



# THE RISING COST OF COAL

## Background

For decades, Los Angeles has benefited from an abundance of cheap and dirty coal-fired power. However, in 2010, **the economic conditions surrounding coal mining and coal burning are changing rapidly, making continued use of coal-fired power a risky investment for Los Angeles' future.** As decision-makers and the public weigh the choices presented in the Los Angeles Department of Water and Power's Integrated Resource Plan, particularly the imperative to stop burning coal by 2020 – it is important to understand how the dirty status quo imperils LADWP and its customers.

The following is a brief summary by Schlissel Technical Consulting of the economic conditions driving up the cost of coal-fired power at LADWP's largest coal-fired power plant: Intermountain Power Plant (IPP) located in Utah. **Even without regulations to curtail global-warming pollution or other dangerous pollutants, the cost of power from IPP is still anticipated to rise by 30% over the next four to five years.** Any further regulations to curtail hazardous air pollutants would push electricity prices for LADWP customers higher.

## PA Consulting Analysis Indicates Rising Cost of Coal-fired Power

PA Consulting's February 25, 2010 *Independent Fiscal of the Los Angeles Department of Water and Power Energy Cost Adjustment Factor (ECAF) and Residential Rate Design Proposals* notes that LADWP's full cost of power from IPP was \$344 million in 2009.<sup>1</sup> The PA Report also noted that this meant an all-in cost of power from IPP of slightly under \$50/MWh in 2009.<sup>2</sup>

PA Consulting also projected that an increase of \$10/ton in the price of the coal that LADWP purchases from the Powder River Basin would increase ECAF costs by approximately \$35 million, or about 10 percent. Our independent calculations confirm these figures.

At the same time, the PA Consulting Report noted that LADWP estimates that the cost of purchasing coal from the Powder River Basin ("PRB") will increase from the current level of about \$35/ton to somewhere in the range of \$55/ton to \$65/ton in 2014.<sup>3</sup> **This would mean an increase in the cost of power from IPP of between 20 percent and 30 percent or from slightly under the \$50/MWh all-in cost that LADWP paid in 2009 to the range of \$60/MWh to \$65/MWh in 2014.**

Moreover, the **all-in cost of power from IPP could be expected to increase even further if the price of PRB coal increases beyond the prices projected by LADWP.** Indeed, a number of factors suggest there will be **significant upward pressures** on PRB coal prices in coming years, as well as price volatility.



Photo by Kimon Berlin via Flickr  
**Powder River Basin Coal Mining**

<sup>1</sup> PA Consulting's February 25, 2010 *Independent Fiscal of the Los Angeles Department of Water and Power Energy Cost Adjustment Factor (ECAF) and Residential Rate Design Proposals*, at page 3.

<sup>2</sup> *Id.*, at page 4-5.

<sup>3</sup> *Id.*, at pages 4-9 to 4-10.

## Supply and Demand Issues Drive Cost of Coal Upward

In particular, there is an increasing emphasis on exporting domestic U.S. coal at the very same time that traditional sources of coal are being depleted. This is expected to lead to upward pressure on coal prices as Central Appalachian reserves are depleted and mining in the PRB is intensified due to rising domestic and international demands and reduced supplies at other sources.<sup>4</sup> A recent coal industry market commentary expressed a concern that appears to be felt by many in the industry: “If the near-term sense of helplessness against the tide of seemingly incurable market dilemmas portends longer-term problems, if a season of wild price volatility truly is a precursor to a more complex and domestically threatening energy environment, we might all be about to catch a falling knife.”<sup>5</sup>

**“We might all be about to catch a falling knife.”**

- Coal Industry Executive

For example, there are indications that intensified mining efforts will lead to rising costs of production in the Powder River Basin.<sup>6</sup> In 2008, the USGS issued a study of the PRB’s Gillette coal beds. This study, which reflected forty years of USGS research on coal reserve methodology throughout the United States, concluded that the methods used by the United States government to calculate coal reserves had significantly overstated the amount of economically recoverable coal. **The study explained that as existing mines and new mines in the area are more intensively exploited, production costs would rise substantially, perhaps to a level that could not be covered by the market price.**<sup>7</sup> This is an important observation as the Gillette coal bed contains most of the coal produced in the PRB, and, overall, accounts for 37% of the nation’s coal production.

These higher prices of power from IPP reflect only LADWP’s projected changes in the price of purchasing coal from the PRB. All other costs are assumed to remain the same. If it were instead assumed that there will be increases in other non-fuel operations and management costs or in capital expenditures, the estimated all-in cost of power from IPP could be even higher by 2014 than \$60/MWh to \$65/MWh.

## Conclusion

Coal prices around the nation are rising, not just in Los Angeles but even in the heart of coal country. **“In West Virginia, American Electric chalks up 54% of its recent rate hike to increased coal costs, and 32% to the rising expense of buying power from other companies — which is also more expensive due to rising coal prices.** The remainder of the increase is to pay for equipment that will reduce coal plant emissions.”<sup>8</sup>

With coal-fired electricity costs rising into the range of current natural gas prices and soon to be on par with large scale wind, it does not make sense from a financial nor environmental perspective to remain dependent on such a dirty and dangerous fuel source. **LADWP must commit in its IRP to moving beyond coal no later than 2020.**

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<sup>4</sup> See, for example, Scott Learn, *Mining companies aim to export coal to China through Northwest points*, The Oregonian, September 8, 2010.

<sup>5</sup> Energy Publishing, In, *Coal and Energy Price Report*, Volume 12, No.88, May 10, 2010.

<sup>6</sup> United States Geological Survey, *Assessment of Coal Geology Resources and Reserves in the Gillette Coalfield River Basin, Wyoming*, Open-File Report – 2008-1202.

<sup>7</sup> The study offers precise calculations for existing mines in the Gillette coal beds as well as cost curves based on various production levels. These models allow for a dynamic understanding of the relationship between rising costs of production and the need for higher coal prices in the market place.

<sup>8</sup> Associated Press, “Coal price hikes boost electric rates, more pain coming” from *USA Today*. April 28, 2008. Found at: [http://www.usatoday.com/money/industries/energy/2008-04-28-electricity-rates-coal\\_N.htm](http://www.usatoday.com/money/industries/energy/2008-04-28-electricity-rates-coal_N.htm)