facility)	Contract will terminate on January 1, 2005	Dec 31, 2027. Initial term of 35 years from commercial operation of the second generating unit or 1992, whichever is earlier, continuing until terminated by either party.	PPA. Jun 29, 2002. Minimum term of 15 years from operational date of June 30, 1987, continuing until terminated by either party.	PPA. Jun 29, 2002. Minimum term of 15 years from operational date of June 30, 1987, continuing until terminated by either party.
5. On-peak/off-peak rates per kWh	Energy Charge formula based on fuel and variable O&M components. Fuel component based on HELCO's cost of delivering No. 2 fuel oil to Keanohe. Variable O&M escalated annually by the GDPIPD.	Base on-peak and off-peak rates + 2/3 of difference between base rates and 100% of HELCO on-peak or off-peak avoided energy cost payment rates on file with the PUC at the time the energy is delivered, with base rates if they are greater than on-peak and off-peak rates. Base on-peak = 5.41¢/kWh; Base off-peak = 4.51¢/kWh.	First 25 MW on-peak and first 22 MW off-peak; higher of: a) 100% of the HELCO respective on-peak and off-peak avoided energy cost payment rates in cents per kilowatt-hour on file with the PUC and in effect for the month in which such energy is delivered; or b) \$0.0656¢/kwh on-peak or \$0.0543¢/kwh off-peak Energy above 25 MW on-peak: higher of: a) formula rate based on fuel and variable O&M components escalated by GDPIPD; or b) \$0.04325¢/kWh Additional off-peak energy above 22 MW: higher of: a) additional on-peak rate less \$0.01¢/kWh; or b) \$0.02¢/kWh.	PPA. First three years, 100% of the HELCO on-peak and off-peak avoided energy cost payment rates for unscheduled energy in cents per kilowatt-hour as shown by the HELCO avoided energy cost data on file with the PUC at the time the energy is delivered. Fourth through ninth years, 92.5% of the HELCO on-peak and off-peak avoided costs for unscheduled energy. Tenth through fifteenth years and thereafter, 85% of the HELCO avoided costs for unscheduled energy. Note: October 29, 1987 "Confirmation of Purchase power Contract, Consent to Assignment, and Certificate," between HELCO and Kamaua Wind Energy Partners notes a minimum purchase rate of 7.28¢/kWh on-peak or 6.00¢/kWh off-peak until Jun 29, 2002. Pending PUC approval of RAC: Higher of rolling 4-year average of on-peak and off-peak avoided energy rates or 5.88¢/kWh.	PPA. First three years, 100% of the HELCO on-peak and off-peak avoided energy cost payment rates for unscheduled energy in cents per kilowatt-hour as shown by the HELCO avoided energy cost data on file with the PUC at the time the energy is delivered. Fourth through ninth years, 92.5% of the HELCO on-peak and off-peak avoided costs for unscheduled energy. Tenth through fifteenth years and thereafter, 85% of the HELCO avoided costs for unscheduled energy. Note: October 29, 1987 "Confirmation of Purchase power Contract, Consent to Assignment, and Certificate," between HELCO and Kamaua Wind Energy Partners notes a minimum purchase rate of 7.28¢/kWh on-peak or 6.00¢/kWh off-peak until Jun 29, 2002. Pending PUC approval of RAC: Higher of rolling 4-year average of on-peak and off-peak avoided energy rates or 5.88¢/kWh.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	HELCO Hamakua Energy Partners, L.P. ("HEP")	HELCO Hilo Coast Power Company ("HCPC")	HELCO Puna Geothermal Venture ("PGV")	HELCO Apollo
Power Producer				
6. Other kWh payments, such as for capacity or avoided losses	Capacity: Formula based on capacity rate and fixed O&M component. Fixed O&M component escalated annually by the GDPID. Less than or equal to 0.1 Hz from 60 Hz except during unavoidable momentary fluctuations. Nominal operating voltage of 69kV with a maximum limit of 72.45 kV and a minimum limit of 65.55kV or such change in standards as the parties mutually agree. Maximum ramp rate during normal system conditions shall be 4.4 MW per minute, per CT up to 22 MW for each CT. Embedded within PPA completion. Approx. 2 yrs.	\$231/kW-yr for 22,000 kW capacity or \$5,082,000.	Capacity: First 25 MW: \$4 million/yr, next 5 MW: \$504,750/yr. Kilovar adjustment: During each payment period PGV shall be credited at the rate of \$0.002 per kilowatt-hour for each kilowatt-hour furnished by PGV to HELCO in excess of 62 x kWh. None specified. +/-. 5% of the generator voltage Less than 2 MW/min. Interconnection Agreement filed with PPA application Dkt. 5525. Information not available. Dkt. 5525: No CA Statement of Position filed. Dkt. 6498: Approx. 4 mos. Dkt. 95-0074: No CA Statement of Position filed. Dkt. 96-0042: Approx. 6 wks. Dkt. 5525: 1 day. Dkt. 6498: Approx. 3 mos. Dkt. 95-0074: Approx. 1 yr. 6 mos. Dkt. 96-0042: Approx. 2 wks.	PPA: The reactive kilowatt-hours less than or more than 62 percent of the kilowatt-hours furnished to Apollo by HELCO for the applicable payment period shall be credited (if less) or charged (if more) at the rate of 0.2 ¢ per kilowatt-hour. (Adjustment = 0.2¢ x [Rkwh - 0.62 kwh].) RAC: Adjustment for avoided transmission losses. There is no reactive kilowatt-hour adjustment. PPA: Not specified. RAC: Not specified. PPA: Not specified. RAC: 0.5% from Company-specified value. PPA: Not specified. RAC: Sustained: 4 MW/2 min. RAC, pending PUC approval: Initial Agmt: Approx. 6 mos. Amd 1: Approx. 3 mos. Amd 2: Approx. 7 mos. Amd 3: Approx. 1 mos. RAC: Approx. 4.8 years. PPA: No CA Statement Of Position filed. PPA: Approx. 3 wks.
7. Allowable Frequency Fluctuation		Not specified.		
8. Allowable Voltage Fluctuation		Not specified.		
9. Required Ramping Rates		Not specified.		
10. Length of time it took to complete:		Not applicable - no interconnection agreement.		
A. Interconnection Agreement		Approx. 4 months.		
B. Power Purchase Agreement		Approx. 1 mos.		
C. CA's review and recommendation		Approx. 7 mos.		
D. PUC's review and Decision and Order		Approx. 2 wks.		

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	HELCO Cyanotech	HELCO Hawi Renewable Development, Inc. (HRD)	HELCO Hawi Agricultural & Energy Corp
Power Producer			
1. PUC Docket Number	98-0363	02-0145 (HRD-1 PPA, Group A Contract) 04-0016 (HRD-2 PPA, Group B). Group A Contract terminates upon Group B PUC Approval Order Date.)	5079 (PPA) 5529 (minimum purchase)
2. PUC Decision and Order	16956 (Apr 27, 1999)	19963 (Jan 14, 2003) (Docket 02-0145) 20979 (May 14, 2004) (Docket 04-0016)	8028 (Aug 3, 1984) (Docket 5079) 8696 (Mar 31, 1986) (Docket 5529)
3. PUC Approval Date	Apr 27, 1999	See above.	See above.
4. PPA Expiration Date	Initial term of 2 years from PUC approval date, continuing afterwards unless terminated by either party.	At least 15 years from Group B (or Group A) Initial In-Service Date and continues thereafter until terminated by either party. In-Service Date occurs on the date that an acceptance test is successfully completed following installation of HRD's wind farm.	Minimum of 1 year from PUC approval date, continuing thereafter until terminated by either party.
5. On-peak/off-peak rates per kWh	100% of the HELCO on-peak and off-peak avoided energy cost payment rates in cents per kilowatt-hour as shown by the HELCO avoided energy cost data on file with the PUC, at the time the energy is delivered.	100% of the HELCO on-peak and off-peak avoided energy cost payment rates in cents per kilowatt-hour as shown by the HELCO avoided energy cost data on file with the PUC at the time the energy is delivered.	Firm energy: Higher of 100% of the HELCO on-peak and off-peak avoided energy cost payment rates for firm energy in cents per kilowatt-hour as shown by the HELCO avoided energy cost data on file with the PUC at the time the energy is delivered + 0.06¢ or 6.64¢/kWh on-peak and 5.51¢/kWh off-peak. Unscheduled energy: 100% of the HELCO on-peak and off-peak avoided energy cost payment rates for unscheduled energy in cents per kilowatt-hour as shown by the HELCO avoided energy cost data on file with the PUC at the time the energy is delivered.

**Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet**

Electric Utility Company	HELCO Cyanotech	HELCO Hawi Renewable Development, Inc. (HRD)	HELCO Hawi Agricultural & Energy Corp
Power Producer			
6. Other kWh payments, such as for capacity or avoided losses	Excess reactive power at 0.5¢/kVAh. Cyanotech pays HELCO at 0.5¢/kVAh for kVAh in excess of 48% of kWh furnished to Cyanotech. HELCO pays Cyanotech at 0.5¢/kVAh for kVAh in excess of 48% of kWh furnished to HELCO.	None.	The reactive kilowatt-hours less than or more than 62 percent of the kilowatt-hours furnished to the QF by HELCO for the applicable payment period shall be credited (if less) or charged (if more) at the rate of 0.2¢ per kilowatt-hour. (Adjustment = 0.2¢ x [Rkwh - 0.62 Kwh])
7. Allowable Frequency Fluctuation	Not specified.	Not specified.	Not specified.
8. Allowable Voltage Fluctuation	Not specified.	0.5% from Company-specified value.	Not specified.
9. Required Ramping Rates	Not specified.	Less than 2 MW/min.	Not specified.
10. Length of time it took to complete:			
A. Interconnection Agreement	Not applicable.	Approx. 3 yrs. for HRD-1. Approx. 13 mos. for HRD-2.	Information not available.
B. Power Purchase Agreement	Approx. 2 years.	HRD-1: Approx. 3.5 years. HRD-2: Approx. 1.6 years. HRD-1: Approx. 2 mos. HRD-2: Approx. 2 mos.	Information not available.
C. CA's review and recommendation	Approx. 2 mos.		Dkt. 5079: No CA Statement of Position filed. Dkt. 5529: No CA Statement of Position.
D. PUC's review and Decision and Order	Approx. 3 wks.	HRD-1: Approx. 1 mos. HRD-2: Approx. 3 wks.	Dkt. 5079: Approx. 3 months. Dkt. 5529: 4 days.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	HELCO	HELCO
Power Producer	Kahua Ranch, Limited (18)	HELCO Wailuku River Hydro
1. PUC Docket Number	4713	6956
2. PUC Decision and Order	7375 (Dec 29, 1982)	11333 (Oct 28, 1991)
3. PUC Approval Date	Dec 29, 1982	Oct 28, 1991
4. PPA Expiration Date	Minimum of 15 years from PUC approval date, continuing thereafter until terminated by either party.	May 12, 2023. Thirty years from the date of first delivery of power to HELCO.
5. On-peak/off-peak rates per kWh	100% of the HELCO on-peak and off-peak avoided energy cost payment rates for unscheduled energy in cents per kilowatt-hour as shown by the HELCO avoided energy cost data on file with the PUC.	Higher of 100% of the HELCO on-peak and off-peak avoided energy cost payment rates in cents per kilowatt-hour as shown by the HELCO avoided energy cost data on file with the PUC at the time the energy is delivered or 7.24¢/kWh on-peak and 5.97¢/kWh off-peak. Minimum purchase rates set at the on-peak and off-peak avoided energy cost payment rates on file with the PUC in effect when the contract became effective.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	HELCO Kahua Ranch, Limited (18)	HELCO Wailuku River Hydro
Power Producer		
6. Other kWh payments, such as for capacity or avoided losses	The reactive kilowatt-hours less than or more than 62 percent of the kilowatt-hours furnished to the QF by HELCO for the applicable payment period shall be credited (if less) or charged (if more) at the rate of 0.2¢ per kilowatt-hour. (Adjustment = 0.2¢ x [Rkwh - 0.62 Kwh].)	The reactive kVAh > 62% of kWh furnished to the Seller by HELCO for the applicable payment period shall be charged at a rate of 0.2¢/kVAh for each kVAh in excess of 62% of the kWh furnished by HELCO to the Seller. The reactive kVAh > 62% of kWh furnished to HELCO by the Seller for the applicable payment period shall be credited at the rate of 0.2¢/kVAh for each kVAh in excess of 62% of the kWh furnished by the Seller to HELCO.
7. Allowable Frequency Fluctuation	Not specified.	Not specified.
8. Allowable Voltage Fluctuation	Not specified.	Not specified.
9. Required Ramping Rates	Not specified.	Less than 2MW/min.
10. Length of time it took to complete:		
A. Interconnection Agreement	Information not available.	Information not available.
B. Power Purchase Agreement	Information not available.	Information not available.
C. CA's review and recommendation	No CA Statement of Position filed.	Approx 4 mos.
D. PUC's review and Decision and Order	Approx. 6 wks.	Approx. 3 mos.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	KIUC	KIUC	KIUC
Power Producer	Agribusiness Development Corporation	Gay & Robinson, Inc.	Kaual Coffee (originally between McBryde Sugar Company, Limited)
1. PUC Docket Number	01-0055	00-0086	4996 6445
2. PUC Decision and Order	18432	18367	7801 (Jan 5, 1984) (Docket 4996) 10425 (Dec 18, 1989) (Docket 6445)
3. PUC Approval Date	Mar 21, 2001	Feb 9, 2001	See above.
4. PPA Expiration Date	Six months commencing from March 1, 2001 with month-to-month extensions thereafter	1 year with 12 months written notice	24 months written notice
5. On-peak/off-peak rates per kWh	32.48 mill per kWh adjusted upward or downward in the ratio of the average of the delivered price to Citizens of Chevron Diesel fuel oil price at the end of any billing month to the price at September 1, 1999, the latter being \$0.83760 per gallon	39.89 mill per kWh adjusted upward or downward in the ratio of the average of the delivered price to Citizens of Chevron Diesel fuel oil price at the end of any billing month to the price at September 1, 1999, the latter being \$.83760 per gallon or \$35.1792 per barrel	Effective Schedule "Q" rate less the power factor adjustment at the end of any month, for the first 38 million kwh delivered to KIUC in each calendar year. 20 mills per kwh, adjusted upward or downward in the ratio of the average of the posted Port Allen Chevron Industrial fuel oil price and the posted Port Allen Chevron Diesel fuel oil price at the end of any billing month to the post figures at December 31, 1977 (\$14.945 per barrel) for all kwh in excess of 38 million kwh.

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Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	KIUC	KIUC	KIUC
Power Producer	Agribusiness Development Corporation	Gay & Robinson, Inc.	Kaul Coffee (Originally between McBryde Sugar Company, Limited)
6. Other kWh payments, such as for capacity or avoided losses	none	none	none
7. Allowable Frequency Fluctuation	As may be agreed upon between the parties within reasonable variations	As may be agreed upon between the parties within reasonable variations	Public utility standards
8. Allowable Voltage Fluctuation	As may be agreed upon between the parties within reasonable variations	As may be agreed upon between the parties within reasonable variations	Public utility standards
9. Required Ramping Rates	+ 300kW and -200kW with the rate of change limited to 100kW per minute.	100kW per minute between -100kW and +200kW	100kW per minute between -200kW and +300kW
10. Length of time it took to complete:			
A. Interconnection Agreement	not applicable - no interconnection agreement	not applicable - no interconnection agreement	not applicable - no interconnection agreement
B. Power Purchase Agreement	Information not available.	Information not available.	Information not available.
C. CA's review and recommendation	No CA Statement of Position filed.	No CA Statement of Position filed.	Dkt No. 4996: No CA Statement of Position filed. Dkt No. 6445: Approx. 2 mos.
D. PUC's review and Decision and Order	Approx. 3 wks.	Approx. 10 mos.	Dkt No. 4996: 1 wk. Dkt No. 6445: Approx. 4 mos.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	MECO
Power Producer	Hawaiian Commercial & Sugar Co. ("HC&S")
1. PUC Docket Number	6616 (Restated PPA)
2. PUC Decision and Order	10803 (Oct 11, 1990) Order 10874 (Nov 30, 1990) - partial amendment to D&O 10803
3. PUC Approval Date	See above.
4. PPA Expiration Date	Not earlier than Dec 31, 2007.
5. On-peak/off-peak rates per kWh	Effective Schedule "Q" rate filed with PUC for regular energy. Three times effective Schedule "Q" rate for emergency power. Rates shall never be less than the energy purchase rates calculated and in effect for the first full calendar month under the Restated PPA.

Division of Consumer Advocacy
Electric Utility Power Purchase Agreement Spreadsheet

Electric Utility Company	MECO Hawaiian Commercial & Sugar Co. (*HC&S*)
Power Producer 6. Other kWh payments, such as for capacity or avoided losses	Capacity charge: \$1,790,880/year.
7. Allowable Frequency Fluctuation	Not specified.
8. Allowable Voltage Fluctuation	Maximum variation of +/- 2.0%.
9. Required Ramping Rates	Not exceeding 100 kW per minute unless requested by MECO or caused by MECO system disturbance.
10. Length of time it took to complete:	
A. Interconnection Agreement	Not applicable. All facilities already were constructed.
B. Power Purchase Agreement	Information not available.
C. CA's review and recommendation	Approx. 4 mos.
D. PUC's review and Decision and Order	Approx. 7 mos.