

CONSTRUCTION AUDIT AND PRUDENCE REVIEW

IATAN CONSTRUCTION PROJECT

**FOR COSTS REPORTED AS OF
JUNE 30, 2010**

**MISSOURI PUBLIC SERVICE COMMISSION
STAFF REPORT**

**FILE NO. ER-2010-0355
AND
FILE NO. ER-2010-0356**



*Jefferson City, Missouri
November 3, 2010*

Document deemed Highly Confidential in its entirety

1 **CONSTRUCTION AUDIT AND PRUDENCE REVIEW**

2 **IATAN CONSTRUCTION PROJECT**

3 **FOR COSTS REPORTED AS OF**

4 **JUNE 30, 2010**

5 **I. Executive Summary**

6 *Staff Expert: Robert E. Schallenberg*

7 The objective for the audit addressed in this Report was to determine whether the
8 Iatan Construction Project (Iatan 1 AQCS, Iatan 2 and Iatan Common Plant, or “Iatan Project”)
9 contain unreasonable, imprudent, inappropriate, or charges not of benefit to ratepayers and that
10 no unneeded or extravagant facilities were built at the site causing unreasonable costs.
11 Inappropriate costs are costs that are unreasonable or the result of imprudent decisions or actions.

12 Schedule 1 attached to this Report is a table of Staff’s adjustments to the June 30, 2010
13 actual costs of the Iatan Project. The cost balances contained in Schedule 1 are shown on the
14 Iatan Project June 2010 cost reports. Staff is recommending that \$69,676,748 and \$129,953,322
15 of total project (exclusive of KCPL AFUDC, KCPL only costs and GMO AFUDC, these
16 amounts are identified separately on Schedule 1) costs be disallowed from the Iatan 1 AQCS and
17 Iatan 2 segment of the Iatan Project June 30, 2010 balances, respectively. In addition, Staff has
18 proposed adjustments to the Iatan 1 AQCS and Iatan 2 segments to transfer costs to the Common
19 Plant segment of the Iatan site.

20 The Iatan Project was the largest single project in KCPL’s Experimental Alternative
21 Regulatory Plan, Case No. EO-2005-0329. As noted, the Iatan Project consists of the Iatan 1
22 AQCS and Iatan 2 segments. The Common Plant additions and modifications to the Iatan site
23 are contained in the budgets of both the Iatan 1 AQCS and Iatan 2 segments. The Iatan 1 AQCS
24 segment and the Iatan 2 segment are integrated components of the Iatan Project. The Iatan
25 Project costs were reported in KCPL’s reports as two segments, Iatan 1 AQCS and Iatan 2.

1 The three Iatan Project components are:

2 **Iatan 1 AQCS** This segment is related to costs that are solely related to the
3 operation of the Iatan 1 generating unit.

4 **Common Plant** This segment is related to the Iatan Project costs that are related to
5 the operation of both Iatan 1 and 2.

6 **Iatan 2** This segment is related to costs that are solely related to the operation of
7 the Iatan 2 generating unit. This generating unit is not yet fully operational and used
8 for service at the time of this Report.

9 The Iatan site is jointly owned by multiple entities. Each of the Iatan Project's segments
10 have different ownership arrangements. KCPL owns seventy percent (70%) of the Iatan 1
11 investment, approximately fifty-five percent (54.71%)ⁱ of the Iatan 2 investment, and
12 approximately sixty-one percent (61.45%) of the Iatan Common Plant investment.

13 The Iatan 1 generating unit is owned 70% by KCPL, 18% by KCP&L Greater Missouri
14 Operations Company (GMO (formerly Aquila, Inc.)), and 12% by Empire. KCPL will
15 own 465 MW, or 54.71% of the Iatan 2 unit, with the remaining capacity divided as
16 follows: GMO-- 18%, Empire -- 12%, Missouri Joint Municipal Electric Utility Commission
17 (MJMEUC) -- 11.76%, and Kansas Electric Power Cooperative, Inc. (KEPCO) -- 3.53%. The
18 Common Plant ownership is developed through a weighted average of the ownership percentages
19 of Iatan 1 and Iatan 2. Empire and GMO own 12% and 18%, respectively, of the investment in
20 each of the three segments.

21 These three segments are not distinguishable from each other on an actual cost basis
22 under KCPL's cost reporting system. These segments cannot be separated on an actual cost
23 basis because the Iatan Project used a contracting strategy which included work covering Iatan 1,
24 Iatan 2, and Iatan Common Plant facilities for both Iatan units for large contracts.ⁱⁱ In addition,
25 actual costs incurred were not invoiced or recorded in a manner that allowed for the recognition
26 of the Iatan Project's actual expenditures related to each of these three segments. The Common
27 Costs work orders were not separated on KCPL's books until April 2009ⁱⁱⁱ.

28 As a result of the Staff's audit of the Iatan Project, the Staff found it necessary to make
29 several adjustments to the individual construction projects (Iatan 1 AQCS, Iatan 2, and Iatan
30 Common Plant). These adjustments, which are shown on Schedule 1 attached to this Report,

1 include costs that were 1) charged to Iatan 1 AQCS incorrectly and should have been charged to
2 Iatan 2 construction (reclassification), 2) found to be imprudent or inappropriate and not charged
3 to the Iatan 1 AQCS project (disallowance), and 3) found to be imprudent or inappropriate and
4 not charged to items charged to the Iatan 2 segment of the Iatan Project (disallowance). The
5 description of each of the Staff adjustments is included in the Detailed Findings – Adjustments
6 section contained later in this Report.

7 The Iatan Project experienced significant overruns from the Definitive Estimate. A cost
8 overrun is the amount of actual costs incurred that exceed the sum of (1) the budget plus (2) the
9 contingency, plus (3) other cost areas where actual costs incurred were less than the budget.
10 KCPL’s Experimental Alternative Regulatory Plan specifies that a Definitive Estimate is to be
11 used relative to the cost controls for capital projects such as the Iatan Project. The Wideman
12 Comparative Glossary of Project Management defined a definitive estimate as:

13 “(Accuracy -5, +10 Percent) A definitive estimate is prepared from well
14 defined data, specifications, drawings, etc. This category covers all
15 estimate ranges from a minimum to maximum definitive type. These
16 estimates are used for bid proposals, bid evaluations, contract changes,
17 extra work, legal claims, permit and government approvals. Other terms
18 associated with a Definitive Estimate include check, lump sum, tender,
19 post contract changes. etc. [D00496]”

20 The same source defines an estimate as:

21 “An assessment of the likely quantitative result. Usually applied to project
22 costs and durations and should always include some indication of accuracy
23 (e.g., + or - 15%). Usually used with a modifier (e.g., preliminary,
24 conceptual, feasibility). Some application areas have specific modifiers
25 that imply pre-set accuracy ranges (e.g., order of magnitude estimate,
26 budget estimate, and definitive estimate in construction). [D00610]”

27 KCPL’s Experimental Alternative Regulatory Plan specifies that the capital projects,
28 such as the Iatan Project, use an estimate with a high degree of accuracy as a basis to identify and
29 explain any cost overruns in the event that actual costs exceeded the definitive estimate for the
30 project.

31 The Iatan 1 AQCS construction project experienced significant cost overruns from
32 the Definitive Estimate established in accordance with KCPL’s Experimental Alternative
33 Regulatory Plan. At June 30, 2010, the Control Budget Estimate of \$376.8 million is estimated

1 to be exceeded by \$107.3 million at project completion, even after the application of a
 2 7 percent (7%) contingency amount of \$25.7 million contained in the Definitive Estimate. The
 3 amount of overruns will continue to grow until the Iatan 1 AQCS segment is closed and reflects
 4 final costs. Cost overruns subsequent to June 30, 2010 are beyond the scope of this Report. The
 5 continued growth of cost overruns will again be addressed by Staff in its true-up Report. The
 6 true-up Report will address Iatan Project costs through October 31, 2010. The chart below
 7 shows a breakdown by category of the sources of Iatan 1 AQCS \$107 million cost overruns as
 8 currently reported by KCPL:

	Current Estimate At Completion	Control Budget Est (CBE)	Over/(Under) Budget
PROCUREMENT	\$27,825,929	\$25,804,908	\$2,021,021
CONSTRUCTION	\$385,633,814	\$301,149,939	\$84,483,875
INDIRECTS	\$53,590,942	\$24,101,996	\$29,488,946
CONTINGENCY	<u>\$17,073,007</u>	<u>\$25,746,537</u>	(\$8,673,530)
10 TOTAL COSTS	\$484,123,692	\$376,803,380	\$107,320,312

11 Iatan 1 AQCS costs as of June 30, 2010 are not completed and closed even though the
 12 environmental upgrade of facility equipment is completed, such that the project has been in
 13 service for more than 14 months (April 19, 2009 to June 30, 2010). Current estimates are that
 14 \$37.6 million will be beyond the scope of this audit filing (Iatan 1 Cost Report June 30, 2010,
 15 Estimated Cost at Completion of \$484.1 million less June 2010 actual costs of \$446.5 million).
 16 It should be noted that even though KCPL continues to report the \$484 million as current
 17 estimate of completion, the Company has made internal representations of its expectations that
 18 the final cost of the Iatan 1 AQCS segment will be less than the \$484 million reported estimate.

19 Similar to the Iatan 1 AQCS cost segment, the Iatan 2 cost segment is also experiencing
 20 significant cost overruns from the Definitive Estimate basis established for this segment of the
 21 Iatan Project in KCPL's Experimental Alternative Regulatory Plan. These overruns amount to
 22 approximately \$303 million at June 30, 2010. This \$303 million cost overrun is over and above
 23 the consideration of the 15 percent contingency amount of \$220 million contained in the Iatan 2
 24 Definitive Estimate. KCPL did not refer to a Definitive Estimate in either of its regular Iatan 1
 25 AQCS or Iatan 2 cost reports. Instead, KCPL referred to the Definitive Estimate as a Control

1 Budget Estimate (CBE). KCPL did use the Definitive Estimate relative to cost reporting for the
2 LaCyne 1 environmental upgrades.

3 The amount of Iatan 2 cost overruns will continue to grow until the Iatan 2 project is
4 closed and reflects final costs. Cost overruns subsequent to June 30, 2010 are beyond the scope
5 of this Report. The continued growth of costs overruns will be partially addressed by Staff in its
6 true-up Report. The true-up Report will address Iatan Project costs through October 31, 2010.
7 Current estimates are that \$173.3 million will be beyond the scope of this audit Report (Iatan 2
8 Cost Report June 30, 2010, Estimated Cost at Completion of \$1,988,213,128 less June 30 2010
9 total project costs of \$1,814,953,322).^{iv} At this time, Staff does not expect that the final costs of
10 the Iatan 2 segment to be \$1,988 million. Staff expects the final costs will be less than the KCPL
11 reported cost of completion.

12 Staff has monitored the treatment of the Iatan Project costs in KCPL's current rate case
13 filed in Kansas to ensure that matters raised in Kansas are considered in Staff's audit. In press
14 releases and testimony before the Kansas Corporation Commission (KCC), KCPL asserts that its
15 cost overruns on Iatan 2 to be approximately \$303 million or 18 percent (18%) of the Control
16 Budget Estimate. However, this assertion can be misleading if one is not aware of the factors
17 that are in play in the development of this amount and percentage. KCPL's CBE of
18 \$1,685 million includes \$48.9 million for train cars KCPL planned to purchase to serve the Iatan
19 site with the addition of Iatan 2. During the project, KCPL decided to lease the train cars and not
20 purchase them, thus significantly reducing the scope of the Iatan 2 segment planned to be
21 accomplished for the CBE amount. The train cars lease cost was not included in the project, but
22 the \$48.9 million purchase cost has remained in the CBE for calculation of the amount of
23 expected cost overruns. The adjusted CBE, after removing the train cars purchase portion of the
24 budget is currently estimated to be exceeded by 21 percent (21%) rather than 18 percent (18%) of
25 the CBE. Another factor that can be misleading regarding the percent of cost overruns is the fact
26 that KCPL's CBE did not reflect credit for any revenues generated from the sale of Test Power
27 from Iatan 2. KCPL's current budget and total cost forecast at completion at June 30, 2010
28 includes a Test Power sales revenue credit of \$48,808,504. If this Test Power credit were
29 reflected in the KCPL CBE, its forecasted cost overruns for Iatan 2 would actually be 25 percent
30 (25%). By not accounting for the two components of no coal train ownership and no recognition
31 of cost offset from revenues derived from the use of the energy generated by Iatan 2 during its

1 construction phase, KCPL's current budget forecast is omitting explicit consideration of
 2 approximately \$89.5 million in cost overruns.

3 Staff has proposed an adjustment for the Iatan Project cost overruns that have been
 4 incurred and charged to the project but have not been identified and explained by KCPL's cost
 5 control system for the Iatan Project. The following chart identifies the Iatan 2 segment areas
 6 where the Iatan 2 costs overruns have and will continue to occur.

latan 2	Current Estimate At Completion	Control Budget Est (CBE)	Over/(Under) Budget
PROCUREMENT	\$185,873,165	\$188,913,508	(\$3,040,343)
CONSTRUCTION	\$1,417,417,382	\$1,018,128,405	\$399,288,977
INDIRECTS	\$358,601,658	\$257,958,087	\$100,643,571
CONTINGENCY (@15%)	<u>\$26,320,923</u>	<u>\$220,000,000</u>	<u>(\$193,679,077)</u>
TOTAL COSTS	\$1,988,213,128	\$1,685,000,000	\$303,213,128
Cost Overruns percent			18%

8
 9 As with the Iatan 1 AQCS segment, cost overruns have occurred and are expected to
 10 continue to occur in the Iatan Project construction and indirect cost areas. In order to better
 11 understand the information contained in above table, Staff requested, by Staff Data Request
 12 No. 819, KCPL's definition for the four (4) areas of costs listed in the above table: Procurement,
 13 Construction, Indirect Costs, and Contingency. KCPL's response provided the following
 14 definitions:

15 Procurement category consists of plant systems or equipment purchased
 16 by KCP&L or by an authorized KCP&L representative to be installed
 17 during the construction phase.

18 Construction category consists of installation of plant systems or
 19 equipment purchased during the procurement phase. This category also
 20 contains furnish and erect contracts.

21 Indirects category consists of costs that are not associated with direct
 22 construction or procurement, but incurred to support the construction or
 23 procurement efforts. i.e., project management, temporary facilities, utility
 24 costs, and etc.

25 Contingency category consists of funds for unforeseeable elements of cost
 26 within the defined project scope.

1 | KCPL also responded that “[t]hese four categories are industry standard categories based on
2 | project team’s collective experience and knowledge. . . .”