

BEFORE THE IOWA UTILITIES BOARD
DEPARTMENT OF COMMERCE
STATE OF IOWA

IN RE:

INTERSTATE
POWER AND LIGHT
COMPANY

}

DOCKET NO. GCU-07-01

DIRECT TESTIMONY OF THOMAS SANZILLO

1 **Q: Please state your name and business address**

2 A: My name is Thomas Sanzillo. My business address is 150 East 49th Street, New York
3 New York, 10017.

4 **Q: By whom are you presently employed and in what capacity?**

5 A: I am currently employed as a Senior Associate of TR Rose Associates. In this position, I
6 spend most of my time providing policy and financial advice to clients.

7 **Q: What is your experience and educational background?**

8 A: For the past twenty five years, I have served in a number of government finance positions
9 in the City and State of New York.

10 Most recently I completed four years as the First Deputy Comptroller for the State of
11 New York. The State Comptroller is the equivalent of the chief financial officer, and the
12 first deputy is a constitutional officer charged with all operational responsibilities of the
13 Comptroller's office. The staff of the Comptroller's Office consists of 2,400 employees,
14 mostly accountants, auditors, investment and budget analysts, attorneys, claims
15 administrators, procurement experts and support personnel.

16 In this capacity, I supervised the New York State Common Retirement Fund. The Fund is
17 a \$150 billion global fund with investments across a broad set of asset classes. The Fund
18 has considerable holdings in the energy industry.

19 The Comptroller also serves as the Chief Procurement Officer reviewing and approving
20 44,000 contracts worth \$85 billion annually. These contracts cover all aspects of
21 government operations, including master service agreements between public utilities and
22 private energy companies, power plants, debt instruments for public utilities and other
23 contracts for the operation of energy functions of the state and its public authorities.

24 The Comptroller supervises the design, fieldwork, report preparation and
25 recommendations for some 400 audits annually of state and local government and public
26 authorities. Audits and reviews during my tenure have been conducted on power plant
27 construction cost controls, management and operation of the New York Power Authority
28 in a changing deregulated market, the rate setting mechanism used by the Long Island
29 Power Authority, the budget and procurement practices of public utilities, demand side
30 efficiency programs and internal controls and contracting processes of state research and
31 development agencies.

32 In addition to these reviews, other policy work resulted in a published report on New
33 York's deregulation effort: restructuring of the industry, new challenges for the Public
34 Service Commission, creation of a statewide power pool and the impact on local property
35 tax assessments and collections.

36 The job also requires review and approval of a debt portfolio for local and state
37 governments of over \$200 billion, including approximately \$20 billion in energy related
38 authority debt. This includes the review, approval and monitoring of the largest public

39 borrowing in the nation's history for the decommissioning of the LILCO nuclear power
40 plant and the purchase of it by the publicly owned Long Island Power Authority.

41 I hold a Bachelor of Arts degree in Politics from the University of California at Santa
42 Cruz.

43 **Q: Have you testified in prior Iowa Utilities Board (IUB) regulatory proceedings or**
44 **other state or federal utility regulatory proceedings?**

45 A: No. However, I have utilized testimony and findings of numerous rate cases in the
46 preparation of audits and studies during my tenure at both the City and State
47 Comptroller's Office. In addition, I have prepared testimony for elected officials in a
48 wide variety of formal and informal venues. I have also personally testified before local
49 and state governmental bodies.

50 **Q: What is the purpose of your testimony?**

51 A: I am testifying on behalf of the Joint Intervenors Community Energy Solutions, Iowa
52 Environmental Council, Iowa Farmers Union, Iowa Physicians for Social Responsibility
53 and the Iowa Renewable Energy Association. I am testifying in opposition to the
54 Sutherland Generating Station Unit 4 proposed by Interstate Power and Light Company
55 (IPL) in this docket.

56 **Q: Are you sponsoring any exhibits as part of your testimony?**

57 A: Yes, a full index of all the exhibits referenced in my testimony is included in the
58 testimony as Appendix A.

59 **Q: How would you summarize your concerns with IPL's application?**

60 A: This 660 MW coal fired power plant is unnecessary. The key assumption that IPL will
61 require an increase of 40 MW annually between 2007 and 2013 or face a capacity deficit

62 by 2013 is not supported by the application. In fact, supplemental information provided
63 in response to data requests shows that the IPL system will have a surplus of capacity in
64 2013, not a deficit as claimed in IPL's original application.

65 IPL's forecast estimates are not credible. A careful review of the application, IPL's
66 corporate position and relevant economic and demographic trends make this clear. IPL's
67 corporate income for 2006-2007 electricity sales has been flat. IPL's most recent
68 corporate statements and Iowa's demographic and economic profile do not lend support
69 for estimates provided by IPL. Furthermore, Corn Belt Power Cooperative (Corn Belt)
70 and Central Iowa Power Cooperative (CIPCO), prospective co-owners for the proposed
71 Sutherland generating facility, have not provided any justification for their demand
72 forecasts as set forth in IPL's application.

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76 ****CONFIDENTIAL MATERIAL ENDS****

77 While the national economy is expected to expand by 2.0 percent in 2007 and by 2.8
78 percent in 2008, Iowa's economy is expected to be flat in 2007 and actually decline in
79 2008. The same trends can be found when Iowa's population statistics are reviewed [See
80 Exhibit ____ (TS-1), Schedule A].

81 Manufacturing currently makes up 20 percent of Iowa's economy, and 50 percent of
82 IPL's customer demand, yet it is the manufacturing base that is likely to experience the
83 most serious downturn in the coming years [See Exhibit ____ (TS-1), Schedule B]. Even if
84 there are additions to the Iowa's manufacturing base from planned new development –

85 and there are reasons to question that assumption (see Harl Testimony) – any accurate
86 load forecasting must consider the losses from a weakening economic picture.

87 The Energy Information Administration is projecting an average annual increase in
88 electricity demand of 1.4 percent for the country as a whole between 2007 and 2030. This
89 is the same rate IPL is projecting in its application to justify the proposed Sutherland
90 facility. Given that Iowa's economy is expected to grow more slowly than the nation's, it
91 is difficult to conclude that Iowa's electricity usage will nevertheless be on par with that
92 projected for the nation as a whole.

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97 ****CONFIDENTIAL MATERIAL ENDS****

98 The application also presents an overly optimistic picture regarding project costs. The
99 most recent construction cost estimates are 28 percent higher than those prepared in
100 February 2007. Construction is slated to begin at the end of 2008. Industry consensus
101 forecasts project costs will only continue to increase up to and beyond the
102 commencement of construction [See Exhibit ___(TS-1) Schedule C]. The cost of credit,
103 coal and transportation all face significant upward adjustments in the coming years.
104 Nationwide, banks and utilities are canceling coal plants because of the high likelihood of
105 additional emission requirements and rising construction costs. These factors require that
106 higher than average scenarios need to be taken into consideration when reviewing this
107 plant. IPL's optimism seems to be based on analyses prepared prior to the most recent

108 industry reports on construction costs, which demonstrate that the current round of
109 industry cost increases are only now being fully experienced by projects in the planning
110 stages. The application does not adequately address evolving market conditions. It cannot
111 be concluded from the information in this application that IPL will be meeting an actual
112 need for electric generation or will be capable of providing a reliable, cost effective
113 addition to the Iowa's electric generating capacity with this project.

114 **Q: Does the application comply with the legislative intent of Section 476.63 of the Iowa**
115 **Code?**

116 A: No. if this plant is approved, it would result in an oversupply of capacity that will either
117 add unnecessarily to the costs of electricity for Iowa consumers or undermine the
118 purported economic benefits to the state.

119 **Q: What does the application identify as the existing need for increased capacity?**

120 A: The application sets forth certain usage data and forecasts demonstrating the need for
121 additional electrical capacity. (Kitchen Testimony, pages 3-8).

- 122 • By 2013 IPL's net projected load (demand) will be 3,104 MW (assuming 40 MW of
123 additional demand each year from current 2007 levels).
- 124 • By 2013, IPL will have an operating capability of 3,490 MW (assuming no new
125 additions to the current resource plan, which adds 200 MW of wind and 150 MW of
126 short term capability between now and 2013)
- 127 • IPL uses an 18 percent reserve margin. An 18 percent reserve margin for 3,104 MW
128 adds 558 MW to the net projected load estimate. (IPL's reserve requirements are
129 conservative compared to the industry standard of 14 percent, or 435 MW)

130 • IPL would have a net surplus capability of 386 MW by 2013 (3,490 MW operating
131 capability less 3,104 MW net projected load).

132 • IPL's net capability deficit is calculated at approximately 175 MW by 2013.

133 The load forecast analysis presented by IPL in their application is derived, in part, from
134 the Electric Generation Expansion Analysis System (EGEAS). A short one half page
135 summary of the model is provided on page 4 of the Kitchen Testimony.

136 IPL projects the need for an increase of 40 MW per year. This is an annual increase of 1.4
137 percent (Kitchen Testimony, page 4). The Kitchen Testimony offers only a cursory and
138 incomplete explanation of the data and assumptions that are the basis for this number.

139 For example, the Kitchen Testimony at page 3 states:

140 IPL's customer energy needs must also be considered. IPL evaluates its
141 customers' capacity and energy needs using the Electric Generation Expansion
142 Analysis System (EGEAS). By using EGEAS, all combinations of existing
143 resources and future resource alternatives are considered when determining the
144 most reasonable expansion plan.

145 **Q: Do IPL's testimony and supporting documents justify the case for additional**
146 **capacity?**

147 A: No. IPL's application presents statistics and assumptions that lack transparency. There is
148 no discussion in the Kitchen Testimony of customer needs. Demand figures are simply
149 assumed. Standard load forecasting analyses usually contain input data related to reliable
150 economic growth forecasts, population and employment trends, retail sales, conservation
151 programs, surveys, historical data and actual electrical usage. A narrative that describes

152 how these factors are weighted is necessary to fully understand how demand forecasts are
153 derived.

154 In those econometric models that rely principally on peak load forecasting, like the IPL
155 model, statistical presentations are typically accompanied by a range of peaks. These
156 models offer low, probable and high scenarios in order to clarify the underlying factors
157 driving the peak demand scenario that is most likely to occur. In addition, standard
158 modeling identifies trends in peak load demand by customer class and geographic area.

159 Additional discussion regarding discrete changes within a system are usually included as
160 part of any narrative and statistical forecast projection. Other parts of the analysis should
161 also consider how these dynamics impact sales revenue. This relevant factor provides not
162 only the justification for system expansion, but also its economic viability.

163 The forecast methodology should also describe the approach used in developing the
164 estimate including the iterative process employed in evaluating the impact of the load
165 forecast and system supply, demand and financial planning functions.

166 Finally, one would expect a thorough discussion of the present status of IPL's marketing
167 and demand side management programs and the methods used to incorporate them in the
168 load forecast.

169 Absent this level of thoroughness, the Iowa Utility Board has not been presented with a
170 complete load forecast.

171 During the discovery period leading up to the preparation of this testimony, IPL has
172 responded to additional requests for information from the parties to this proceeding. The
173 data should be very useful to IUB members. What remains missing, however, is a
174 coherent narrative from IPL that connects the dots and makes the case for this plant. In

175 order to supplement this testimony, I reviewed IPL's 2005 Electric Resource Plan that
176 was submitted to the Iowa Utilities Board. This document provides additional
177 background information. However, the demand forecast charts and data are not
178 adequately explained. Of particular concern is the lack of clear definitions for each line
179 item of the chart entitled "Projected MAIN Load and Capability Data" included with the
180 Kitchen Testimony.

181 **Q: What are some examples of weaknesses in the presentation that impair the load**
182 **forecast presentation?**

183 A: The failure by IPL to provide an analytical narrative leaves IPL's data in the application
184 as a series of unconnected dots.

185 For example, Schedule A of the Kitchen Testimony – the Projected MAIN Load and
186 Capability Data Chart – provides for a 442 MW addition to the system capacity through
187 2013. 350 MW of this capacity is explained in the Kitchen Testimony (200 MW of IPL-
188 owned wind power added in 2010 and two short term contracts of 150 MW in 2011 and
189 2012). The chart in the application appears to have 92 MW of 'phantom capacity'. A
190 complete description of this resource, its future availability, and the costs involved would
191 clarify a potentially important factor. 92 MW represents almost half of IPL's estimated
192 capacity deficit. None of the other line items in this chart are accompanied by a narrative
193 or any background detail. The reader is left to wonder what the composition of each line
194 is and how much each of the factors contributes to the calculation that goes into the final
195 number expressed in the chart.

196 The plan assumes the future use of small short term capacity contracts in several of the
197 plan's out years. What is the likely market and what would happen if IPL had to rely on

198 these contracts for the 175 MW in 2013? The plan relies on over 200 MW of additional
199 wind power in the out years of the plan. What does the wind market look like in Iowa,
200 and is it possible to move up the schedule?

201 The Expansion Plan offered as Schedule B to the Kitchen Testimony identifies various
202 other existing resources that are not utilized by IPL. What do the out-year markets look
203 like for these resources? Why are they not utilized to meet capacity needs?

204 **Q: Are there other factors that raise concerns about the load forecast analysis?**

205 A: Yes. While the load forecast in the application projects continued increase in demand, a
206 review of Alliant Energy Services recent 10K and 10Q filings provides important data
207 that suggests a weakening of demand [See Exhibit ___ (TS-1) Schedule D].

208 Alliant's overall electricity sales decreased by 6 percent from 2006 to 2007. IPL's
209 electricity sales were down by 16 percent, while Wisconsin Power and Light increased by
210 8 percent. Alliant's electricity sales are flat for the first six months of 2007 when
211 compared with the same period in 2006, and revenues are down by approximately 8
212 percent. Absent a broader contextual discussion of all of the trends, it is difficult to see
213 how the load forecasting assumptions in the application are credible.

214 Corn Belt states its needs will be for 100 MW of additional capacity by 2013. CIPCO
215 estimates its capacity needs at 12 MW per year. In response to a recent RFP issued by
216 Corn Belt for additional capacity, the cooperative received numerous responders. This
217 seems to suggest there is considerable capacity for sale in the service area. Neither
218 cooperative has provided any supporting data to justify their demand figures. According
219 to the application, IPL, CIPCO and Corn Belt will enter into a joint ownership agreement

220 for the operation of the Sutherland plant. A clear, integrated statement of projected load
221 would provide a better justification for the plant.

222 **Q: What does a review of some of Iowa's basic economic and population trends show?**

223 The basic trends suggest that energy usage, like the economy in the state, will remain flat
224 or decline in the next five years.

225 Most notably, basic census forecasting projects slow growth in Iowa's population over
226 the next five to ten years. Iowa will continue to lose its rural population and enjoy
227 modest increases in its more urban areas [See Exhibit ____ (TS-1) Schedule E].

228 IPL's projection forecasts an increase in demand of 1.4 percent annually between 2007
229 and 2013. In the short term, the Institute of Economic Research at the University of Iowa
230 (IER) states:

231 Forecast growth in employment has weakened somewhat for the balance of 2007.
232 For 2008 the forecast anticipates no growth in employment, a substantial
233 downward revision from the July forecast. The more pessimistic outlook is the
234 consequence of four successive quarters of weakening growth in employment
235 beginning in the third quarter of 2006 [See Exhibit ____ (TS-1) Schedule B].

236 IER's quarterly reports are used by the State of Iowa as a tool to assist it with revenue
237 forecasting for state fiscal purposes. It is an important component of how the state
238 projects annual revenues. The forecasts are also used to assist the state in maintaining
239 access to the credit markets. It is a forecast relied upon by state budget decision staff,
240 legislative staff and leaders and stakeholders in the state's credit process. The IER
241 forecast is projecting actual declines in the manufacturing sector through 2008, following
242 a slow performance in 2007. The manufacturing sector is 20 percent of Iowa's economy

243 and creates almost 50 percent of the demand from IPL's customer base [See Exhibit ____
244 (TS-1) Schedule F]. One of the potential boosts to the manufacturing economy could be
245 from new ethanol plants in various stages of planning in the state, however, acceptance of
246 IPL's expansion plan based on future manufacturing development is risky. (See Harl
247 Direct Testimony) Even if some of these additions materialize, a comprehensive load
248 forecast would quantify the losses from the weakening economy and add in any credible
249 increases in the final estimation.

250 The Iowa Gross Domestic Product shows that the utility industry has been the slowest
251 growing part of the economy since 2002, next to the retail industry [See Exhibit ____ (TS-
252 1) Schedule G]. From 2002 the principal sources of growth have been manufacturing,
253 financial services, construction, health care and government. If the manufacturing base
254 declines as predicted, then any source of growth is likely to come from these other
255 sectors. These sectors typically use less electricity, and with a slower growing economy,
256 in order for IPL to see demand rise to its projected levels, the state would need to see
257 over 5 percent growth in 2012 and 2013 – a projection that is not supported by the current
258 IER forecast.

259 While IPL's 2005 Resource Plan identifies Iowa's Gross Domestic Product measure as a
260 factor in its demand forecast model, it is unclear how it is weighed against other factors.
261 For example, IPL's 2005 Resource Plan projected demand would increase by 50 MW per
262 year through 2013. In this application, IPL has adjusted this projection downward by 20
263 percent to 40 MW per year.

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313 The IPL projections do not demonstrate the need for a new a power plant. In response to
314 data requests made of IPL, numerous additional memos and charts have been produced to
315 explain various aspects of the forecast model and expansion plan analysis. Those
316 explanations actually serve to confuse matters and demonstrate how the original
317 application lacked clarity. However, it should be noted that the data provided in the
318 application and subsequent answers to data requests still do not contain detailed load
319 projections for Corn Belt and CIPCO.

320 **Q: Will the proposed financial structure proposed for the plant be cost effective and**
321 **result in a project that is the least cost option?**

322 A: No. The plan as proposed is insufficiently detailed and actually may not materialize. The
323 more likely result is a financial structure to support the project that will be dramatically
324 different and quite costly.

325 The proposed financial structure assumes IPL will secure both debt and equity financing.
326 There is no detail provided that quantifies the level of each or the source and estimated
327 terms of this financing. It is also anticipated that both Corn Belt and CIPCO will secure
328 financing from the Rural Utilities Services (a division within the United States
329 Department of Agriculture).

330 The Beer Testimony states at page 5:

331 CIPCO and Corn Belt have indicated it is unlikely they will be denied RUS financing.
332 However, in the unlikely event they are unable to obtain RUS financing, CIPCO and
333 Corn Belt have indicated that if they determined continual involvement in this project
334 was not viable with traditional financing, CIPCO and Corn Belt will aid IPL in obtaining

335 new project partners. Should IPL be unable to find other joint owners, IPL will enter into
336 PPAs (Purchased Power Agreements) for the capacity it does not need.

337 **Q: Is it likely that RUS financing will be available in a timely manner?**

338 A: No. RUS financing will be finalized approximately 24-36 months from the point the two
339 cooperatives file an application. It does not appear from the evidence in the testimony
340 that either cooperative has filed. The construction schedule sets the last quarter of 2008 as
341 the start of construction. If the RUS application were filed in October 2007, it would not
342 be approved until October 2009 or possibly as late as sometime in 2010. Absent a
343 detailed description and analysis of project financing (construction and permanent) the
344 proposed structure has a very real risk of not materializing.

345 **Q: Are Corn Belt and CIPCO creditworthy institutions?**

346 A: In the past both cooperatives have been solid credit risks. If there is one point to be taken
347 from this testimony about this plant and the market context in which it is being proposed
348 it is as Yogi Berra said: "The future ain't quite what it used to be".

349 The application provides no information regarding the financial status of either
350 cooperative. A brief review of their annual reports show a number of trends that might
351 bear on their creditworthiness:

- 352 • CIPCO revenue from electricity sales has been flat for the past few years. Its long
353 term debt portfolio is well managed, but in the event of an economic slowdown its
354 margins are likely to shrink.
- 355 • Corn Belt has experienced increases in electricity sales revenue. However,
356 between 2003 and 2007 Corn Belt's long-term debt has increased by 79 percent.

357 A rapid increase in debt leading into an economic slowdown may require a future
358 lender or the Corn Belt board to proceed with caution on any new undertaking.

359 **Q: Should the availability of RUS financing be a factor in the IUB's determination?**

360 A: No. The Rural Utility Service has, in at least 13 instances, supported financing for both
361 coal and nuclear plants that have fallen into default and caused losses in the billions for
362 the RUS program and other investors [See Exhibit ____ (TS-1) Schedule K].

363 One of the most notable projects was owned by the Louisiana based Cajun Electric
364 Cooperative. RUS supported the project. Louisiana regulators ultimately refused to
365 approve rate increases that were caused by overruns and the failure of planned industrial
366 development to materialize. The losses experienced by the program and investors were in
367 the billions [See Exhibit ____ (TS-1) Schedule L]. Other projects in both regulated and
368 unregulated markets were distressed and required debt write-offs. Many of the distressed
369 projects were planned in response to the energy crisis of the 1970s. A rush to build cost
370 the federal government and investors billions in losses. The GAO believes that RUS will
371 continue to face losses into the future. The IUB must make its decision based on Iowa
372 state law and the conditions within Iowa, not on the underwriting criteria of a federal
373 subsidy program.

374 **Q: What is the status of the RUS program?**

375 A: President Bush's 2008 federal budget calls for the elimination of the program. While it is
376 unlikely that the program will be ended during the next federal fiscal year, it is likely that
377 the administration will try to end it again. The RUS program has recently come under
378 public scrutiny as a supporter of coal fired power plants [See Exhibit ____ (TS-1)

379 Schedule M]. Unlike many private lending institutions, the program has not confronted
380 its role as a contributor to global climate change.

381 In addition the GAO expressed concerns about the programs 'policy drift' in 2004. The
382 public policy objective of RUS is to support rural electrification projects. The GAO noted
383 that recent financing decisions tended to support projects serving largely urban areas.
384 Given the population shifts in Iowa it remains to be seen how RUS will view the
385 Sutherland plant.

386 **Q: What kind of financing does RUS offer?**

387 The program offers three basic types of financing. For the purposes of this discussion the
388 different types of financing produce different interest rate scenarios. Depending on
389 market conditions and the program selected, the interest rate range is between 2 and 11
390 percent. The application does not present any modeling that would account for the impact
391 of the range in interest rates on the creditworthiness of the Sutherland plant.

392 **Q: What type of financing has IPL offered for this project, and is it cost effective?**

393 A: No. IPL has proposed both debt and equity financing, but has not provided any detail.
394 Therefore it cannot be determined to be cost effective.

395 **Q: What is the current status of the debt and equity markets for coal fired power
396 plants?**

397 A: The current market for financing of these projects is increasingly skittish.
398 On October 8, 2007 Standard and Poor's issued a report that calls into question the
399 viability of those coal-fired power plants currently in the planning stages because of
400 economic risks created by potential new carbon emission rules.

401 We recognize that coal-fired assets meet the pressing need for economical base
402 load capacity, particularly after the long hiatus since utilities last added large
403 quantities of this type capacity to their generation fleets. Yet, our evaluations must
404 also recognize the financial impact that carbon emission constraints might have
405 on coal operators in the coming years. (David Bodek, Credit Analyst, 10/08/07).

406 Earlier this year Citigroup downgraded coal stocks stating, “prophesies of a new wave of
407 coal-fired generation have vaporized” and the industry is “likely to be structurally
408 impaired by new regulatory mandates applied to a group perceived as landscape-
409 disfiguring global warming bad guys” [See Exhibit ___ (TS-1) Schedule N].

410 An earlier investment analyst view struck a similar note:

411 Coal-fired power plants in the United States emit, on average, twice as much CO₂
412 per MWh (1.1 tons) as do their gas-fired competitors (0.6 tons). The impact on
413 generation costs of a mandatory program of allowance purchases for CO₂
414 emissions will thus be far greater for coal-fired than gas-fired generators [See
415 Exhibit ___ (TS-1) Schedule O].

416 Over the last year, at least ten proposed coal fired plants have been dropped at various
417 stages of the planning process.

- 418 • Southwestern Power Group’s Bowie Power Station in Arizona – in September 2007 a
419 proposed 600 MW IGCC coal plant was canceled by the company in favor of
420 pursuing a natural gas-fired plant, in part because of market economics and regulatory
421 uncertainty [See Exhibit ___ (TS-1) Schedule P].
- 422 • Florida Power and Light’s Glades Power Plant – in July 2007 a proposed 1,960 MW
423 coal-fired power plant was rejected by Florida Public Service Commission due, in

424 part, to uncertainty over the cost of future carbon regulations [See Exhibit ____ (TS-1)
425 Schedule Q].

426 • American Electric Power and Oklahoma Gas and Electric's Red Rock Generating
427 Station in Oklahoma – in September 2007 a proposed 950 MW plant was rejected by
428 the Oklahoma Corporation Commission for failure to evaluate alternatives such as
429 natural gas [See Exhibit ____ (TS-1) Schedule R].

430 • Tenaska's Sallisaw Electric Generating Plant in Oklahoma – in July 2007 the
431 company cancelled its plans to build a 660 to 880 MW coal-fired plant on the grounds
432 that it is not economically viable at this time [See Exhibit ____ (TS-1) Schedule S].

433 • Peabody Coal Company's Thoroughbred Generating Station in Kentucky – in August
434 2007 an air permit for a 1,500 MW coal-fired plant was reversed by the Franklin
435 Circuit Court due to inadequate air pollution control analysis [See Exhibit ____ (TS-1)
436 Schedule T].

437 • Seminole Electric Power Cooperative's Seminole 3 Generating Station in Florida – in
438 August 2007 a proposed 750 MW coal-fired plant was rejected by the Florida
439 Department of Environmental Protection on the grounds that the plant would not
440 minimize environmental and public health impacts and would not serve the public
441 interest [See Exhibit ____ (TS-1) Schedule U].

442 • Great Northern Power Development's South Heart Power Project in North Dakota –
443 in August 2007 the company withdrew its application for an air permit for a 500 MW
444 coal-fired plant [See Exhibit ____ (TS-1) Schedule V].

- 445 • Florida Municipal Power Agency’s Taylor Energy Center in Florida – in July 2007 a
446 proposal for an 800 MW coal-fired plant was withdrawn shortly after the Florida PSC
447 denied the application for Glades Power Plant [See Exhibit ____ (TS-1) Schedule Q].
- 448 • TXU Corporation – In February 2007 as part of a buyout of TXU Corporation by
449 private equity firm, TXU announced that it would abandon plans for eight out of
450 eleven proposed plants in Texas [See Exhibit ____ (TS-1) Schedule W].
- 451 • Indeck Energy Service’s Elwood Energy Center in Illinois – in September 2006 the
452 EPA’s Environmental Appeals Board reversed the air permit for this proposed 660
453 MW coal-fired plant [See Exhibit ____ (TS-1) Schedule X].

454 **Q: How is IPL positioned to address the skittishness of the new market realities?**

455 A: Not well. According to the company’s most recent 10K and 10Q filings, Alliant Energy is
456 in the process of a significant repositioning.

457 Over the past two years, Alliant has been selling their non-regulated businesses, which
458 are predominantly international investments. The company has experienced mixed
459 success in the international arena. Alliant is selling off its domestic transmission
460 capacity. The company has also just completed a stock repurchase program.

461 These changes suggest that the Alliant company going forward will be different from the
462 one the residents of Iowa currently know. The company’s mixed success and ultimate
463 withdrawal from the international markets is recognition of the complicated and changing
464 global energy picture, of which coal is a part.

465 The changing nature of the domestic credit markets may require Alliant to bear
466 increasing levels of financial risk in order to complete the Sutherland plant. While its
467 short term cash position has improved as a result of various asset sales, the warnings from

468 the investment market will make outside credit more expensive to finance this project.
469 Depending on how the IUB constructs a rate-making package for this project, either
470 Alliant will bear greater risk through a large equity contribution, or Iowa's ratepayers will
471 be asked to absorb the increased costs that come from a tighter credit market.

472 The lack of any discussion of this matter of credit risk suggests that Alliant is not
473 positioned well for this project.

474 **Q: Doesn't Alliant really address the most critical risk factor it confronts? Isn't their**
475 **plan for flexible burning capacity of either western or eastern coal the hedge they**
476 **need to deal with volatility in the coal markets?**

477 A: Yes and no. It is an appropriate hedge if executed according to an overall risk
478 management strategy. The management strategy requires a resource outlay and a clear
479 direction to achieve it. From the application, it appears that Alliant is of two minds about
480 this very serious matter.

481 The Kitchen Testimony (at page 7) is dismissive of the larger dynamics of coal
482 production and pricing:

483 Furthermore, coal is abundant in the U.S., relatively low in cost, and experiences
484 less price volatility than other traditional fuel supplies.

485 The testimony seems to imply that nothing has changed in the coal or utility industry
486 since IPL developed its last coal-fired plant in 1983.

487 The testimony of Larry Harder (at page 9) suggests another view within IPL of the
488 current and future market for coal.

489 There have been a significant number of plants recently announced and under
490 construction that have indicated that PRB (Power River Basin) coal will be their

491 design fuel. Even under the most conservative growth estimates in demand for
492 PRB coal, the current supply chain infrastructure will not be able to adequately
493 produce and deliver the projected quantities. This will have the effect of
494 increasing fuel costs from the PRB mines, based on both mining and rail transport
495 capabilities from western supplies. The additional demand will also expose users
496 to risks in fuel supply interruption should any significant rail
497 operation/maintenance event occur. By designing the proposed SGS Unit 4 with
498 the ability to utilize a variety of coals, it is believed that availability will remain
499 high and the price of delivered coal can be more readily managed.

500 This potential price hedge can only be fully exploited if the company has demonstrated
501 its proficiency in the coal trading business. If the company is engaged in a risk
502 management process, what is it and how will it impact the costs that will be associated
503 with the Sutherland plant? If Alliant will be devoting resources to manage multiple
504 contracts with coal producers and transportation operators, how will the costs be borne by
505 Iowa ratepayers? A poorly managed coal trading operation can miss important price
506 swings resulting in Alliant and ratepayers bearing the brunt of higher fuel costs.

507 One leading industry analysis presents the new market dynamic:

508 Due to the global and domestic supply, demand and volatility drivers, we believe
509 that price volatility will continue to increase. In other words, regardless of which
510 direction they may ultimately trend, the price swings (for coal) will be more
511 erratic and of greater magnitude [See Exhibit ____ (TS-1) Schedule Y].

512 The application does not explain obvious issues related to the plant's operation that flow
513 from this diversification strategy. How do the different heat content levels from the two

514 types of coal (PRB and Illinois Basin) impact the cost of running the plant? How will the
515 varying levels of sulfur content from each region impact on plant operations and costs?
516 Will ash handling be different for the different types of coal, and what are the cost
517 implications of that? How will the various transportation carrier costs be managed? And,
518 finally, how are the pricing scenarios constructed in order to accurately compare this
519 specific plant and its operating assumptions with other energy alternatives that may not
520 face the same challenges regarding their fuel sources?

521 While the Harder testimony looks west to analyze the plant's risks, there is an analysis of
522 the eastern part of IPL's equation that is missing. The application states that the Illinois
523 Basin would be its second source of coal. The problems with Illinois coal are different,
524 but the result of upward pressure on prices is the same.

525 Illinois Basin coal has been in decline for a number of years. In 2006 production declined
526 by 15 percent due to a myriad of factors related to the recoverability of the coal.
527 Transportation from the Illinois Basin is limited [See Exhibit ____ (TS-1) Schedule Z].
528 Demand pressure from surrounding states may make it feasible to mine the currently
529 unrecoverable veins, but the price and transportation factors may put this coal at a
530 premium for power plants in Iowa.

531 It is plain from both the IPL application and Alliant's corporate filings that the change it
532 is undergoing is to focus on its core business of energy generation. There is no discussion
533 in the application of company strategy or any strategic partnerships that will turn this
534 planned price hedge into a real contribution to the company's bottom line.

535 **Q: What other factors are having an impact on coal pricing?**

536 A: As mentioned in the Harder testimony, the price of coal transportation is increasing both
537 as a function of demand and inadequate rail infrastructure. It is widely known in the
538 industry that transportation costs are going in only one direction --- up. The Energy
539 Information Administration reported in their December 20, 2006 Coal Report:

540 A Bear Stearns survey of more than 1,000 shippers confirmed what coal-fueled
541 power plant operators believe and the railroad industry says is necessary – that
542 rail transportation rates are rising and expected to continue [See Exhibit ____ (TS-
543 1) Schedule AA].

544 Other analysts have pointed out that rail transportation costs in the United States
545 increased between 50 to 100 percent during 2005 and 2006 [See Exhibit ____ (TS-1)
546 Schedule Y].

547 Absent major investments in the nation’s rail infrastructure these problems are not likely
548 to abate. Given these market dynamics, it is imperative that any analysis of cost
549 efficiency and energy reliability address the transportation cost component.

550 The IPL application concerns itself entirely with the cost of transportation infrastructure
551 that is directly attributable only to the plant’s physical construction.

552 **Q: Do the construction cost estimates support an argument that the project is cost**
553 **effective?**

554 A: No.

555 ****CONFIDENTIAL MATERIAL BEGINS****

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579 A: One recent independent analysis summarizes the current market conditions [See Exhibit

580 ____ (TS-1), Schedule C]:

581 The rapid increases experienced in utility construction costs have raised the price
582 of recently completed infrastructure projects, but the impact has been mitigated
583 somewhat to the extent that construction or material acquisition preceded the most
584 recent price increases. The impact of rising costs has a more dramatic impact on
585 the estimated cost of proposed utility infrastructure projects, which fully
586 incorporate recent price trends. This has raised significant concerns that the next
587 wave of utility investments may be imperiled by the high cost environment. These
588 rising construction costs have also motivated utilities and regulators to more
589 actively pursue energy efficiency and demand response initiatives in order to
590 reduce the future rate impacts on consumer.

591 Several documents contained in IPL's application provide analyses of existing and
592 proposed regulatory designs, but absent a clear narrative that explains the various
593 construction cost line items and how they respond to potential emissions regulatory
594 scenarios, it is difficult to determine the validity of the projections.

595 The newly revised capital numbers provided in the construction cost breakdown clearly
596 raise the specific capital cost, \$/kW. This is a standard industry measure but there does
597 not appear to be any comparable criteria for judging when a project is too costly, or when
598 the cost is so high as to warrant consideration of alternatives. There are various assertions
599 that this plant represents a least cost option. Absent a comprehensive and realistic
600 presentation of all costs --- capital, financing, operating and maintenance compared
601 against all alternatives and against various price scenarios over time, it remains to be seen
602 whether this plant is, in fact, a least cost option.

603 In its response to questions regarding its application, IPL is optimistic that costs will
604 continue to increase. Recent published reports, prepared after the estimates provided in
605 this application, suggest otherwise. [See Exhibit __ (TS-1), Schedule C]

606 • OtterTail Power Company is building a 630 MW plant in Milbank, South Dakota.
607 Costs have increased from \$1.0 to \$1.6 billion over the past year.

608 • Duke Power has seen the cost of a 400 MW coal plant rise from \$1 billion in 2005 to
609 \$2.4 billion in 2007.

610 • Westar Energy announced a 600 MW coal-fired plant in 2005 with cost estimates of
611 \$1 billion. The current project cost is \$1.4 billion. The project has been deferred

612 **Q: Does this conclude your direct testimony?**

613 A: Yes.