

1.0 Introduction

In annexing portions of Yolo County, SMUD proposes to condemn those portions of PG&E's property within the Annexation Area. The price SMUD must pay PG&E for this property is defined as its fair market value. The definition of fair market value in this context is as follows:

“the highest price on the date of valuation that would be agreed to by a seller, being willing to sell but under no particular or urgent necessity for so doing, nor obliged to sell, and a buyer, being ready, willing, and able to buy but under no particular necessity for so doing, each dealing with the other with full knowledge of all the uses and purposes for which the property is reasonably adaptable and available.”¹

Most valuation experts and authoritative sources agree that there are three generally accepted approaches to estimating the fair market value of a property. These are: 1) the cost approach; 2) the sales comparison approach; and 3) the income capitalization approach. The applicability of each approach varies with the nature and purpose of the valuation assignment. After each approach has been considered, the appraiser reconciles to a single value, or range of value, that most accurately reflects the property's market value as of the valuation date. Neither SMUD nor PG&E used all three approaches in estimating the fair market value of the electric property in the Annexation Area.

The fair market value set forth by SMUD is \$84 million² whereas PG&E estimates it to be \$516.7 million³, resulting in a difference of approximately 515%. This difference in fair market value estimates is the result of several factors that include the property inventory, the unit costs applied to this inventory, the calculation of depreciation, and the number of methods used to estimate the fair market value.

To determine the fair market value, SMUD used the cost and income capitalization approaches which were based upon a report by R. W. Beck, Inc.⁴ (Beck) and a report prepared by SMUD staff and will be referenced to collectively as SMUD's estimate of fair market value. In its February 24, 2006 filing to LAFCo, SMUD staff updated this analysis and provided information on electric utility system transactions.

¹ California Government Code § 126.320(a).

² Application for Annexation SMUD, July 29, 2005.

³ PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 1.

⁴ R. W. Beck, Inc. was the project manager and lead consultant responsible for the economic analysis, conclusions, and final report. Stone & Webster Management Consultants and Lucy Company provided the inventory of property and communication plan. The report prepared by this group is referred to collectively as the Beck report for ease of presentation.

In its July 29, 2005 Application to LAFCo, SMUD estimated a range of \$84 million to \$130 million and used an estimate of \$84 million for the electric property in its economic analysis. The \$84 million estimate was below that selected by SMUD staff in its report that used an estimate of \$110 million and represented the mid-point of the range.

On September 16, 2005, subsequent to SMUD making its Application to LAFCo, PG&E filed a response to SMUD's Application setting forth comments relative to SMUD's estimate of fair market value and its own estimate. In developing its opinion of fair market value, PG&E utilized both PG&E staff and the firm of Black & Veatch⁵ (B&V) which will be referenced collectively as the PG&E estimate of fair market value. PG&E utilized the cost approach to determine the value of the property being acquired by SMUD. Additional submittals by PG&E have been made to the LAFCo to address boundary changes and issues raised by SMUD. Collectively, these submissions set forth PG&E's opinion relative to the estimated fair market value of its property in the Annexation Area. PG&E estimates that the value of the system is \$516.7 million which includes an additional component for the change in this value from 2004 to the actual acquisition date of 2008, going-concern value, and adjustments for current assets and liabilities.

The following sections describe the methods employed by SMUD and PG&E in estimating the fair market value of the property in the Annexation Area, along with our review and critique of these methods and analyses. A reconciled range of fair market value is provided at the end of this appendix based on this review and our experience in estimating the fair market value of electric utility property like that in the Annexation Area.

2.0 Analysis of SMUD and PG&E's Cost Approach to Value

In developing the fair market value of electric utility property, the cost approach is a widely accepted methodology, especially for components of property that have no discrete income potential, such as a portion of an electric transmission system. However, the use of the cost approach to estimate the value of an electric system with the size and characteristics of the Annexation Area must account for the limitations on earnings imposed by regulation as a form of external obsolescence which is typically measured by analyzing the property's economic potential.

⁵ Black & Veatch is an engineering firm with vast experience in the electric and gas industries.

There are two indicators of value that are typically used to value electric utility property using the cost approach. These include the Original Cost Less Depreciation (OCLD) and the Replacement Cost New Less Depreciation (RCNLD).⁶ The OCLD is typically defined as the original cost of the property when it was first placed into service less the accrued depreciation. The OCLD value is an estimate of the property's "net book value" and is generally equivalent to the rate base value of the property. The OCLD, or the net book value, typically establishes the lower end of value for rate regulated property like the electric system in the Annexation Area.

The RCNLD is defined as the cost of constructing a Replacement Cost New (RCN) of the property at current prices with the same or closely related material less accumulated depreciation. The RCNLD value typically establishes the upper end of value.

The cost approach methodologies used by SMUD and PG&E to estimate the value of the property in the Annexation Area are similar, however, the inputs and assumptions used vary considerably along with the conclusions reached by each party. The following is a summary of the inputs and assumptions used by SMUD and PG&E that are addressed in this appendix and include:

- inventory of the property to be acquired;
- replacement cost new;
- depreciation applied to the RCN;
- PG&E's inclusion of going-concern value; and
- consideration of additional elements of the cost approach.

The following sections will address each of these items.

2.1 Inventory of Property to Be Acquired

As of December 31, 2004, there was a definitive amount of property within the proposed Annexation Area which comprised the electric transmission and distribution system owned by PG&E that SMUD is proposing to acquire through condemnation. In developing the cost approach, both SMUD and PG&E created an inventory of this property to establish the property's RCN as of the December 31, 2004 valuation date.

The inventory of property can be compiled from visual inspection in the field, records maintained by the owner of the property, or a combination of the two methods. There

⁶ The Reproduction Cost New Less Depreciation could also be utilized for property such as the subject, however, replacement or reproduction cost for electric transmission and distribution property are estimated to be similar in this instance.

are limitations to both methods of creating a property inventory. The field inspection is dependent on the accuracy of the persons conducting the inspection and their ability to locate the property, which is particularly difficult for subsurface components. Property inventories developed from company records are dependent on the accuracy of the records used to compile the inventory.

SMUD and PG&E have similar quantity estimates for several of the system components, but there are significant differences with respect to the overhead and underground circuit miles. The following is a summary of the approaches used by SMUD and PG&E in developing their inventories, and our analysis of each approach.

SMUD developed a field inventory of the electric property in the Annexation Area without access to PG&E databases or circuit maps. Instead, SMUD collected data on street maps as the basis of creating an inventory of the property. The maps developed by SMUD were used to extrapolate certain lengths of low voltage networks and number of poles in the Annexation Area. This field inventory resulted in an estimate of 480 miles of overhead lines in the Annexation Area and 11,815 utility poles and represents a density of 25 poles per circuit mile.⁷

In developing its overhead conductor estimates, PG&E used its databases (adjusted by certain factors) and circuit maps along with field verification to develop an inventory. The data that formed the basis of PG&E's estimate include the following;⁸

- PG&E's Geographical Information System (GIS). This system was used to identify distribution circuits and plat maps associated with the proposed condemnation area.
- Centralized Electric Distribution System Assets (C-EDSA). This database contains detailed information on PG&E's distribution circuits and equipment such as feeders, conductor, transformers, services, and miscellaneous line equipment. PG&E's Mapping Department is responsible for updating this database each time a plant is added or removed. PG&E's Electric Planning Department is the principal user of the C-EDSA database, using it for source data to model distribution circuits for necessary upgrades and additions.
- PG&E's Pole Asset Management Pole inventory database. This database contains detailed information regarding PG&E's poles and is primarily used to manage PG&E's "Test and Treat Program." This database tests the reasonableness of the number of poles in the area obtained from the C-EDSA database.

⁷ SMUD February 24, 2006 filing to LAFCo, pg. 17.

⁸ PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 41.

Appendix C Fair Market Value

- PG&E's customer records system. This database was used to determine the number of customers in the Annexation Area.

The data identified above, along with a partial field inventory, form the basis of PG&E's property inventory. As a result, PG&E estimates 584 circuit miles in the Annexation Area and 19,744 poles, including street light poles, resulting in a density of 33 poles per circuit mile.⁹

In developing an inventory of property like that in the Annexation Area, it is not unusual for differences of 5% to 10% to exist between data sources or inventories. These differences result from the volume of property in the area which makes it difficult to field inventory, and the accuracy with which the database and circuit maps have been maintained by the utility. The inventory of overhead circuits for the Annexation Area differs by approximately 25% and is attributed to the methods employed by SMUD and PG&E in creating an inventory of this property.

The inventory of property maintained by PG&E and shown on its circuit maps should result in a reasonable estimate of the property in the Annexation Area. However, PG&E's C-EDSA database does not include the length of unfused tap lines installed prior to 2003 in its inventory of circuit miles. The exclusion of these unfused tap lines requires the use of a factor to account for this property in the development of an inventory. PG&E estimates this factor at 1.43 and claims that it is the same value used "in reports and data requests to agencies such as the California Public Utilities Commission (CPUC) and Securities and Exchange Commission (SEC)."¹⁰

The use of a factor to estimate the length of circuit miles makes it difficult to state with any degree of certainty how accurate the PG&E inventory is for the Annexation Area. There is little doubt that the C-EDSA database should be adjusted by some factor, as SMUD's field inventory demonstrates, there are approximately 480 circuit miles of overhead circuits in the Annexation Area compared to the 436 circuit miles reported in the C-EDSA database. Therefore, SMUD's field inventory would suggest an adjustment of 1.10 times for overhead conductor lengths.

To confirm the length of circuit miles in the C-EDSA database, PG&E selected two random samples to compare the lengths in the database versus the lengths on its circuit maps. These samples showed that, on average, the C-EDSA database, adjusted by a factor of 1.43, was close to the lengths on the circuit maps.

⁹ Ibid, pg. 106, Table 9.4.2.4.

¹⁰ PG&E March 8, 2006 filing to LAFCo, pg. 9.

Table C-1 is a summary of the lengths in the C-EDSA database, the PG&E circuit maps, and the factor by which the circuit maps vary from the database, as set forth in PG&E's report.

TABLE C-1
COMPARISON OF LENGTHS OF OVERHEAD CIRCUITS
IN THE C-EDSA DATABASE COMPARED
TO LENGTHS ON CIRCUIT MAPS

Map No.	C-EDSA Database (feet)	Measured on Circuit Map (feet)	Factor (C/B)
J-17-14	14,925	20,850	1.40
J-17-15	17,677	20,332	1.15
J-18-13	470	690	1.47
J-18-14	3,547	1,476	0.42
K-18	39,935	68,093	1.71
K-18-01	4,685	2,847	0.61
K-18-06	0	2,229	0.00
K-19	42,930	41,403	0.96
K-21	2,725	20,515	7.53
L-18-16	0	1,704	0.00
M-19-14	7,885	12,296	1.56
M-18-13	2,635	10,236	3.88
N-21	0	13,640	0.00
L-23-24	12,685	13,658	1.08
J-18-02	6,797	5,553	0.82
J-17-06	2,370	4,839	2.04

Sources: C-EDSA database and PG&E February 28, 2006 filing to LAFCo,
Table 9.4.1.4 Detailed Comparison of 9 Representative Field Inventories and
Table 9.4.1.2 Detailed Comparison of 8 Random Field Inventories.

Table C-1 illustrates that the lengths in the database differ from the lengths shown on any given circuit map, and that there appears to be no consistent relationship between the two sources. Therefore, the lengths in the C-EDSA database do provide a starting point, however the use of a consistent 1.43 factor may not be appropriate for the Annexation Area.

The length of underground circuit miles inventoried by both parties varies by approximately 36% and is the result of similar inventory issues as previously discussed. With respect to the underground inventory, PG&E used a factor of 1.18 times the

lengths in the C-EDSA database.¹¹ Table C-2 illustrates this same relationship for underground circuits.

TABLE C-2
COMPARISON OF LENGTHS OF UNDERGROUND CIRCUITS
IN THE C-EDSA DATABASE COMPARABLE
TO LENGTHS ON CIRCUIT MAPS

Map No.	C-EDSA Database (feet)	Measured on Circuit Map (feet)	Factor (C/B)
J-17-14	390	0	0.00
J-17-15	2,645	2,968	1.12
J-18-13	17,350	15,198	0.88
J-18-14	15,471	18,372	1.19
K-18	1,600	0	0.00
K-19	190	90	0.47
L-18-16	7,105	14,500	2.04
M-19-14	2,048	2,271	1.11
M-18-13	2,783	2,473	0.89
L-23-24	120	362	3.02
L-22-10	9,916	14,330	1.45
J-18-02	4,000	3,364	0.84
J-17-06	16,992	21,966	1.29

Sources: C-EDSA database and PG&E February 28, 2006 filing to LAFCo, Table 9.4.1.4 Detailed Comparison of 9 Representative Field Inventories and Table 9.4.1.2 Detailed Comparison of 8 Random Field Inventories.

In order to reconcile the difference in circuit lengths, it would be necessary to measure the circuits on approximately 266 circuit maps that serve approximately 70,000 customers in the Annexation Area. A complete review of all of the PG&E circuit maps has not been undertaken as part of this review. Instead, the aggregate RCN estimates presented by SMUD and PG&E for the various quantities of property, along with the sales comparison and income capitalization approaches to value have been used to account for differences in certain property components.

The actual property inventory for the Annexation Area most likely will range somewhere between the estimates of SMUD and PG&E and have some impact on the RCN and RCNLD. However, the earning potential of this property will limit how much a willing purchaser would pay for the property relative to the value estimated

¹¹ Ibid, pg. 5.

using the cost approach. Therefore, differences in the estimate of RCN and RCNLD are not expected to influence the selection of final value estimate presented in this report due to use of the sales comparison and income capitalization approaches to measure the earning potential of the property.

2.2 Replacement Cost New (RCN)

The RCN of the electric property in the Annexation Area is calculated by inventorying the property and applying the appropriate unit costs. The inventory of this property developed by SMUD and PG&E is discussed in the previous section.

The following section is a summary of how the quantity of property and unit costs of the electric property in the Annexation Area are used by the parties to calculate the RCN. The property components have been grouped together for comparison by type of property. These categories include transmission plant, substation property, distribution rights-of-way, overhead electric (including poles), underground, line transformers, services and meters, and switches that comprise the system.

2.2.1 Transmission Plant

There are approximately 75 miles of transmission lines and associated rights-of-way within the Annexation Area. The transmission lines that comprise the property SMUD is proposing to annex consist of primarily 115 kilovolt (kV) transmission lines erected on a variety of wood, steel tower, and steel lattice structures. Table C-3 is a summary of the quantity and RCN of the transmission plant.

TABLE C-3
COMPARISON OF TRANSMISSION PLANT
QUANTITY AND RCN FOR ANNEXATION AREA
ESTIMATED BY SMUD AND PG&E
AS OF 12/31/04

Transmission Item	Quantity in Circuit Miles		Unit Cost		RCN (\$ in millions)	
	SMUD	PG&E	SMUD	PG&E	SMUD	PG&E
Rights-of-Way	N/A	N/A	N/A	N/A	\$7.42	\$7.50
Transmission Lines	73	76	419,726	449,825	<u>\$30.64</u>	<u>\$34.00</u>
				Total:	\$38.06	\$41.50
				Reconciled ROW:	\$7.50	
				Reconciled Transmission Lines:	\$32.32	

Sources: SMUD February 24, 2006 filing to LAFCo, pgs. 27-28; PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 106, Table 9.4.2.4.

SMUD estimated a value of \$7.42 million for rights-of-way compared to PG&E's estimate of \$7.5 million. Therefore, there is little dispute over the value of these rights-of-way and a value of \$7.5 million is considered reasonable.

SMUD estimated the aggregate cost new of the transmission lines in the Annexation Area at \$30.64 million compared to PG&E's estimate of \$34 million. Both estimates are considered reasonable and establish a range of \$30.64 to \$34 million for this property. Therefore, the mid-point, or \$32.32 million, is considered a reasonable estimate of the RCN.

2.2.2 Substations

There are five substations in the Annexation Area that SMUD is proposing to condemn. These substations, along with the size in megavoltamperes (MVA), unit costs, and estimates used by SMUD and PG&E, are provided in Table C-4.

TABLE C-4
COMPARISON OF SUBSTATIONS
QUANTITY AND RCN FOR ANNEXATION AREA
ESTIMATED BY SMUD AND PG&E
AS OF 12/31/04

Substations	Quantity in MVA		Unit Cost (\$/MVA)		RCN (\$ in millions)	
	SMUD	PG&E	SMUD	PG&E	SMUD	PG&E
West Sacramento	90	105	\$54,444	\$137,333	\$4.90	\$14.42
Deepwater	16	16	\$112,500	\$210,000	\$1.80	\$3.36
Davis	120	135	\$45,000	\$65,407	\$5.40	\$8.83
Woodland	135	120	\$32,593	\$74,833	\$4.40	\$8.98
Plainfields	<u>12</u>	<u>10</u>	<u>\$83,333</u>	<u>\$105,000</u>	<u>\$1.00</u>	<u>\$1.05</u>
Total:	373	386	\$46,917	\$94,922	\$17.50	\$36.64
Reconciled:					\$27.00	

Sources: SMUD February 24, 2006 filing to LAFCo, Exhibit 1, pg. 2 of 40; PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 106, Table 9.4.2.4.

SMUD and PG&E have a 3% difference in the total MVA capacity of the substations which is attributed to SMUD using the rated capacity of the substations and PG&E using the nameplate capacity. The use of either measure is appropriate and the difference is not considered meaningful.

The SMUD estimate of RCN for these substations is \$17.5 million, or \$47,000 per MVA of substation capacity. The PG&E estimate is \$36.6 million, or approximately \$95,000 per MVA of substation capacity. PG&E's estimate of RCN is almost twice that presented by SMUD. This range is considered significant and greater than one would expect for this type of property. A review of substation costs from the Beck report indicates an RCN for these substations of \$23.15 million, or approximately \$62,000 per MVA. Therefore, it is reasonable that the RCN for the substations is somewhere closer to the mid-point of the range and \$27 million was selected as a reasonable estimate.

2.2.3 Distribution Rights-of-Way

The distribution rights-of-way associated with the electric system represent an interest in land required to cross the property of private land owners. These rights-of-way are granted so that customers in the area can receive electric service via either underground or aboveground facilities.

Distribution system rights-of-way are quite different from those granted for the transmission lines. Typically, the property located within transmission rights-of-way is quite imposing on the local area and serves a broader group of customers. The impact to property values and quality of life these larger transmission lines impose is significantly greater than that of the distribution system property. Consequently, distribution rights-of-way are replaced more easily than transmission rights-of-way and have lower fair market values.

PG&E identified 2,031 rights-of-way associated with its distribution system in its January 26, 2006 filing to LAFCo and estimates the value of these rights-of-way at \$14.2 million. The PG&E unit cost per distribution easement is intended to include the cost of researching owner information, cost of negotiating with property owners, survey work, and compensating the property owners.

SMUD reviewed the distribution rights-of-way associated with the Annexation Area provided by PG&E and identified that certain rights-of-way were either one-time permits, gas facilities, or transmission rights-of-way. SMUD concluded from its review that there were 1,635 rights-of-way in the Annexation Area with a cost of \$0.9 million, or \$550 per easement. The cost per easement SMUD estimated distinguished between the easements that were either granted for no consideration or one dollar worth of consideration, and those that PG&E paid more than one dollar to acquire. The cost estimates developed by SMUD intended to account for the cost of granting and documenting easements and, where necessary, compensating the owner of the underlying property.

Table C-5 illustrates the quantity and value of the rights-of-way both SMUD and PG&E indicate are necessary to operate the distribution system.

TABLE C-5
COMPARISON OF DISTRIBUTION RIGHTS-OF-WAY
QUANTITY AND COSTS FOR ANNEXATION AREA
ESTIMATED BY SMUD AND PG&E
AS OF 12/31/04

	Quantity	Cost/Right-of-way (rounded)	RCN (\$ in millions)
SMUD	1,635	\$550	\$0.90
PG&E	2,031	\$7,000	\$14.22
Reconciled:			\$0.90

Sources: SMUD February 24, 2006 filing to LAFCo, pg. 27; PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 106, Table 9.4.2.4.

The difference between the SMUD and PG&E RCN estimates is attributed to the per right-of-way estimate and number of rights-of-way. The cost of acquiring a distribution right-of-way is generally quite low which is supported by SMUD's review of the rights-of-way documents that indicate approximately 97% of the easements were granted for one dollar.¹² The granting of a right-of-way for one dollar or less is consistent with typical purchases for distribution rights-of-way and SMUD's estimate.

PG&E claims that certain railroad crossings and construction permits should be considered in the value of the rights-of-way and that SMUD's costs do not account for those permits. These costs are typically a function of obtaining permits for the construction of the whole system and would fall within the engineering costs that are included in the unit costs of each component. Therefore, SMUD's estimate of the distribution rights-of-way costs is considered to reflect the cost for the distribution rights-of-way.

2.2.4 Overhead Circuits

The overhead primary and secondary system that SMUD is seeking to acquire includes the poles, wires, and miscellaneous apparatus associated with this system. A discussion of the inventory differences has been presented previously and is not repeated in this section. Table C-6 shows the lengths and RCN for the overhead circuits.

¹² SMUD February 24, 2006 filing to LAFCo, pg. 25.

TABLE C-6
COMPARISON OF OVERHEAD FACILITIES RCN
FOR ANNEXATION AREA
ESTIMATED BY SMUD AND PG&E
12 OF 12/31/04

Overhead Distribution	Quantity in Miles		Unit Cost		RCN (\$ in millions)	
	SMUD	PG&E	SMUD	PG&E	SMUD	PG&E
12 kV Overhead & Poles	480	584	\$77,125	\$73,767	\$37.02	\$43.08
Secondary Lines	55	135	\$20,000	\$10,889	\$1.10	\$1.47
Capacitors	187	210	\$7,433	\$16,000	\$1.39	\$3.36
Fuses	N/A	1,016	N/A	\$4,000	N/A	\$4.06
Regulators & Booster	N/A	N/A	N/A	N/A	\$0.20	\$0.22
				Total:	\$39.71	\$52.19
Reconciled:					\$46.00	

Sources: SMUD February 24, 2006 filing to LAFCo, Exhibit 1 and pgs. 15-16; PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 106, Table 9.4.2.4.

SMUD's estimate of RCN for the overhead facilities is approximately 25% below the cost estimate by PG&E. A review of the database and the maps provided by PG&E indicates that there are differences in the quantity of property used by SMUD and PG&E to estimate the RCN for the Annexation Area. A reconciliation of these differences would require a complete inventory from circuit maps and field verification which has not been undertaken in this assignment. However, for the purposes of this analysis, the mid-point of the RCN estimates by SMUD and PG&E has been used for these facilities, or \$46 million, and is considered a reasonable estimate of RCN.

2.2.5 Underground Electric Distribution (12 kV and Secondary)

The underground electric system SMUD is seeking to acquire in the Annexation Area includes the underground distribution lines and conduit, underground junction boxes that are used either for switching or transformer storage, and miscellaneous equipment. Table C-7 is a summary of the underground facilities, unit costs, and RCN estimates presented by both SMUD and PG&E.

TABLE C-7
COMPARISON OF UNDERGROUND FACILITIES AND RCN
FOR ANNEXATION AREA
ESTIMATED BY SMUD AND PG&E
12 OF 12/31/04

Underground Distribution	Quantity in Miles		Unit Cost		RCN (\$ in millions)	
	SMUD	PG&E	SMUD	PG&E	SMUD	PG&E
12 kV Underground	259	353	\$270,656	\$522,238	\$70.10	\$184.35
Secondary	125	240	\$109,200	\$21,125	\$13.65	\$5.07
Capacitors	N/A	7	N/A	\$30,000	N/A	\$0.21
Fuses	N/A	186	N/A	\$26,505	N/A	\$4.93
Interrupter	N/A	6	N/A	\$75,000	N/A	\$0.45
J Box	N/A	359	N/A	\$5,989	N/A	\$2.15
Risers	669	N/A	\$747	N/A	\$0.50	N/A
				Total:	\$84.25	\$197.16

Reconciled: \$84.00

Sources: SMUD February 24, 2006 filing to LAFCo, Exhibit 1; PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 106, Table 9.4.2.4.

Both SMUD and PG&E RCN estimates for underground facilities are based on the cost of installing the facilities under brownfield conditions. The use of brownfield costs as opposed to the costs actually incurred by PG&E under greenfield conditions when it installed this property results in RCN estimates presented by both SMUD and PG&E that are substantially higher than the greenfield estimates in the Beck report. The cost of brownfield construction accounts for the road opening and repaving that is incurred to replace the facility as of the valuation date compared to the cost of greenfield construction which assumes that construction of the property occurs with construction of the road or development. The greenfield costs for this type of construction would be approximately \$130,000 to \$150,000 per mile.

SMUD estimates that underground construction in the Annexation Area will result in a unit cost of approximately \$270,000 per mile while PG&E estimates almost twice this amount at \$522,000 per mile.

A review of both the inventory and unit costs indicate that the RCN presented by SMUD more closely reflects the cost to install underground facilities in the Annexation Area. In concluding that SMUD's estimate for underground facilities was reasonable, several factors were considered which included the unit costs, the type of construction, and quantity of property. The unit cost estimate used by PG&E for 12 kV primary

underground facilities is almost twice the estimate used by SMUD and is considered to be excessive for this type of construction. With respect to quantity, SMUD estimated 94 fewer miles than PG&E, which, using SMUD’s estimated cost per mile of 12 kV primary, would result in an underestimate of approximately \$25 million. However, had SMUD adopted a greenfield approach and PG&E’s quantity, the RCN would be approximately \$20 million below SMUD’s current estimate of RCN for this component. Therefore, SMUD’s underground cost estimates are used in estimating the RCN.

2.2.6 Line Transformers

The transformers in the Annexation Area range in size from 5 kilovolt-amperes (kVa) single-phase pole-mounted transformers to 3,000 kVa 3-phase pad-mounted transformers arranged in various configurations and located throughout the Annexation Area. Table C-8 is a comparison of the total unit count, total MVA, and estimated cost new for the transformers in the Annexation Area.

TABLE C-8
COMPARISON OF LINE TRANSFORMERS
QUANTITY AND RCN FOR ANNEXATION AREA
ESTIMATED BY SMUD & PG&E
AS OF 12/31/04

	Quantity of Transformers	kVa	\$/kVa	RCN (\$ in millions)
SMUD	7,395	555,940	\$32.22	\$17.91
PG&E	9,233	733,919	\$44.58	\$32.72
Reconciled:				\$32.72

Sources: SMUD February 24, 2006 filing to LAFCo, pgs. 21-22; PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 106, Table 9.4.2.4.

The difference between the RCN estimates in Table C-8 is a result of both quantity and unit cost differences. The transformer summary above indicates that PG&E’s total kVa and RCN is higher than that estimated by SMUD.

The transformer count by PG&E was based on its C-EDSA database and confirmed by its estimate of loads in the Annexation Area. A review of the quantity of transformers indicates that PG&E’s estimated kVa for the system is considered reasonable based on PG&E’s estimated system peak of approximately 321,000 kVa.¹³

¹³ Ibid, pg. 18.

In addition to the quantity of transformers, SMUD and PG&E also have differences in unit costs that result in different RCN estimates. Table C-9 is a summary of selected pad-mounted transformers and the cost estimates by SMUD, Beck, and PG&E.

TABLE C-9
SUMMARY OF SIZE AND UNIT COSTS
OF PAD-MOUNTED TRANSFORMERS

Item		SMUD[1]	R. W. Beck[2]	PG&E[2]
Single-phase	50 kVa	\$2,183	\$1,850	\$3,175
Single-phase	75 kVa	\$2,603	\$2,454	\$3,719
Single-phase	100 kVa	\$2,892	\$2,870	\$4,158
3-phase	75 kVa	\$5,855	\$3,780	\$7,134
3-phase	150 kVa	\$6,870	\$7,186	\$7,271
3-phase	300 kVa	\$8,480	\$8,930	\$7,884
3-phase	500 kVa	\$11,157	\$10,844	\$15,900
3-phase	750 kVa	\$13,054	\$15,126	\$16,080
3-phase	1,000 kVa	\$17,451	\$16,294	\$16,489
3-phase	1,500 kVa	\$23,439	\$24,818	\$32,404

[1] SMUD February 24, 2006 filing to LAFCo, Exhibit 1, cost table.

[2] PG&E February 28, 2006 filing to LAFCo, Volume II, Appendices.

The comparison of line transformers and associated unit costs in Table C-9 provides a summary of the price estimates used by the various parties. The unit cost of 3-phase pad-mounted 75 kVa transformer units shows that PG&E's unit costs are approximately 90% higher than Beck's estimates for these units. A similar comparison for 300 kVa units indicates a more narrow range with PG&E estimating the lowest unit price.

A review of the unit prices in Table C-9 with prices published in R.S. Means (an industry recognized cost manual) indicates that PG&E has the most consistent unit prices for transformers. Therefore, PG&E's transformer quantities and unit costs are used in estimating the RCN.

2.2.7 Services and Meters

The service to customer premises includes both aboveground and underground service drops and meter installations. The quantity and cost of these installations is summarized in Table C-10.

TABLE C-10
COMPARISON OF SERVICES AND METERS
QUANTITY AND RCN FOR ANNEXATION AREA
ESTIMATED BY SMUD AND PG&E
AS OF 12/31/04

	Quantity		RCN (\$ in millions)	
	SMUD	PG&E	SMUD	PG&E
Services	68,462.0	70,181.0	\$38.80	\$37.61
Meters	70,000.0	71,104.0	<u>\$5.03</u>	<u>\$7.50</u>
		Total	\$43.83	\$45.11
Reconciled:			\$45.00	

Sources: SMUD February 24, 2006 filing to LAFCo, Exhibit 1; PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 106, Table 9.4.2.4.

The difference in estimates of services and meters is less than 3%. Therefore, a figure of \$45 million for services and meters is considered reasonable and used to estimate the RCN.

2.2.8 Switches and Reclosures

Switches and reclosures allow the system operators to isolate portions of the system to allow for repairs or upgrades to the system. Table C-11 is a summary of the switches and costs for each.

TABLE C-11
COMPARISON OF SWITCHES AND RECLOSURES
QUANTITY AND RCN FOR THE ANNEXATION AREA
ESTIMATED BY SMUD AND PG&E
AS OF 12/31/04

	Quantity	Average Unit Cost	RCN (\$ in millions)
SMUD	1,010	\$6,096	\$6.16
PG&E	1,057	\$18,524	\$19.58
Reconciled:			\$13.00

Sources: SMUD February 24, 2006 filing to LAFCo, Exhibit 1; PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 106, Table 9.4.2.4.

The average unit cost estimates presented by PG&E are approximately three times more than those used by SMUD. A review of unit costs used by SMUD for each of the switches, in its February 24, 2006 filing to LAFCo, indicates that several of the switches have reasonable unit estimates while SMUD has appeared to underestimate the price of more complex switches. Therefore, the mid-point of this range is used to estimate the RCN to account for the higher cost of these more complex switches.

2.2.9 Summary of RCN

The RCN for the various property components estimated by SMUD and PG&E, along with our reconciled RCN are included in Table C-12.

TABLE C-12
SUMMARY OF RCN
(\$ in millions)

		SMUD	PG&E	Reconciled
Transmission				
2.2.1	Rights-of-way	\$7.42	\$7.50	\$7.50
	Transmission Lines	<u>\$30.64</u>	<u>\$34.00</u>	<u>\$32.30</u>
	Subtotal	\$38.06	\$41.50	\$39.80
2.2.2	Substations	\$17.50	\$36.64	\$27.00
Distribution				
2.2.3	Rights-of-way	\$0.90	\$14.22	\$0.90
2.2.4	12 kV Overhead & Poles/Secondary Lines/Capacitors/Fuses	\$39.71	\$52.19	\$46.00
2.2.5	12 kV Underground/Secondary/ Capacitors/Fuses/Interrupter/J Box	\$84.25	\$197.16	\$84.00
2.2.6	Line Transformers	\$17.91	\$32.72	\$32.72
2.2.7	Services and Meters	\$43.83	\$45.11	\$45.00
2.2.8	Switches and Reclosures	\$6.16	\$19.58	\$13.00
	Street Lights	<u>\$1.83</u>	<u>\$1.83</u>	<u>\$1.83</u>
	Subtotal	\$194.59	\$362.81	\$223.45
	Total	\$250.15	\$440.95	\$290.25
RCN per customer @ 70,000 customers		\$3,574	\$6,299	\$4,146

The RCN totals for the system and per customer have been summarized in Table C-12. The reconciled \$4,146 per customer estimate is considered reasonable and consistent with the density of customers in the Annexation Area.

A second method that could have been used to establish an RCN for some or all of the property in the Annexation Area is referred to as cost index trending. This method uses the original cost incurred to construct the property and adjusts the cost to the date of value using industry accepted trending tables. This method of estimating RCN has not been performed by SMUD or PG&E for any of the property in the Annexation Area.¹⁴

¹⁴ PG&E indicated that it only maintains original cost information for Yolo County and selected property in the Annexation Area.

2.3 Appraisal Depreciation and Obsolescence

In the cost approach, depreciation is the difference between the RCN and the property's market value as of the valuation date. The causes and types of depreciation are found in three basic categories: 1) physical deterioration, 2) functional obsolescence, and 3) external obsolescence. Physical deterioration and functional obsolescence are intrinsic to the property and are a function of a property's design, construction, age, maintenance and performance compared with similar improvements in the marketplace. External obsolescence is a loss in value caused by factors outside a property. This form of obsolescence is typically incurable, and in the case of rate regulated property is a function of earning limits on the property.

The following sections describe how SMUD and PG&E applied depreciation to the electric transmission and distribution property in the Annexation Area.

In developing the accumulated depreciation associated with the transmission and distribution property, SMUD utilized a straight line method of depreciation. SMUD's calculation of straight line depreciation was based on the estimated age of the facility and the depreciation factors associated with this age of property using average service lives, survivor curves, and net salvage rates reported by PG&E in its FERC Form 1 filing¹⁵ which is an annual report to the Federal Energy Regulatory Commission (FERC). The accumulated depreciation was then subtracted from the RCN value to determine the RCNLD.

PG&E measured depreciation based primarily on what it refers to as statistical approaches.¹⁶ PG&E utilized survivor curves and average service lives similar to those employed by SMUD. These types of curves and service lives assign retirement patterns and life characteristics to the facility being valued. However, instead of using straight line depreciation like that employed by SMUD, PG&E relied on present worth depreciation. Present worth depreciation is a method of distributing the value of accumulated depreciation over the property's service life so that it more closely relates to the utilization of the property. PG&E sets forth its explanation of present worth depreciation as follows:

“The value of utility property relates to the capability of that property to generate cash and to support the financing required to fund acquisition (including construction) of that property over its remaining life. In order to recognize the value and distribute value equitably between the buyer and seller, depreciation must recognize this value contribution and

¹⁵ Application for Annexation SMUD, July 29, 2005, Appendix E, pg. 2-2.

¹⁶ PG&E February 28, 2006 filing to LAFCo, Volume II, pgs. 50-51.

financing requirement. To do so we must recognize in depreciation a present worth factor. Properly developed, present worth depreciation results in a value for property equal to the indebtedness associated with the property. Very simply, properly applied, use of present worth depreciation produces a result whereby the value of an asset at any point during its life is equal to the outstanding debt associated with securing the asset.”¹⁷

The effect of using a straight line method of depreciation results in SMUD estimating accumulated depreciation associated with the system of approximately 47%. PG&E’s present worth method of depreciation results in accumulated depreciation of approximately 21%.¹⁸

The estimation of depreciation associated with an electric system like that SMUD is seeking to acquire in the Annexation Area relies on both statistical approaches to estimating depreciation and professional judgment associated with the application of those statistical approaches. In developing its depreciation, SMUD has used straight line depreciation which is the approach typically employed to estimate depreciation for electric utility property. While present worth depreciation is used for certain purposes in the State of California, it is not considered to be a widely adopted method of calculating depreciation to electric utility property.¹⁹

In arriving at our estimate of the most reasonable depreciation, an inspection of the property was conducted and the accrued depreciation PG&E reports for its entire transmission and distribution system in its December 31, 2004 FERC Form 1 was reviewed. An inspection of the property in the Annexation Area indicated that this property was of older vintage and appeared to suffer from more than 21% accumulated depreciation. This visual inspection is supported by PG&E system-wide accumulated depreciation for transmission and distribution property of approximately 40%. Therefore, SMUD’s depreciation estimate of 47% is considered reasonable for the electric property in the Annexation Area.

2.4 Going-Concern Value

In developing the value of the subject property, B&V added an incremental value for going-concern which is intended to reflect the incremental value associated with a business concern which is distinct from the value of its tangible property. PG&E has

¹⁷ Ibid, pg. 51.

¹⁸ SMUD February 24, 2006 filing to LAFCo, pg. 32; PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 117.

¹⁹ An interview with B&V indicated that outside of California, they were aware of only one other situation where present worth depreciation had been utilized.

estimated the going-concern value at 25% of the property's RCN based upon its opinion of the incremental going-concern component present in the system SMUD is seeking to acquire.²⁰

PG&E argues that:

“the courts have long recognized the incremental value attributable to acquiring a going concern. In fact, the price paid by Turlock Irrigation District for certain PG&E facilities included an allowance of 10 percent of RCNLD for going concern value and Turlock also agreed to a service area agreement as part of the transaction. We believe that an allowance of 10 percent of RCNLD is wholly inadequate to compensate PG&E for the cost incurred in developing its business in Yolo County, plus the present value in PCS and fiber, the potential value in connection with BPL, and other uses. We therefore use a conservative going concern value allowance of 25 percent of RCN for the purpose of this report.”²¹

Typically when valuing the component of going-concern, either the income capitalization or sales comparison approach is used to establish the value of the enterprise which must be greater than the RCNLD for going-concern value to be present. The RCNLD developed in the cost approach is then typically subtracted to estimate the incremental value associated with going-concern. The B&V report, prepared for PG&E, did not develop that approach here; instead it added the 25% to the value of the RCNLD based upon its opinion with no support that the income potential of the property was capable of supporting this incremental value.

Since the incremental value estimate provided by PG&E is not supported by any market-based analysis that indicates a willing buyer would pay more for the property than RCNLD, it is difficult to find that this premium would be paid. Therefore, while going-concern may be present in some instances, there is no support that it is present in this case.

2.5 Reconciliation of 2004 to 2008

The analysis developed by SMUD in its Application assumes that the additions to the property will be offset by additional depreciation associated with the property currently being valued as of December 31, 2004 and, therefore, SMUD makes no separate consideration for additional property added to the system. The assumption that these

²⁰ PG&E February 28, 2006 filing to LAFCo, Volume II, pg. 63.

²¹ Ibid (The term PCS stands for “digital cellular service” and BPL stands for “broadband over powerline”).

Appendix C Fair Market Value

additions would be offset by additional depreciation is reasonable. However, it is also reasonable to assume that SMUD will have to pay for additional property to serve these customers over this period that exceeds accumulated depreciation.

PG&E has identified that additional assets will be constructed between 2004 and the time at which SMUD takes over PG&E's property in the Annexation Area, as continued operation of the distribution system by PG&E will necessitate these additions. PG&E estimates that these additions will exceed additional accumulated depreciation and retirements between 2004 and 2008, and increase the value of the property by approximately \$37.4 million.

PG&E calculates this difference in the RCNLD between 2004 and 2008 as follows:²²

RCNLD of Existing System: (\$ in millions)

	12/31/04	1/1/08	Difference Represents Additional Depreciation
RCNLD:	\$345.88	\$338.81	\$7.07

In estimating the change in value between 2004 and 2008, PG&E estimates the RCNLD will decline by \$7.07 million which is then subtracted from the estimate of \$44.49 million for additions to the property between 2004 and 2008. In order for these assumptions to be correct, the additions to the system would have to average approximately \$11.25 million per year. The reasonableness of this assumption was analyzed by comparing the annual property additions between 2001 and 2004 in the PG&E report for the past four-year period. This review indicated that the average investment over the past four years was approximately \$3 million per year.

Therefore, SMUD's assumption that additions will equal depreciation and retirement is considered reasonable and no adjustments to the RCNLD figure is made for abnormally high expenditures. If the relationship between capital additions and depreciation changes, SMUD has indicated that it will compensate PG&E for this property if it can demonstrate that its construction was prudent.

2.6 Other Assets and Liabilities

PG&E also has identified certain current assets and liabilities that SMUD should compensate it for as part of acquiring its property. The assets include the accounts

²² PG&E February 28, 2006 filing to LAFCo, pg. 57.

receivable, unbilled revenues, and construction work in progress. PG&E identifies that combined, these have a value of \$20.8 million.

PG&E also has identified liabilities associated with the transfer that SMUD will incur if it acquires the facility. PG&E has identified these liabilities to have a value of \$11.3 million.

The net effect of the assets and liabilities is a positive \$9.5 million that SMUD will receive in accounts receivable and unbilled revenues. The current assets and potential liabilities PG&E has identified are common for this type of transaction and are not considered to impact the fair market value of the electric property in the Annexation Area.

In the event SMUD has to pay PG&E for these assets, it will recover this amount from the customers in the Annexation Area based on services previously provided by PG&E. Therefore, no adjustment to the acquisition price is made for these current assets and potential liabilities.

2.7 Reproduction Cost New Less Depreciation (RCNLD)

The following table is a summary of the estimated RCNLD of the property SMUD is proposing to acquire. For purposes of this analysis, the assumption has been made that additions to the property will be offset by retirements and additional accrued depreciation and that the current assets equal the current liabilities. Therefore, if these assumptions, as of the taking date, are not consistent then SMUD has acknowledged that it may have to compensate PG&E for these items at that time. However, for the purpose of our analysis it is reasonable to use the values presented below.

The RCNLD for the various property components estimated by SMUD and PG&E, along with our reconciled RCNLD is shown in Table C-13.

TABLE C-13
SUMMARY OF RCNLD
(\$ in millions)

	SMUD	PG&E	Reconciled
Transmission			
2.2.1	\$7.42	\$7.50	\$7.50
	<u>\$30.64</u>	<u>\$34.00</u>	<u>\$32.30</u>
Subtotal	\$38.06	\$41.50	\$39.80
2.2.2	\$17.50	\$36.64	\$27.00
Distribution			
2.2.3	\$0.90	\$14.22	\$0.90
2.2.4	\$39.71	\$52.19	\$46.00
2.2.5	\$84.25	\$197.16	\$84.00
2.2.6	\$17.91	\$32.72	\$32.72
2.2.7	\$43.83	\$45.11	\$45.00
2.2.8	\$6.16	\$19.58	\$13.00
	<u>\$1.83</u>	<u>\$1.83</u>	<u>\$1.83</u>
Subtotal	\$194.59	\$362.81	\$223.45
Total	\$250.15	\$440.95	\$290.25
	\$117.57	\$95.07	\$136.42
	\$132.58	\$345.88	\$153.83
	N/A	\$123.87 [1]	\$0.00
	N/A	\$37.42 [2]	\$0.00
	N/A	<u>\$9.53</u> [3]	<u>\$0.00</u>
	\$132.58	\$516.70	\$153.83
(rounded)	\$133	\$517	\$154

Note: Reconciled value is depreciated at 47%.

Sources: SMUD February 24, 2006 filing to LAFCo; PG&E February 2006 filing to LAFCo, Volume II, pgs. 36, 63 and 68.

[1] PG&E Going-Concern value calculated at 25% of RCN as of January 1, 2008 (\$495.48 x 25% = \$123.87), pg. 63.

[2] PG&E Additions are calculated from Total Capital Additions through December 31, 2007, or \$44.9 million less Accumulated Depreciation of \$7.07 million, or \$37.42 million, pgs. 56-57.

[3] PG&E Current Assets calculated as Other Assets less Liabilities as of January 1, 2008 (\$20.83 - \$11.30 = \$9.53), pg. 68.

3.0 Original Cost Less Depreciation (OLCD)

The OCLD estimate of value is a technique that is used to estimate the value of the property when it was placed into service and is used as a proxy for the “net book value of the property.” The net book value of electric utility property represents the amount upon which investor-owned utilities, such as PG&E, are entitled to earn as a return.

In its July 29, 2005 Application to LAFCo, SMUD set forth its estimate of establishing an OCLD for the property it was seeking to acquire in the Annexation Area. This estimate of OCLD was based on taking the RCN and trending it back to the year of installation using the Handy-Whitman Cost Index.²³ The OCLD estimate for the Annexation Area that SMUD set forth was \$84 million based on the RCN figures set forth by SMUD staff.

PG&E provided its own estimate of OCLD, in a letter to the LAFCo dated February 1, 2006, of \$129 million as of December 31, 2004 using a technique similar to that of SMUD. However, PG&E used its estimate of RCN as the starting point for this calculation.

In arriving at a value estimate for the property in the Annexation Area, OCLD, as calculated in the manner presented by SMUD and PG&E, is used as a proxy for the actual net book value. In this context, it is another method of estimating value and in the absence of the actual net book, serves as a reasonable proxy of the property’s net book and earnings potential in the marketplace. Therefore, the final value estimate for the property SMUD is seeking to acquire in the Annexation Area should take into consideration this figure in the absence of the actual net book value.

4.0 Sales Comparison Approach to Value

The sales comparison approach to value is a process whereby the fair market value of the subject property is based upon the comparison of prices that have been paid for similar properties or comparison to offers and listings of similar properties. The sales comparison approach is most applicable in an active market where the prices paid serve as accurate indicators of the most probable selling price of the subject property as of the valuation date.

²³ The Handy-Whitman Cost Index (HWI) is a widely recognized publication that tracks the annual change in the construction cost of various electric, gas, and water improvements for six regions of the country. The HWI has been published since 1914 and is used by owners, appraisers, and regulatory bodies for measuring the change in construction costs over time, and is considered to provide reliable indications of cost when applied to the original construction costs.

4.1 Trends in the Sale of Electric Systems

Electric system transactions have occurred throughout the country. While electric systems may not sell with the regularity of more common real estate or personal property, there still exists a significant number of transactions that can be used to develop units of comparison.

The ability to identify transactions is the first step in developing the sales comparison approach. However, it is rare to find a sale or transaction that is exactly identical to the subject property.²⁴ The lack of exactly comparable sales requires that the characteristics that influenced the motivation of buyers and sellers be reflected in the selection of sales for comparison to the subject, and that the units of comparison used to estimate the value of the subject account for differences between the sales and the subject.

The following is a summary of the characteristics that were considered in selecting comparable sales for comparison to the subject.

- Size of system (customers, assets, revenue, etc.)
- The location or region of the country in which the sale was located
- Motivation of buyers and sellers
- Expectations of future cash flows (profitability)
- Did the transaction involve other businesses
- Age of assets being acquired
- Physical condition and economic characteristics

Units of comparison considered in this approach typically include:

- **Sale Price / Customer**

This unit of comparison is a good indicator of value for systems that have similar mixes of commercial, industrial, and residential customers, capital structure, and profitability, but is of limited use when comparing companies with different mixes of each.

²⁴ Except in cases where the subject itself has been sold in the recent past, or as part of a transaction where the price has been agreed upon by the buyer and seller.

- **Sale Price / Net Book**

The sale price to net book ratio measures the relationship of a system's sale price to one of the primary factors used by state commissions to establish the system's cost of service or revenue requirement.

- **Sale Price / EBITDA**

The sale price to EBITDA (earnings before income taxes, depreciation and amortization) ratio is also an indicator of the system's cash flow potential like the sale price to gross revenue ratio. However, this ratio allows for comparison of systems that have different levels of expense as it measures the system's cash flow that would be available to satisfy debt and equity capital in a transaction and is not influenced by past financing or depreciation expenses.

4.2 Sales Analysis

In its original Application to the LAFCo, SMUD did not set forth any information relating to sales transactions. However, in its February 24, 2006 filing, SMUD developed a summary of transactions located in California and the western United States which have transferred since 1988. Table C-14 illustrates these sales.

TABLE C-14
ELECTRIC UTILITY SALES TRANSACTIONS
FROM SMUD'S FEBRUARY 24, 2006 FILING

Year	State	Seller	Purchaser	RCNLD Sales Price	OCLD	Sales Price (RCNLD/OCLD)
1988	CA	CP National	Lassen MUD	\$19,900,000	\$14,256,187	1.40
1994	ID	Pacific Power & Light	Washington Water & Power	\$29,935,247	\$23,791,631	1.26
1998	MT	Pacific Power & Light	Flathead Electric Coop	\$111,000,000	\$103,000,000	1.08
1999	CA	Pacific Power & Light	Nor-Cal Electric Authority	\$184,091,795	\$138,166,826	1.33
2002	HI	Citizens Communications	Kauai Island Utility Coop	\$215,000,000	\$181,400,000	1.19
2003	CA	PG&E	Turlock Irrigation District	\$15,111,825	\$8,700,000	1.74

These sales show a ratio of sale price to OCLD between 1.08 and 1.74 times. SMUD estimated a net book value of \$65 million for PG&E's property in the proposed Annexation Area based upon PG&E's filing with the California State Board of

Appendix C Fair Market Value

Equalization. Assuming a \$65 million net book value, the value estimate using the sales above would range from a low of \$70.2 million to a high of \$113 million.

PG&E has not developed a value estimate using the sales comparison approach, but instead cited two recent Florida arbitration decisions relating to the condemnation of electric utility property. PG&E points out that neither of the arbitration panels thought it necessary to discuss OCLD or net book value.

The points brought up by PG&E in reference to the arbitrations are worthy of consideration. However, it is our opinion that these documents do not demonstrate market value but rather settlements between the parties.

A review of the sales information presented by SMUD and PG&E indicates that the most probable range of sale prices for the property SMUD is seeking to acquire is between 1.08 and 1.8 times the property's net book. This range is consistent with our experience and supported by transactions in the marketplace. In applying this range of multiples, it is important to use the actual net book value of PG&E's property which SMUD has estimated at \$65 million,²⁵ or as close a proxy as can be estimated from actual company records.

In its filing with the CPUC, PG&E used an estimate of \$78 million for its book value in the Annexation Area and the amount ratepayers would receive from the sale of the property.²⁶

Therefore, assuming that the actual net book value for the Annexation Area is between \$65 and \$78 million, the range of value established by the sales comparison approach is shown in Table C-15.

²⁵ SMUD's estimate is consistent with research conducted on behalf of the LAFCo by Economic Planning Services (EPS) that indicates the California State Board of Equalization uses an estimate of approximately \$61 million for PG&E's net book value in the Annexation Area.

²⁶ This assumption indicates that ratepayers would receive only \$78 million, even if the price ultimately paid was \$516.7 million.

TABLE C-15
SUMMARY OF VALUES USING
SALES COMPARISON APPROACH AND
VARIOUS RANGES OF NET BOOK VALUE
AS OF 12/31/04
(\$ in millions)

	Low Ratio 1.08	High Ratio 1.80
SMUD's Estimate of Net Book @ \$65 million	\$70	\$117
PG&E's Estimate of Net Book @ \$78 million	\$84	\$140

The estimated value in the table above establishes a range of between \$70 and \$140 million for the property in the Annexation Area. The mid-point of this range is \$105 million and is considered a reasonable estimate for the subject using the sales comparison approach.

5.0 Income Capitalization Approach to Value

The income capitalization approach derives a value estimate based on the total present worth of all anticipated future benefits that arise from ownership of the property. The income capitalization approach is considered to be, in the appropriate circumstances, the best means of estimating the value of an income producing property. Implicit in this approach is consideration of the amount and probability of receiving future income from operation of the property.

The basic concept behind the income capitalization approach may be represented by the following formula:

$$\text{Value (V)} = \frac{\text{Income (I)}}{\text{Rate (R)}}$$

The Value (V) is a direct function of the future Income (I) and an inverse function of the comparative risk of the investment which is reflected by the cost of capital or capitalization Rate (R). This basic formula can be used to estimate the value of any given property by capitalizing the anticipated future cash flows by the perceived risk associated with receiving the cash flow as compared with other investments available in the market.

The elements of the income capitalization approach that impact value are the reliability of the anticipated future cash flows and the cost of capital associated with the particular investment.

Methods used to capitalize future income include the “Direct” and “Yield” capitalization approaches. Each of the approaches is premised on the relationship described above, between value, income, and perceived risk. The approaches are each defined as follows:

- **Direct capitalization** is a method used to convert an estimate of a single year’s income expectancy into an indication of value in one direct step – either by dividing the income estimate by an appropriate income rate or by multiplying the income estimate by an appropriate income factor.²⁷

- **Yield capitalization** is a method used to convert future benefits into present value by discounting each future benefit at an appropriate yield rate or by developing an overall rate that explicitly reflects the investment’s income pattern, value change, and yield rate. The procedure used to convert periodic income and reversion into present value is called discounting; the required yield rate of return is called the discount rate. The yield capitalization technique is typically developed using a discounted cash flow analysis, in which a discount rate is used to calculate the present value of anticipated future cash flows.²⁸

In its July 29, 2005 filing to LAFCo, SMUD set forth various income capitalization approaches to value the electric property in the Annexation Area and included the use of both a direct capitalization approach and a yield capitalization approach, or discounted cash flow (DCF) method. The result of the direct capitalization approach in the SMUD Application was \$60 million and the DCF method was \$79 million.

PG&E has not presented an income capitalization approach for LAFCo’s consideration in its filings.

The income capitalization approach used by SMUD to value the system should, in theory, arrive at the net book value of the property since the income that PG&E is allowed to earn is predicated upon earning a fair return on this amount of invested capital.

²⁷ *The Appraisal of Real Estate*, 12th ed. (Chicago: Appraisal Institute, 2001), pgs. 529-530.

²⁸ *Ibid*, pgs. 549-550.

However, in developing retail rates for PG&E, the CPUC establishes a system-wide retail rate that may result in more or less revenue per customer generated in a particular area compared to the system average. In the case of the Annexation Area, the income capitalization approach developed by SMUD was based upon system averages as opposed to information specific to Yolo County. Since that time, PG&E has sought and received rate increases and currently has higher distribution revenue than that originally used in the analysis by SMUD.

Therefore, while the income capitalization approach developed by SMUD in its Application is supportive of the final value estimate, this analysis would need to be updated in order to provide a more accurate indication of value.

6.0 Range of Fair Market Value Estimates

The purpose of this reconciliation is to develop the most reliable estimate of value based on an analysis of the quality and quantity of data available relating to the property in the Annexation Area. The three approaches to value establish a range as shown in Table C-16.

TABLE C-16
RANGE OF FAIR MARKET VALUE ESTIMATES
USING THE THREE APPROACHES TO VALUE
FOR THE ANNEXATION AREA

Item	Value (\$ in millions)
Cost Approach (RCNLD):	\$154
(OCLD):	\$84-\$129
Sales Comparison Approach:	\$105
Income Capitalization Approach:	\$79

The value estimates range from \$79 to \$154 million for the electric property in the Annexation Area. The lower and upper ends of the range are established using the OCLD and RCNLD estimates. The income capitalization and sales comparison approaches determine how the final value estimate relates to this range based upon the property's earning potential.

The income capitalization and sales comparison approaches both indicate that the fair market value is at the lower end of the range shown in Table C-16 and is best represented by the \$110 million estimate of fair market value used by SMUD staff. Therefore, \$110 million is considered a reasonable estimate of fair market value for this property and is supported by all three approaches to value.