



MUSINGS FROM THE OIL PATCH

September 11, 2012

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Note: Musings from the Oil Patch reflects an eclectic collection of stories and analyses dealing with issues and developments within the energy industry that I feel have potentially significant implications for executives operating and planning for the future. The newsletter is published every two weeks, but periodically events and travel may alter that schedule. As always, I welcome your comments and observations. Allen Brooks

We will always remember those innocent Americans who died on this day in 2011.

Is Keystone XL A Glutton For Punishment With New Route?

TransCanada Corp. submitted a revised routing for the proposed Keystone XL pipeline through Nebraska

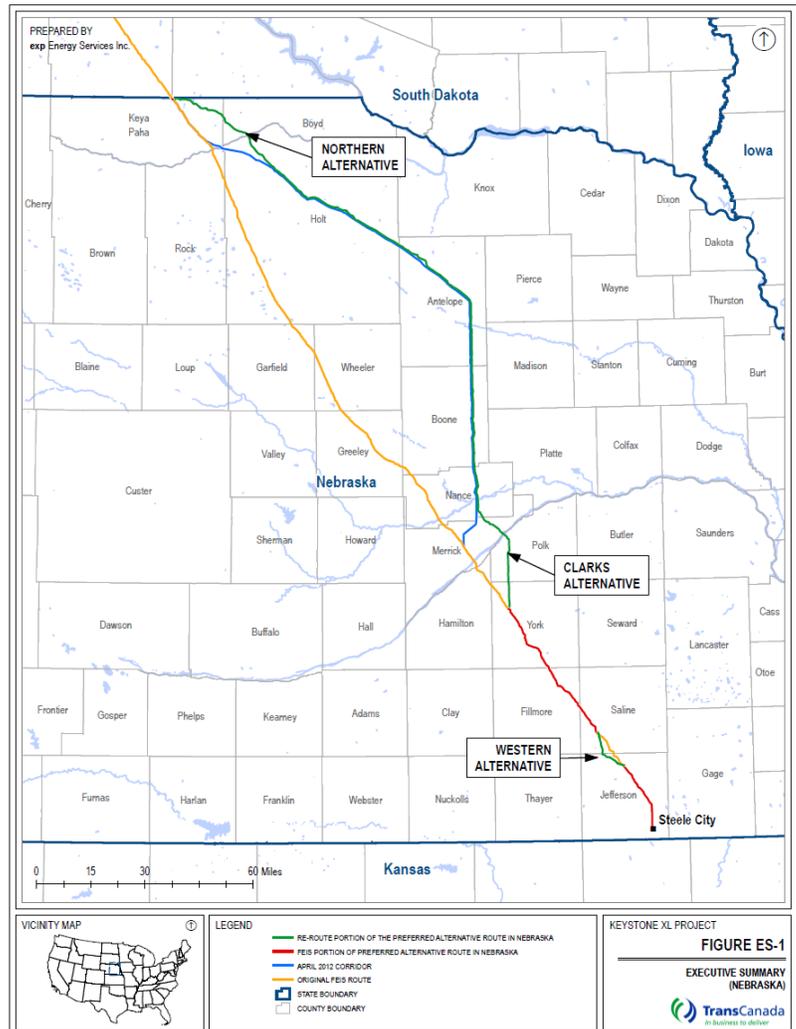
The three changes involved avoiding areas with similar characteristics to the Sandhills, and avoiding Clarks' WHPA and Western's WHPA

On September 5, 2012, TransCanada Corp. (TRP-NYSE) submitted a revised routing for the proposed Keystone XL pipeline through Nebraska as part of its effort to win state approval to build the line and eventually a Presidential Permit for construction. The revision of the route proposed in TRP's April application with the Nebraska Department of Environmental Quality (DEQ) takes into account feedback from over 670 Nebraskans who took part in open house discussions, hundreds of additional comments submitted to the DEQ and conversations with landowners along the proposed route. As result of this feedback, TRP made three modifications to its preferred pipeline route.

The three changes involved the northern portion of the proposed route to avoid areas that have similar characteristics to the Sandhills, to avoid the city of Clarks' Well Head Protection Area, and moving the pipeline out of the newly defined city of Western's Well Head Protection Area. The revised route is shown in green on the map in Exhibit 1 on the next page. The original pipeline route is in yellow with the first revised route in blue and red. The net impact of the latest revision is an increase in the distance in Nebraska by 20 miles to 275 miles.

TRP filed its revised route proposal in a Supplemental Environmental Report to the DEQ. The company also announced it submitted the report to the Department of State (DOS) in complying with the DEQ timelines and overall regulatory process for determining the re-routing in Nebraska as requested by the DOS in November 2011. TRP also submitted an environmental report to the DOS as part of the Presidential Permit application.

Exhibit 1. Latest Revised Keystone Route



Source: Nebraska DEQ

So far, the Keystone pipeline has been only a minor election campaign prop

So far, the Keystone pipeline has been only a minor election campaign prop, primarily as an example used by Republicans of actions of the Obama administration to prevent energy infrastructure projects that would immediately put thousands of Americans to work. Importantly, this project is supported by three construction unions that would stand to put many of their members to work. Will Keystone's profile as a campaign point grow? Will it matter?

We recently read *The Amateur: Barack Obama In The White House*, written by Edward Klein and based on nearly 200 interviews. The Keystone pipeline is only mentioned a few times, mostly in passing. However, there is one reference that we found extremely interesting and that sent us to the Internet to review the timeline of the political battle over the pipeline's approval process.

In October 2010, Secretary Clinton says she is “inclined” to approve the Keystone pipeline permit

According to the timeline published by *Macleans.ca*, the DOS approved the crossing of the US/Canada border for the original Keystone pipeline in March 2008. In July 2008, TRP announced expansion of the pipeline and the creation of the Keystone XL pipeline project. In March 2009, Canada’s National Energy Board approves the XL pipeline. The National Resources Defense Council issues a damning report on oil sand bitumen and the pipeline. The DOS draft Environmental Impact Statement (EIS) is criticized for its lack of adequate information on greenhouse gas emissions. In June 2010, 50 members of Congress sent a petition to Secretary of State Hillary Clinton urging her to consider “clean energy and climate priorities” when studying the XL pipeline application. In July 2010, the EPA criticizes the DOS EIS for its supposed lack of adequate information on many topics. In October 2010, Secretary Clinton says she is “inclined” to approve the Keystone pipeline permit. In August 2011, environmental protesters led by high-profile Hollywood actors and actresses protest the pipeline in front of the White House. That same month the DOS issues its final EIS stating there are no “major environmental risks” with the project. In September 2011, Archbishop Desmond Tutu, the Dalai Lama and seven Nobel Peace Prize laureates write to President Obama urging him to reject the pipeline. In early November 2011, President Obama announces that he will postpone a decision on the pipeline application until early 2013, or after the 2012 November elections.

“The only thing personal about the meeting was when Michelle turned to Caroline and said, ‘The president is going to put the Keystone Pipeline project on hold and wouldn’t Bobby like that?’”

In *The Amateur*, Mr. Klein describes on page 154 an event held on Halloween 2011 (October 31) at the White House involving Caroline Kennedy and First Lady Michelle Obama. Ms. Kennedy was invited to a reception celebrating the fiftieth anniversary of the White House Historical Society that had been established by her mother, Jacqueline Bouvier Kennedy. Mr. Klein quoted from his interview with Ms. Kennedy in which she stated, “The only thing personal about the meeting was when Michelle turned to Caroline and said, ‘The president is going to put the Keystone Pipeline project on hold and wouldn’t Bobby like that?’ In response, Caroline said, ‘Bobby would like to meet with the president about the Keystone Pipeline being not only delayed, but being aggressively attacked and killed.’ Michelle looked stricken. She said, ‘Bobby should call the White House,’ meaning that he would have to go through channels like everybody else.”

In the interview, President Obama said, “The State Department’s in charge of analyzing this, because there’s a pipeline coming in from Canada”

We subsequently found the following information. The next night, President Obama was interviewed by a reporter from KETV-TV an Omaha, Nebraska television station. In the interview, President Obama said, “The State Department’s in charge of analyzing this, because there’s a pipeline coming in from Canada. They’ll be giving me a report over the next several months, and, you know, my general attitude is, what is best for the American people? What’s best for our economy both short term and long term? But also, what’s best for the health of the American people? Because we don’t want for examples aquifers, they’re adversely affected, folks in

Nebraska obviously would be directly impacted, and so we want to make sure we're taking the long view on these issues."

President Obama went on to say, "We need to encourage domestic oil and natural gas production. We need to make sure that we have energy security and aren't just relying on Middle East sources. But there's a way of doing that and still making sure that the health and safety of the American people and folks in Nebraska are protected, and that's how I'll be measuring these recommendations when they come to me."

The sequence of events suggests that President Obama had made his mind up on rejecting the Keystone pipeline at some point during October, in order to have informed his wife who passed on the information to Ms. Kennedy

The sequence of events suggests that President Obama had made his mind up on rejecting the Keystone pipeline at some point during October, in order to have informed his wife who passed on the information to Ms. Kennedy. Mr. Klein's anecdote was designed to show how the Obama's were trying to curry favor with the Kennedys, but what it really shows is that the environmental agenda of the Obama administration had won out over the "all-of-the-above" energy plan. President Obama's television interview highlights the hypocrisy of his trying to portray a thoughtful executive weighing the pros and cons of the Keystone pipeline when he had already made up his mind. Will the President's priorities change with regards to Keystone if he is re-elected? Remember, Secretary Hillary Clinton has indicated she will step down from heading the State Department, meaning there will be a new leader who will need time to fully evaluate the project. Will the environmental movement be re-invigorated by Obama's re-election? Will their political power be diminished because President Obama will never face another election? The bigger question may be President Obama's shift in focus in his second term to his legacy, and his green agenda is high in that thinking. That may be bad news for the future of the Keystone XL pipeline, and is confirmed by the Democratic platform.

UK Wind Power Battle And A New Rhode Island Wind Twist

After reading the reports and critics, this is more a debate about "The greatest thing since sliced bread" versus "Hogwash"

We were treated to a couple of articles about battling reports on the future impact of increased wind power generation in the United Kingdom from a good friend. The debate isn't a rerun of "Tastes Great," "Less Filling" that inundated the air waves some years ago about a certain beer. After reading the reports and critics, this is more a debate about "The greatest thing since sliced bread" versus "Hogwash." We'll get into the issues, which are similar to ones debated in neighboring Massachusetts in recent years as the state wound its way through approval of the power purchase agreement (PPA) for Cape Wind, possibly the nation's first offshore wind farm. But first, the latest twist in the offshore wind saga in Rhode Island.

The Rhode Island Renewable Energy Coordinating Board recently restated its support for wind energy although the sector has been hit by a number of problems. The newly hired administrator of the

Two wind turbine projects – Jamestown and Westerly – were shut down due to local opposition and expense

state's Office of Energy Resources touted the new state and federal agency database that serves as a "global knowledge center" for wind, solar, hydropower and energy-efficiency programs. The state is finalizing several new guidelines and services for wind turbines. While this is the good news, two wind turbine projects – Jamestown and Westerly – were shut down due to local opposition and expense. Blame is being laid at the feet of the Economic Development Corporation (EDC) fiasco involving Studio 38, a \$75 million loan from taxpayers to a start-up videogame creator owned by former Red Sox pitcher Curt Schilling that filed for bankruptcy after failing to produce a successful product and not being able to attract venture capital investment. The bankruptcy left taxpayers on the hook for the business' debts plus the failure to create the jobs promised, and virtually all the taxpayer funds gone. The EDC had provided \$140,000 for the study of the Jamestown wind turbine proposal but without any funds, this support was ended.

In Westerly, an entrepreneur was proposing to build a couple of wind turbines that would supply the town with power. The public began to question the economics and contractual arrangements of the proposal and eventually brought so much pressure the town killed the project. In Portsmouth, the shutdown of the high school turbine, which faces estimated repair costs of \$400,000, was considered too risky for the town by many residents, effectively killing its revival.

Benjamin Riggs Jr., a media-identified "longtime wind energy antagonist" filed a complaint with the FERC claiming that the approval by the Rhode Island Public Utility Commission of the PPA in 2010 appears to constitute a violation of the Federal Power Act

The latest twist in Rhode Island's wind power business is the announcement of the filing of a complaint against the legality of the PPA for the Deepwater Wind Rhode Island LLC offshore wind project near Block Island. Benjamin Riggs Jr., a media-identified "longtime wind energy antagonist" filed a complaint with the Federal Energy Regulatory Commission (FERC) claiming that the approval by the Rhode Island Public Utility Commission of the PPA in 2010 appears to constitute a violation of the Federal Power Act. He also claims that the sole sourced PPA that was not commercially viable or in the public interest is in violation of the Commerce Clause of the U.S. Constitution, and that the PUC, in complying with legislation from the Rhode Island Legislature, violated the State's separation of powers clause in its constitution.

One media report suggests that Mr. Riggs will be joined by an unnamed group in Bristol to challenge the East Bay Energy Consortium, a committee of nine Rhode Island cities and towns aiming to collectively reduce municipal energy costs by proposing to build a 5- to 10-turbine wind farm in Tiverton.

While some of the issues raised by the complaint are specific to Rhode Island and the National Grid PPA, others are generic to wind power

While some of the issues raised by Mr. Riggs' complaint are specific to Rhode Island and the National Grid (NGG-NYSE) PPA, others are generic to wind power and were explored in the recent UK wind energy report and criticism. The Rhode Island specific issues are some that we focused on as we covered the events, and issues we still can't fathom that were allowed. The PPA approval process in

It was written to confront critical views of the viability of wind power

Rhode Island was an exercise in politics driven to achieve a desired result regardless of the law. This approach unfortunately seems to be acceptable for many more politicians than we ever imagined.

In the UK, the Institute for Public Policy Research – North (IPPR) published a report entitled, “Beyond the bluster: Why wind power is an effective technology.” It was written to confront critical views of the viability of wind power. In announcing its report, the IPPR web site states: “Much opposition to wind power appears to be based on the belief that it is an ineffective technology, inefficient or unreliable. This claim is untrue and it is important to get ‘beyond the bluster’ in assessing the effectiveness of wind power.” A leading critic of wind power and of this report, Stuart Young, found problems with the report’s basic understanding of the operation of wind turbines and the power they generate that he essentially threw up his hands. Mr. Young wrote, “Having confirmed that the Report actually includes these claims and that they have not been quoted out of context, I see little point in a detailed examination of a document which makes two [the first two cited below] so readily dismissible assertions.”

Three conclusions of the report highlighted in the press release announcing its publication were:

1. “It is inaccurate to describe the output from wind power as ‘unpredictable.’”
2. “In the short term, wind power output is remarkably stable and increases and decreases only very slowly.”
3. “The risks associated with ‘long, cold, calm spells’ have been overstated.”

The problem becomes that they then say “the reliability and security of wind power does not depend on the variability of wind but, instead, on how well changes in wind power output can be predicted and managed”

The authors of the IPPR report try to make the point that “the variability of wind power does not mean that it is either unreliable or that it is insecure.” They make the point that over large areas there is less variability than at any one point, which is a valid consideration. The problem becomes that they then say “the reliability and security of wind power does not depend on the variability of wind but, instead, on how well changes in wind power output can be predicted and managed.” Therein becomes a major problem as numerous problems with Texas’ wind energy have demonstrated in the past.

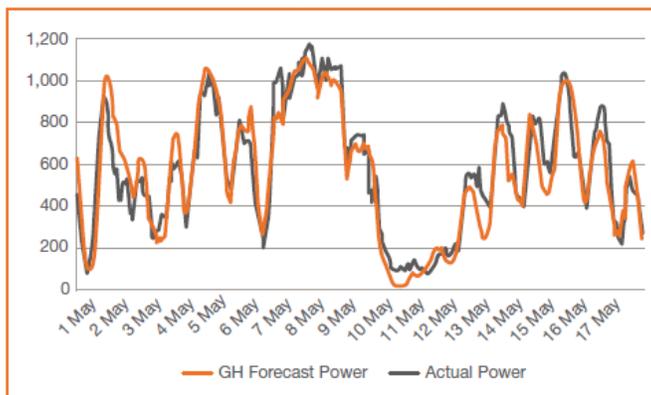
We have difficulty understanding some of the IPPR report authors’ thoughts about power plant operations and the variability and intermittent nature of their power generation. The report contains a highlighted box dealing with the topic. The text of the section reads: “Box 2: Variability and intermittency as terms for describing different generation technologies. The word ‘intermittent’ is often used to describe changes in wind power output. Intermittency can be construed as meaning that changes in wind power output are unpredictable and shift between ‘on’ and ‘off’, whereas wind power

We are not sure that we would ascribe routine, scheduled maintenance of a nuclear or fossil fuel fired power plant as the same as intermittent wind

output changes over time in a predictable manner. For this reason we choose to use the term ‘variable’, which we believe gives a more accurate description. In fact, the term ‘intermittent’ might more accurately be used to describe other types of generation. For example, in the event of a technical failure or an unplanned outage to a fossil-fuelled generation unit (depending on the number of units that the station comprises) up to 100% of the station’s capacity could be suddenly and unexpectedly withdrawn from the network. Also, nuclear power stations have to be shut down completely for around one month in every 18 while maintenance work takes place (IPPR Trading Limited 2012). A similar outage to a turbine in a wind farm of a large number of individual turbines would have minimal impact on the generation capacity of the system.” We are not sure that we would ascribe routine, scheduled maintenance of a nuclear or fossil fuel fired power plant as the same as intermittent wind.

To try to further their case, the IPPR report presented the chart in Exhibit 2. Unfortunately, there is no reference to whose power graph this represents or the time period of the forecast. Can wind power be forecasted? Sure. It is forecasted by power companies who need to schedule the operation of their power generation plants.

Exhibit 2. Is Forecasting Wind Easy?



Source: GL Garrad Hassan

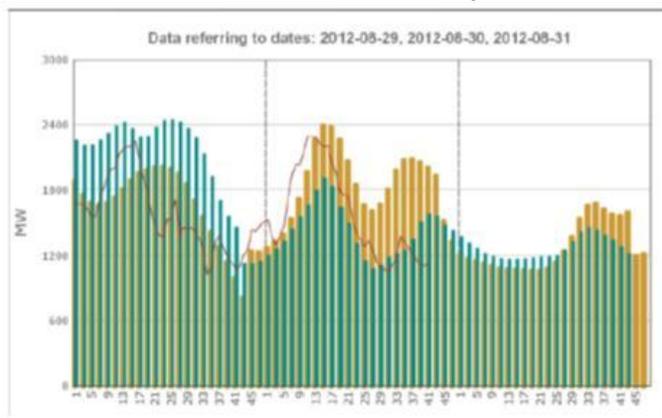
Source: IPPR Note: Axis is megawatt-hours.

Yes, wind output can be forecast, but as this data demonstrates, the difference between the refined output forecast and the recorded output can be as high as 1,250 megawatts (MW)

In Mr. Young’s critique of the report, he presented the chart in Exhibit 3 (next page) showing a snapshot of wind power forecasts and actual recorded output as of 8 pm on August 30, 2012. Each bar represents power for a half-hour segment, or 48 periods in a 24-hour day. The yellow bars represent NGG’s initial half-hour wind power forecast. The green bars are the company’s refined forecast and the red line is the actual wind output recorded. Yes, wind output can be forecast, but as this data demonstrates, the difference between the refined output forecast and the recorded output can be as high as 1,250 megawatts (MW). The difference between the initial forecast and the refined forecast is almost 800 MW over a 24-hour period. Can these swings be forecasted? To some degree,

and future forecasting expertise should improve, but the data suggests that the swings are much greater than the wind energy proponents suggest, or maybe even understand.

Exhibit 3. Wind Forecasts And Reality Are Different



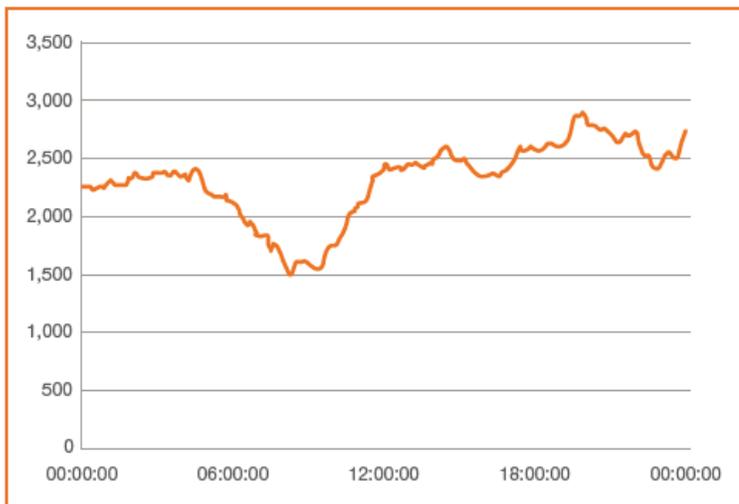
Source: Young

The interesting challenge is to understand how large an area the utility must be able to access power from and how long it will take to construct the infrastructure to support the utility to minimize wind power's variability

The IPPR report tries to make the case that wind power is variable over the course of 24 hours, but the increases and decreases are slow and manageable. The report states: "Although wind may seem fickle at street level, at a national or system scale, wind power production varies remarkably slowly. Due to the averaging effects that occur first as wind speed is averaged across the rotor disc of an individual turbine, then across the electrical output of a number of turbines in a wind farm and, finally, the large-scale spatial averaging that occurs across the entire dispersed wind fleet of a country, there is no significant variation of wind power output on timescales of minutes. This is illustrated in figure 4 [Exhibit 4] which shows, at five-minute resolution, the output of all wind generation visible to the GB [Great Britain] system operator, for a sample day." Therefore, if an electricity company can secure wind power from anywhere in the country, its supply will be much more stable than if coming from only one wind farm or geographic region. The interesting challenge is to understand how large an area the utility must be able to access power from and how long it will take to construct the infrastructure to support the utility to minimize wind power's variability.

In the real world, however, utility companies often cannot access wind energy from large geographic areas. Therefore, they are confronted with the scenario the IPPR report says shouldn't matter. Mr. Young presented data on a 24-hour, rolling basis ending at 8:30 pm on August 30, 2012, [Exhibit 5, next page] that shows power availability in five-minute intervals during the past three months. According to Mr. Young, there were two five-minute periods where variability was in excess of 100 MW. He also pointed out that one should note the number of times that wind power generation approaches zero from 4,868 MW of metered wind capacity.

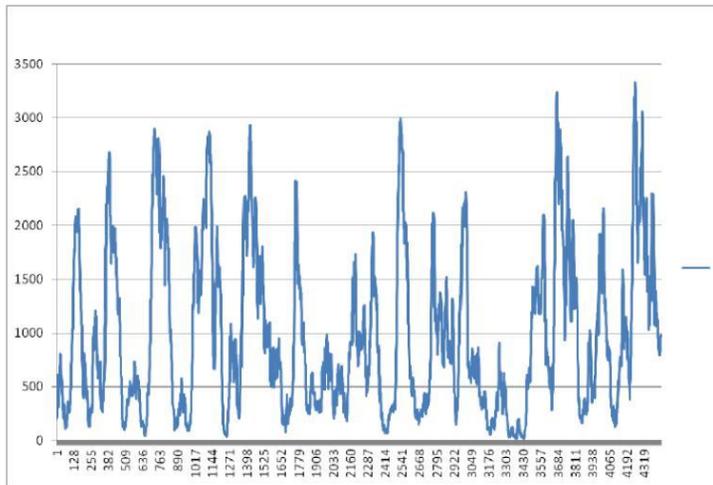
Exhibit 4. Wind Can Be Made To Appear To Change Smoothly



Source: Elexon 2012

Source: IPPR Note: Axis is megawatt-hours.

Exhibit 5. Wind Energy Variability Is Quite Large



Source: Young Note: Axis is megawatt-hours.

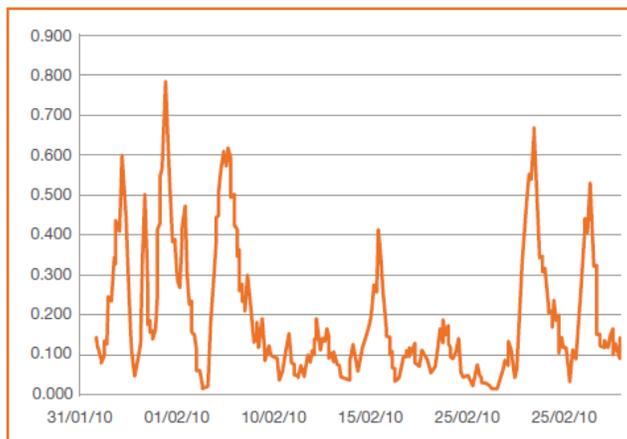
We must admit we laughed when we read this section of the IPPR report as it highlights one of those “never acknowledged” truths about variable energy sources such as wind, solar and hydropower, which are backup power supplies

The third conclusion from the IPPR report dealt with those long spells of low wind power output due to climatic conditions. We must admit we laughed when we read this section of the IPPR report as it highlights one of those “never acknowledged” truths about variable energy sources such as wind, solar and hydropower, which are backup power supplies. To address the issue of long periods of little wind output, the IPPR report showed the chart in Exhibit 6 showing wind energy during the month of February 2010 when there was a 14-day period of low wind output in Ireland, which has about the same penetration of wind power capacity as the UK is targeting for 2020.

That statement can only be true if the utility has sufficient power from conventional sources

The authors conclude that “The extreme weather event experienced in this example did not impair the ability of the electricity system to provide secure and reliable energy supplies to homes and businesses— since it has adequate conventional capacity in reserve.” So how can the report state that the impact of “long, cold, calm spells” is overstated? That statement can only be true if the utility has sufficient power from conventional sources.

Exhibit 6. Long, Cold, Calm Is Wind’s Challenge



Source: Eirgrid 2012

Source: IPPR Note: Axis is utilization percent.

While this is a perfectly logical theoretical argument, it doesn’t begin to approach the real world of utility operations, especially given that they are charged with operating in the “public interest,” meaning always ensuring power availability

Probably the most important question the IPPR report was trying to address was the impact of wind power on carbon emissions. The thrust of their argument is simple, and similar to the case made by Charles River Associates (CRA) in arguing for approving the PPA for Cape Wind. The argument is that power is purchased at the margin and the cheapest cost power – wind – will displace other (fossil fuel-fired) power sources that are more expensive. As a result of this substitution of energy supplies, clean wind power will reduce the carbon emissions that would come from burning fossil fuels and thus, wind power is a cheap way of improving air quality. While this is a perfectly logical theoretical argument, it doesn’t begin to approach the real world of utility operations, especially given that they are charged with operating in the “public interest,” meaning always ensuring power availability. To deal with the intermittent nature of wind (solar also) power, backup power supplies need to be kept in reserve. The cycling of fossil fuel-fired power plants makes them less efficient and tends to increase the amount of emissions they release. Moreover, other than combined-cycle gas plants that have rapid starting options, the power plants are left idling creating carbon emissions while the clean energy power sources are supplying electricity. BENTEK conducted a study of wind power systems and their impact on carbon emissions in Colorado and Texas. Their report showed that by increasing wind power into the grid, there was actually an increase in carbon emissions from what was theoretically assumed would be the result of this strategy.

It will be interesting to see whether FERC considers the issues or looks for a politically popular way to keep the current administration happy

When CRA presented its study in 2010 and BENETEK did theirs that year, it was clear some consultants were being hired to justify utopia for the utility industry in order to help them secure their PPAs and project approvals. A lot of these issues have now been placed before FERC with the filing of the recent complaint by Mr. Riggs. It will be interesting to see whether FERC considers the issues or looks for a politically popular way to keep the current administration happy. Possibly some day in the future, a Massachusetts utility worker will be able to instantly secure wind power from Texas so he won't need to maintain a coal-fired power plant in the neighborhood. We can't image what that power will cost due to the infrastructure investment needed and the technology to actually make it happen. Our guess is that day is a long way off.

Battle Over Fracturing In New York State Is Ramping Up

That ban did little to end the anti-fracturing opposition in the region located along the northern border of Pennsylvania, especially the liberal hotbed of Ithaca at the tip of Cayuga Lake in the Finger Lakes region of the state

The prolific Marcellus shale formation that blankets Pennsylvania, West Virginia and the eastern portion of Ohio also extends into western and southern areas of New York State. In response to a strong and vocal environmental movement in these regions, New York instituted a moratorium against the use of hydraulic fracturing to tap the potential hydrocarbon resources deposited in these areas. One major political issue was concern about potential contamination of drinking water sources that supply New York City, so the area surrounding the water reservoirs was ruled off-limits for any drilling or fracturing. That ban did little to end the anti-fracturing opposition in the region located along the northern border of Pennsylvania, especially the liberal hotbed of Ithaca at the tip of Cayuga Lake in the Finger Lakes region of the state.

Expectations are that New York Governor Andrew Cuomo will advocate allowing limited drilling to go forward

A four-year study of the risks associated with the use of hydraulic fracturing to tap the oil and gas resources in the Marcellus and Utica formations of New York State is coming to a conclusion. A draft proposal suggested limited state approval for drilling and fracturing, but the final study's conclusions have not been released nor has there been a vote on the issue. Expectations are that New York Governor Andrew Cuomo will advocate allowing limited drilling to go forward, but it will require a vote of the legislature, which is not due to return to Albany until January 2013.

One of the latest and arguably most high-profile groups to oppose hydraulic fracturing is the Artists Against Fracking Coalition

According to an article in *Rolling Stone* magazine, a New York Department of Environmental Conservation spokesperson wrote in response to an email request for comment that "Our review of high-volume hydraulic fracturing is continuing and no decisions have been made." The representative went on to comment that the department has been responding to 80,000 comments it received on the draft report and recommendation. One of the latest and arguably most high-profile groups to oppose hydraulic fracturing is the Artists Against Fracking Coalition based in New York City and founded by Yoko Ono, wife of the late Beatle John Lennon, and her son, musician Sean Lennon. The group held a press conference a

Ms. Ono indicated that she had sent a letter to Gov. Cuomo asking for his support against relaxing the restrictions against fracturing

couple of weeks ago to highlight its opposition to ending in anyway the ban against hydraulic fracturing in New York State. Ms. Ono indicated that she had sent a letter to Gov. Cuomo asking for his support against relaxing the restrictions against fracturing. The coalition's opposition was further highlighted by an op-ed published by *The New York Times* and written by Sean Lennon.

Exhibit 7. Lennon Farm Is In Delaware County



Source: geology.com

Sean Lennon believes that all his memories and enjoyment of the farm will be lost with the arrival of the oil and gas companies

Sean Lennon's op-ed focused on the idyllic surroundings of his family's farm in northern Delaware County at the edge of the Catskill Mountains and where the water flowing in a neighboring stream, Ouleout Creek, flowed north into the Susquehanna River. The farm was bought by John Lennon and Yoko Ono in the early 1970s before Sean was born. According to Sean Lennon, his parents rejected the East Hampton, Long Island transformation undertaken by the Studio 54 crowd in favor of a more bucolic lifestyle of amateur dairy farmers. Sean Lennon believes that all his memories and enjoyment of the farm will be lost with the arrival of the oil and gas companies. The imagery in his letter is powerful – "land in an area that is now on the verge of being destroyed," "the world 'clean' takes on a disturbingly Orwellian tone," [referring to natural gas being "sold as clean energy"], and "Fracking for shale is in truth dirty energy." From these phrases flows a more fact-filled and authority-citing op-ed that questions the long-term safety of hydraulic fracturing.

Sean Lennon and his mother stake out the high moral ground against the dirty energy and polluting chemicals and poisonous methane released by the drilling and fracturing of the Marcellus shale

Sean Lennon and his mother stake out the high moral ground against the dirty energy and polluting chemicals and poisonous methane released by the drilling and fracturing of the Marcellus shale. Backed by the artist, musician and filmmaker members of the coalition, including such prominent figures as Paul McCartney, Ringo Starr, Lady Gaga, Jimmy Fallon, Alec Baldwin, Gwyneth Paltrow, Anne Hathaway, Julianne Moore, Uma Thurman, Hugh Jackman, Joseph Gordon-Levitt, Zooey Deschanel, Mark Ruffalo and Olivia Wilde the anti-fracturing, anti-shale and anti-energy movement is a powerful force.

Exhibit 8. Artists Against Fracking Press Conference

NEW YORK, NY - AUGUST 29: (L-R) Actor Mark Ruffalo, professor of engineering at Cornell University, Dr. Anthony Ingraffea, Sean Lennon, and Yoko Ono pose for a picture at the Artists Against Fracking Coalition Event at Paley Center For Media on August 29, 2012 in New York City.

Source: *Time Entertainment*

In his op-ed, Sean Lennon cited America's Natural Gas Alliance (ANGA) for having spent \$80 million in a publicity campaign promoting the energy and economic benefits of natural gas and shale gas. He pointed to ANGA's use of the public relations firm Hill and Knowlton that worked for the tobacco industry in the 1950s and 1960s promoting the safety of smoking. ANGA weighed in with a tweet that was picked up by *entertainment.time.com* that said, "Sean Lennon's @nytimes piece on #fracking is far more art than science. Allow us to fact check: bit.ly/O0IODp."

"Many of us at ANGA are huge fans of the Beatles and the Lennon legacy and so it gives us no pleasure to say that in describing his world of honeybees and raspberries Sean echoes his father's more imaginative periods"

A few days later ANGA issued a statement that the web site extracted from: "Many of us at ANGA are huge fans of the Beatles and the Lennon legacy and so it gives us no pleasure to say that in describing his world of honeybees and raspberries Sean echoes his father's more imaginative periods and does not seem inclined toward a serious discussion about natural gas... Sean claims natural gas could somehow 'render the climate unlivable' and 'raise the price of food and make coastlines unstable for generations.' Natural gas can do all that? Are the New York Times editorial page fact checkers all at the beach this week?"

Sean Lennon went on to say, "Once they destroy one community, they move on to the next"

Further to the issue of the economic benefits of natural gas, in an interview following the coalition's recent press conference, Sean Lennon commented, "This is not going to bring jobs to America and save our economy." He went on to say, "Once they destroy one community, they move on to the next." This line of attack is reminiscent of the war waged against Wal-Mart (WMT-NYSE) and its program to build stores in more rural communities several years ago. That campaign framed the issue as Wal-Mart destroying Main Street shopkeepers, i.e., a Goliath stomping on Davids, a charge that academic studies have shown to be false.

The energy industry needs to become more pro-active earlier when engaging “public perception” issues, and it needs to become more creative when waging these campaigns

Unfortunately, for all the money and effort expended by the energy industry, its public relations image remains poor making it more difficult to fight the environmental and “dirty energy” opposition groups, which tend to have PR-smart organizers and high-profile activist members. The energy industry needs to become more pro-active earlier when engaging “public perception” issues, and it needs to become more creative when waging these campaigns. The upcoming election is critical for the future direction of the country, and it is equally as critical for the future of energy in the United States.

Americans Rate Oil And Gas Industry As Worse Than Feds

Once a year in August, the Gallup polling organization has been asking Americans about their attitudes toward business and industry sectors. This year’s poll results, like all the previous ones, were based on telephone interviews with a random sample of 1,012 adults, aged 18 years or older, living in the all 50 U.S. states and the District of Columbia. This year’s poll was conducted August 9-12, 2012. All prior polls were conducted in the first half of August except for 2001, which was conducted in mid-August.

Americans believe the computer industry was viewed most favorably and the oil and gas industry the least

The results of the poll showed that Americans believe the computer industry was viewed most favorably and the oil and gas industry the least. Five of the six highest-rated business and industry sectors, according to their net positive scores, are related to either the computer or the food sector of the economy. The one exception is the retail industry, which ranked third.

Negative ratings went from 10% for the computer and restaurant industries to 61% for the oil and gas industry

The ranking of all industries is contained in Exhibit 9. Industry positive rankings ranged from 73% for the computer industry to 22% for the oil and gas industry. Negative ratings went from 10% for the computer and restaurant industries to 61% for the oil and gas industry. Interestingly, the oil and gas industry ranked worse than the federal government, although both sectors improved in the past year. Interestingly, the oil and gas industry was ranked worse than the federal government by Americans sampled, although both sector rating percentages improved compared to last year. The oil and gas industry was one percentage point worse in favorability rating than the federal government and was also one percentage point worse in negativity.

Exhibit 9. Industry Ratings By Americans In 2012

For each of the following business sectors in the United States, please say whether your overall view of it is very positive, somewhat positive, neutral, somewhat negative, or very negative. How about -- [RANDOM ORDER]?

Industry	% Positive	% Neutral	% Negative	Net positive (positive minus negative, in pct. pts.)
Computer industry	73	14	10	63
Restaurant industry	59	29	10	49
Retail industry	53	29	16	37
Internet industry	55	21	20	35
Farming and agriculture	52	25	20	32
Grocery industry	51	27	20	31
Publishing industry	42	33	21	21
Accounting	39	38	19	20
Travel industry	40	34	21	19
Automobile industry	43	28	28	15
Telephone industry	42	29	28	14
Education	45	22	32	13
Sports industry	43	25	30	13
Movie industry	38	25	35	3
Television and radio industry	37	25	36	1
Healthcare industry	42	15	42	0
Pharmaceutical industry	37	24	38	-1
The legal field	34	25	37	-3
Electric and gas utilities	34	26	38	-4
Advertising and public relations industry	31	33	35	-4
Airline industry	31	32	35	-4
Real estate industry	27	30	41	-14
Banking	25	21	53	-28
The federal government	23	14	60	-37
Oil and gas industry	22	15	61	-39

Aug. 9-12, 2012

GALLUP

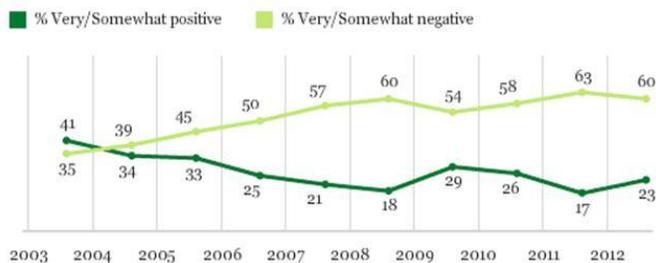
Source: Gallup

The three worst performers were banking, farming and agriculture and electric and gas utilities

While Gallup makes much of the improvement from year to year of various industry sectors, long-term trends may not be as kind as we show with O&G and the federal government. It is interesting that the three industries or sectors with the top positive rating improvements between 2011 and 2012 were healthcare, education and retail. On the other end of the spectrum, the three worst performers were banking, farming and agriculture and electric and gas utilities.

Exhibit 10. Government Out-ranks Oil & Gas Industry

Ratings of the Federal Government, 2003-2012

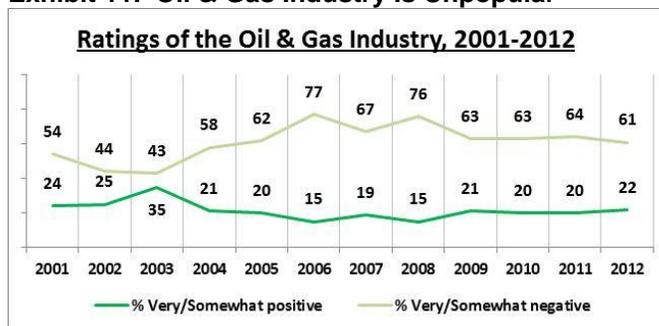


GALLUP

Source: Gallup

We thought it would be interesting to examine the view of Americans toward the federal government and the oil and gas industry over time. Based on the data available from Gallup's web site, it must not have surveyed Americans' attitudes about the federal government before 2003 while polling had sampled views about the oil and gas industry beginning two years earlier.

Exhibit 11. Oil & Gas Industry Is Unpopular



Source: Gallup, PPHB

The relatively stable ratings, both favorable and unfavorable, over most of the 12-year period points to the challenge the oil and gas industry faces in winning public support for any of its positions

When looking at the long-term trend in favorable/unfavorable ratings for the oil and gas industry compared to the federal government, it was interesting to see that the former's ranking hadn't changed materially in either category over the past 12 years. On the other hand, Americans' views toward the federal government changed drastically over the past decade. The federal government's unfavorable rating nearly doubled from 35% to 60%, while its favorable ratings declined from 41% to 23%. The relatively stable ratings, both favorable and unfavorable, over most of the 12-year period points to the challenge the oil and gas industry faces in winning public support for any of its positions. Without a more favorable rating, it is difficult to believe the oil and gas industry can ever win over the public on critical industry issues. This rating position also means the industry is perceived as an easy target for emotionally-charged environmental issues.

Lower 48 Land Natural Gas Production Continues To Grow

Hurricane Isaac appears to have inflicted little damage on the offshore Gulf of Mexico producing facilities

Natural gas prices continue to struggle to rise above \$3 per thousand cubic feet and stay there. Hurricane Isaac appears to have inflicted little damage on the offshore Gulf of Mexico producing facilities, although it did cause a shutdown in production for a few days as workers were evacuated for safety reasons. While rain and flooding along the Gulf Coast in Louisiana and Mississippi may have impacted some onshore operations, on balance the storm was a non-event for the oil and gas industry.

From a demand perspective, natural gas continues to gain share of the electric generation market, but weak coal prices have slowed the rate of gain. As we move into the early fall shoulder months for

The early forecasts suggest a normal rather than a colder winter, which will do little to lift gas prices higher

For people hoping for higher natural gas prices in the near term, that overall national production decline is a positive

energy demand (less) natural gas prices will fluctuate more based on the rate of gas injections volumes into storage and perceptions about when cold temperatures may arrive and how they might impact winter gas demand. At the present time, the early forecasts suggest a normal rather than a colder winter, which will do little to lift gas prices higher.

The latest natural gas monthly production figures from the Form 914 monthly survey of producers conducted by the Energy Information Administration (EIA) suggest that total U.S. gas production declined. However, as we move from the estimates for total gas production to the estimate for Lower 48 gas production, the picture changes dramatically. The change is the result of changes in Alaskan production and Gulf of Mexico production. There is also a very different picture of the gas supply outlook depending on whether one looks at the latest monthly data versus its prior month initial estimate or compared to last month's revised total. The data reported by the EIA has a two month lag, so the most recent estimate is for the month of June. We have shown the changes in the monthly volumes in Exhibit 12. If we look at the change in total U.S. gas production, the month-to-month difference (June versus May) in initial volume estimates is -0.72 billion cubic feet per day (Bcf/d). Compared to the revised monthly figure for May, the difference is -0.88 Bcf/d. For people hoping for higher natural gas prices in the near term, that overall national production decline is a positive.

Exhibit 12. Lower 48 Land Gas Production Grows

Bcf per day	Initial May 2012 to Initial June 2012	Revised May 2012 to Initial June 2012
Total U.S. gross	(0.72)	(0.88)
Alaska gross	(0.69)	(0.69)
Lower 48 gross	(0.02)	(0.19)
Gulf of Mexico gross	(0.29)	(0.29)
Lower 48 land gross	0.27	0.11

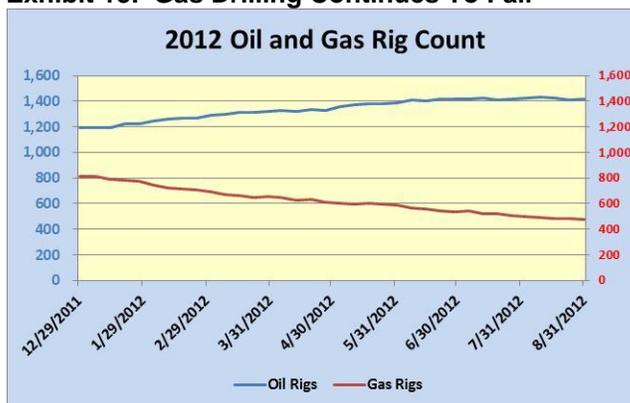
Source: EIA, PPHB

The thesis for higher natural gas prices is based on the meaningful shift in producer focus from dry natural gas prospects in favor of shale oil and liquids-rich gas prospects

The problem becomes when we look deeper into the production estimates, we see that the volume decline was due to sharply lower Alaskan and Gulf of Mexico production. These volume changes can be large, but often are the result of specific events in these two markets. Natural gas price bulls have been counting on falling production for the Lower 48 land market, which is heavily influenced by shale drilling. The thesis for higher natural gas prices is based on the meaningful shift in producer focus from dry natural gas prospects in favor of shale oil and liquids-rich gas prospects. This race from dry gas to liquids has been underway for a while and actually accelerated during this year. In Exhibit 13 we have presented the oil and gas rig counts as reported by Baker Hughes (BHI-NYSE) since the last week in December 2011. During the eight months of 2012, the oil rig count has increased by 226, or 18.9%, while the gas rig

count fell by 336, or 41.5%. Since these rigs are primarily located in the Lower 48 land region, one would have expected a greater impact on gas production.

Exhibit 13. Gas Drilling Continues To Fall



Source: Baker Hughes, PPHB

Unless gas prices soar and stimulate producers to shift their drilling back to dry gas prospects, we expect gas production in the Lower 48 land market to drop in coming months

So why hasn't gas production in the Lower 48 land region declined in pace with the fall in gas-oriented drilling rigs? The primary reasons reflect the large amount of gas associated with shale oil production, the focus on liquids-rich gas prospects that also produce larger than anticipated gas volumes, and the completion of previously drilled but uncompleted wells. This latter category of wells has always been an overhang for the natural gas market. These uncompleted wells were drilled during the rush to drill leases in order to hold them, but wells weren't completed as producers focused their limited capital on more economic wells and wells that proved up new producing areas. Now that much of the effort on defining the productive areas of shale basins is over, producers are going back to complete these previously drilled wells. Unless gas prices soar and stimulate producers to shift their drilling back to dry gas prospects, we expect gas production in the Lower 48 land market to drop in coming months. The questions will remain: how much and when?

Gasoline Consumption Up For Labor Day But Gain Is Deceiving

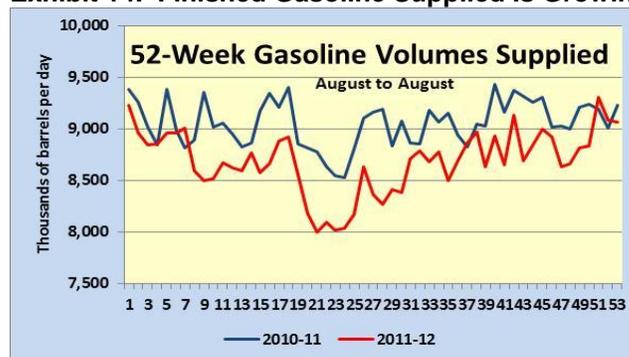
Demand was estimated to be 9.11 million b/d, a 14-week high, and up from 8.94 million b/d in the prior week

As reported by *Bloomberg News*, MasterCard Spending Pulse's weekly survey showed that U.S. gasoline demand increased 1.9% for the week ending August 31st. Demand was estimated to be 9.11 million barrels per day (b/d), a 14-week high, and up from 8.94 million b/d in the prior week. The latest weekly demand is the highest since May 25th, representing a 4.2% increase from the same week a year ago, after having posted declines for the previous 52 weeks. The annual weekly comparison is helped by the fact that last year, Hurricane Irene was starting its track up the East Coast of the country shutting down life, commerce and certainly vacation travel.

For the latest four-week average compared to the year-ago period, demand is 1.1% lower, marking the 76th consecutive decline in the measure

Year-to-date, gasoline demand is down 4.2% from the same period of 2011. For the latest four-week average compared to the year-ago period, demand is 1.1% lower, marking the 76th consecutive decline in the measure. While the data in Exhibit 14 is not the same as the MasterCard Spending Pulse is reporting, the amount of finished gasoline supplied to the market as reported by the Energy Information Administration over the past two years shows how the demand pattern collapsed this year but is slowly returning to comparable year-ago levels.

Exhibit 14. Finished Gasoline Supplied Is Growing



Source: EIA, PPHB

It is interesting to note how low gasoline volumes fell during this past winter, an unusually warm season, compared to the prior worse winter

The finished gasoline supply figures in Exhibit 14 highlight the seasonal demand decline experienced during the fall and winter months. On the other hand, they also demonstrate how gasoline demand builds slowly following winter and into the stronger summer driving season. It is interesting to note how low gasoline volumes fell during this past winter, an unusually warm season, compared to the prior worse winter. The gasoline volumes number raise some concerns about the assumption that the warm winter caused more economic activity to be pulled forward.

If we assume that the amount of finished gasoline supplied is representative of actual gasoline consumption, there has been a sharp upward bounce in recent weeks. Labor Day plans signaled more Americans traveling over the holiday weekend coupled with sharply rising gasoline prices due to the fire at Chevron's (CHV-NYSE) West Coast refinery, the devastating fire at the Venezuelan refinery, the Iranian economic sanctions placing upward pressure on crude oil costs, rising corn prices boosting ethanol blending component costs and concern about possible damage to Gulf Coast refining capacity and Gulf of Mexico oil production facilities from Tropical Storm Isaac, consumers may have stepped up their buying.

The Real Or Unreal World Of California Gov. Jerry Brown

In our eclectic reading, we recently received a copy of *Pacific Standard* magazine in response to another publication we subscribe

The magazine “is not about the West; it’s a magazine published from the West that dedicates itself to looking at the world through that lens”

to that has elected to cease publishing a magazine and going totally electronic. In the letter from editor P. Steven Ainsley, he described the focus of the magazine and that the issue we received was a special one. Mr. Ainsley said, “*Pacific Standard* focuses broadly on themes of education, the environment, the economy, and modern culture.” He went on to say that the magazine “is not about the West; it’s a magazine published from the West that dedicates itself to looking at the world through that lens.”

In describing the special issue, Mr. Ainsley said, “This one covers the issues confronting California, the most populated state in the nation, and the one often cited as having the ninth-largest economy in the world when ranked with independent nations. The challenges confronting California are commonly harbingers of things to come for the rest of the nation.”

The magazine contained an extended article about an interview it conducted with California Governor Jerry Brown. Gov. Brown is serving his third term as governor of the state having previously served two terms about three decades ago. In the interim he served two terms as mayor of Oakland and one term as the state’s attorney general. He also made three unsuccessful runs for president and is now planning his next run for the governor’s office.

In a state that has been rejecting tax increases for two decades, it is highly questionable whether the public will suddenly embrace Gov. Brown’s tax increase necessity view

The article described Gov. Brown as “determined to push ahead with what he sees as his historic mandate: to build a stable water system for the state, construct a futuristic \$68 billion high-speed rail system, turn more power over to local governments, move the state to alternative energies, and stabilize and reform the heretofore uncontrollable budget process – even if he has to do it on his own.” In the Q and A session, Gov. Brown was constantly responding to the issue of the financial health of California. He is putting a tax increase on the ballot in hopes the citizens will agree with him that there is no other choice and that he has his back to the wall. In a state that has been rejecting tax increases for two decades, it is highly questionable whether the public will suddenly embrace Gov. Brown’s tax increase necessity view. This is especially true given his budget cuts while still desiring to invest tens of billions on big ticket items. When asked about this, Gov. Brown said, “Gotta invest! Gotta invest right now. Right now they’re cutting satellites for climate monitoring – dumb idea on the part of Congress. Hey, you might be cutting health care, you might be cutting welfare, but you have to invest in infrastructure, in basic R&D.”

Then he was fully embracing the “Era of Limits”

This line of question was followed with a discussion of Gov. Brown’s public utterances when he was in office decades ago. Then he was fully embracing the “Era of Limits.” He applied this philosophy to government since that period was marked by legislators wanting to undertake all sorts of socially popular initiatives even when the funding wasn’t present. Now, California has to cut and make truly hard decisions.

“First of all, in 10 or 15 years, we’ll probably be suffering extreme weather events”

One of the strangest series of questions and answers, which help explain why much of the rest of the United States questions what is going on in California. Here are the questions and answers:

“Some observers say the current California gridlock will disappear in 10 to 15 years when the demographics of the state catch up with the electorate. The voters are older, whiter, wealthier than the population, but that is changing.

That sounds a bit utopian to me. First of all, in 10 or 15 years, we’ll probably be suffering extreme weather events. We’ll have plenty of problems then. Not to mention the aging European stock that will feel besieged.”

“It’ll be browner because we’ll be having forest fires.”

“Barring extreme weather, if the state becomes increasingly majority-minority, when it becomes browner – browner, with a small b – won’t we see a political sea change?

It’ll be browner because we’ll be having forest fires.”

“Climate change is serious stuff”

“Come on, you’re more optimistic than that.

No. Ever read Jim E. Hansen? [former NASA scientist and leading climate change advocate] Climate change is serious stuff. Extreme events - they will happen. We’ll cope with them. But there’ll be more expenses. We’re storing up a lot of liabilities that we’ll have to deal with. Yes, there will be a different demographic balance, different environmental challenges, and there’ll be a different economic picture. It’s very hard to predict. I would say it’s not going to be any easier than it is today. It will probably be harder.”

California may be the best example of the understanding that blind dedication to fighting against apocalyptic climate scenarios will ultimately lead to economic catastrophe

While we found this series of questions and answers somewhat bizarre, it was enlightening just how much California’s political and economic action is driven by fear about climate change. California may be the best example of the understanding that blind dedication to fighting against apocalyptic climate scenarios will ultimately lead to economic catastrophe. Fighting carbon emissions in California by building a \$68 billion high-speed railroad that the state can neither finance nor afford, and that will require decades to complete, if it is ever finished, is the best example of the failure of this philosophy of government.

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