2014 Outlook: Utilities, Power, and Gas

Electricity Sales Unplugged

Outlook Report

Rating Outlook
Utility Parent Companies (UPC)

STABLE

(2013: STABLE)

Investor-Owned Utilities (IOU) — Electric and Gas

STABLE

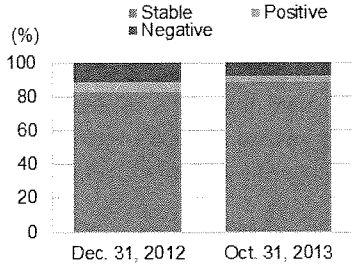
(2013: STABLE)

Competitive Generation Companies (Gencos)

STABLE

(2013: NEGATIVE)

The Utilties, Power, and Gas Sector Outlook Distribution
(Dec. 31, 2012, as Compared with Oct. 31, 2013)



Source: Fitch.

Sector Outlook
IOU Electric

STABLE

(2013: STABLE)

IOU Gas

POSITIVE

(2013: STABLE)

Gencos

NEGATIVE

(2013: NEGATIVE)

- Flat electricity sales trends.
- Regional variance from national trend
- Stable natural gas price outlook

Stable Ratings Outlook: Fitch Ratings expects the ratings and ratings outlook for the overall U.S. Utilities, Power, and Gas (UPG) sector to remain stable in 2014. Fitch expects modest earnings growth from recent rate base additions and continued maturation of capex projects. Broad macroeconomic conditions remain favorable for the sector; Fitch expects modest economic growth, tepid inflation, low natural gas prices, and a favorable interest rate environment.

Divergent Operating Fundamentals: Business line and regional distinctions are emerging as key operating differentials in Fitch's analysis of the UPG sector. Gas utilities have a positive sector outlook, while electric utilities have a stable sector outlook and competitive generators (gencos) have a negative sector outlook.

Got Gas?: Gas utilities are benefitting from stable and low natural gas prices, and growing volumes from system build-outs and growing usage in electricity generation and as transportation fuel. In the northeast and mid-Atlantic regions, conversions from heating oil are also propelling strong customer and volume growth. Fitch expects continued strong growth and improved credit metrics for the sector in 2014, although ratings are expected to be stable.

Electric Industry Challenged: The electric industry faces stagnant growth prospects as the recent trend of declining per-capita consumption is expected to continue, if not accelerate. Efficiency, driven by favorable economics and fostered by federal and state energy policies, will erode electricity sales for the foreseeable future. Consequently, growth prospects appear brightest in the Sun Belt regions, which have experienced the strongest economic growth. Demographics, including the retirement of the baby boomers, will drive population migration to warmer climates. Outside of the Sun Belt, Fitch expects declining electricity sales in most areas.

Higher Capex, Flat Sales: The recent trend of higher capex and flat electricity sales will pressure retail prices as costs are spread over fewer units of sales. Earnings growth for the industry, based on higher capex in light of weak sales, is unsustainable and calls into question the industry's current business model.

Competitive Generators Under Siege: Efficiency and demand-side management programs (DSM) continue to constrain load growth and shave peak load. Power prices are in turn expected to remain near current depressed levels, and forward curves portend only a slow recovery in wholesale power prices. While sector fundamentals remain negative, the credit profile of independent generators has actually improved with consolidation, while affiliated gencos may continue to face rating and outlook pressure.

Outlook Sensitivities

Natural Gas Prices: Electric utilities, gas local distribution companies, and gencos are all heavily dependent on, and therefore closely correlated to, natural gas prices and supply. Fitch models assume natural gas prices in the $3.50/thousand cubic feet (mcf)–$4.00/mcf range in 2014, consistent with 2013 pricing. Any potential environmental restriction on fracking (not considered likely by Fitch), would alter natural gas supply and result in price spikes, adversely affecting the earnings and liquidity of most industry participants.

Capital Markets Access: The industry is capital intensive with a still-large backlog of infrastructure investments projects to be developed over the next few years. Bank credit and capital markets access are essential ingredients in maintaining the industry's strong liquidity.

Overview

Fitch expects the 2014 economic environment to reflect gradual improvement from 2013. The UPG operating environment is expected to be similar to 2013, with continued pressure on electricity sales and low natural gas prices. Key underlying macroeconomic forecasts (from the Global Economic Outlook, September 2013) include:

- 2014 GDP growth of 2.6%.
- 10-Year U.S. Treasury yield reaching 3.2%.
- Unemployment declining to 7%.
- Natural gas prices rage bound $4.00/mcf (Fitch 2014 price deck average).
- Inflation at 2%.
- Housing starts of 1.1 million units (Fitch's U.S. Homebuilding/Construction: The Chalk Line Fall 2013).

Fitch's key industry forecasts and assumptions include:

- Stable regulatory policies at the federal and state level.
- Weather-normalized retail electricity sales flat to minus 1%.
- Normal weather in 2014 could produce flat to slightly higher sales as compared with 2013 sales.
- Elevated capex spending.
- Modest pressure on authorized return on equity (ROE) levels.
- Strong bank and capital markets access.

Stable Utility and Utility Parent Company Ratings

Within the context of gradual recovery, low inflation, and stable commodity prices, Fitch expects regulated utilities to maintain their solid investment-grade credit profile. Issuer Default Ratings (IDRs) should remain on the cusp of 'BBB+' to 'A–', with more than 90% of debt issuances being rated in the 'A' category. Long-term debt instrument ratings of Fitch's entire universe of regulated utilities carry investment-grade ratings, a testament to the sound credit profile of the industry.

Fitch expects stable utility parent company (UPC) ratings, although UPCs with affiliated gencos could face some rating pressure. Median IDRs and senior unsecured debt for UPCs should remain at 'BBB+'.

Sector Outlook

The sector outlook for regulated electric utilities is stable. Many state-run efficiency programs rely on utilities for implementation, and lost electricity sales attributable to efficiency are usually covered by efficiency riders that allow the utility to be reimbursed for the lost sales and other costs of the efficiency program.

The sector outlook for regulated gas distribution companies is positive. Relatively low and stable natural gas prices, customer growth, expanded use of natural gas for power generation and transportation fuel, and customer switching from heating oil or propane will drive substantially higher throughput volumes and drive improved profitability. All sector outlooks are based on normal weather conditions, and consequently, actual results may vary.

Related Research

Other Outlooks
www.fitchratings.com/outlooks

Other Research

Utilities, Power, and Gas Monthly Summary — October 2013 (November 2013)

Fitch Fundamentals Index - U.S. Index Trend Analysis – 3Q13 (October 2013)

Power Down II: Efficiency Gains Short Circuit kWh Sales (U.S. Residential Electricity Consumption Leads Broad Declines Across All Sectors) (October 2013)

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Discreet and individualized Rating Outlooks for Gencos

Independent power producers (IPPs) already carry deep non-investment-grade ratings, reflecting poor sector fundamentals, including weak electricity demand and low power prices. However, following a year of heavy downgrades in 2013, Fitch sees a more stable rating environment in 2014. While fundamentals will remain challenging, recent company consolidation is considered a credit positive. Regional market conditions and fuel mix are key differentiating factors between individual companies.

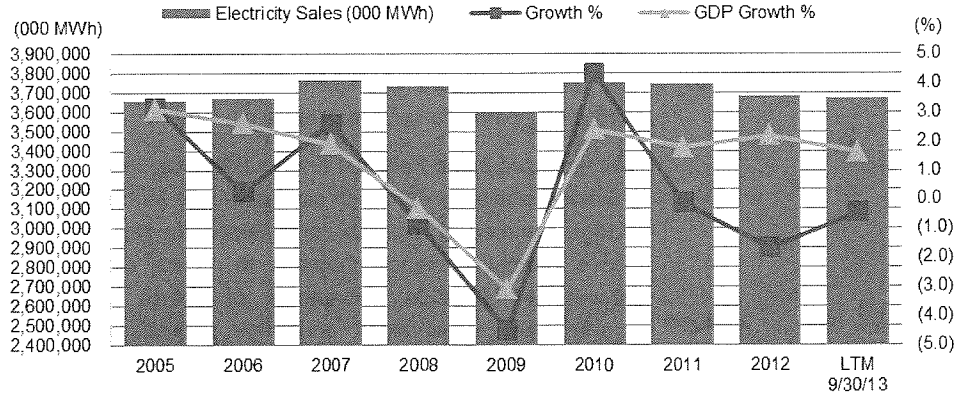
Affiliated gencos generally have investment-grade ratings and may be under greater rating pressure. This, in turn, poses a rating risk for parent companies with genco subsidiaries. Given the extended trough in power companies, many affiliated gencos have used debt reduction as a means to preserve their credit profile. Longer term, this strategy will likely be insufficient to maintain ratings.

Key Issues

Flat Electricity Sales

U.S. electricity sales peaked in 2007 and have declined in four out of the last five years. While, cyclical factors, including weather and the overall level of economic activity, are key variables in electricity consumption, structural changes in electricity usage and demand are a more dynamic and growing factor in electricity consumption trends. Both regulated electric utilities and competitive generators are negatively affected by weak power sales.

Electricity Sales Trend



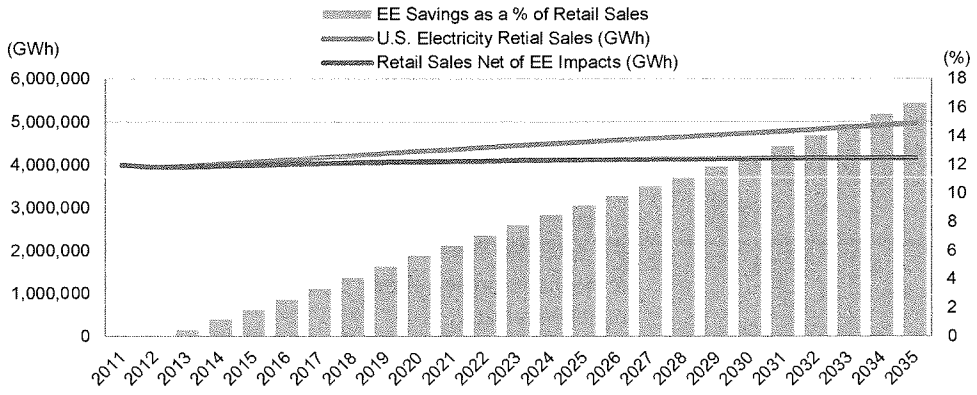
Source: EIA, Department of Commerce.

Regulated Utilities and Retail Electricity Sales

Fitch considers efficiency as a competitive threat to regulated utilities and the traditional monopolistic utility business model. It is cost effective for large and small commercial and residential electricity consumers to invest in efficiency capital investments in almost all cases. Federal and state energy policies further mandate efficiency savings. Federal policies typically target specific devices or appliances such as lighting, refrigerators, dishwashers, water heaters, and most household appliances, while state policies tend to target total consumption reductions — typically around 1% per year from a base level. The 1% annual electricity reduction goal is based on what total load

would have been without efficiency, and consequently, may only keep total electricity sales flat (see the Forecast Energy Efficiency Impacts on U.S. Retail Sales chart below).

Forecast Energy Efficiency (EE) Impacts on U.S. Retail Sales



Source: WoodMackenzie.

While efficiency investments and federal and state efficiency programs are still in their infancy, the impact on electricity sales has been immediate and will only grow over time. Efficiency is rooted in sound economics, supported by federal and state policy, and popular with all constituents: consumers, politicians, regulators, and environmentalists, a combination that will likely drive efficiency gains, even beyond current estimates.

The Forecast Energy Efficiency Impacts on U.S. Retail Sales chart above is a forecast of total lost electricity sales from efficiency, and total industry electricity sales with and without the impact of efficiency.

The financial impact on utilities to date has been more modest. Most state efficiency programs are conducted through the local incumbent utility and provide a decoupling mechanism from lost sales attributed to efficiency. Utility earnings to date have been largely insulated from efficiency, particularly for residential customers.

As projected in the Forecast Energy Efficiency Impacts on U.S. Retail Sales chart above, Fitch believes efficiency will weigh significantly on total electricity sales, based purely on economics. Large commercial multisite consumers from big box retailers, hotels, and restaurant chains have internal efficiency programs to reduce electricity consumption while Energy Service Companies (ESCOs), purveyors of energy efficiency products and services, target governments, universities, and other organizations with efficiency retrofits that guarantee energy savings. Lost sales from these investments are outside utility efficiency trackers and will increasingly pressure margins and retail electricity prices.

The credit impact to utilities from weak or lost electricity sales to efficiency are largely neutral over the near term, as most utilities have riders or decoupling mechanisms in their tariffs that recover the gross margins that were lost due to lower sales. Over the longer term, the U.S. regulated utility industry will become a stagnant, no-growth industry given current expectations of the energy efficiency impact. As discussed under the Regional Demographics Create Opportunities and Challenges section on page 5, population migration to the U.S. Sun Belt will stimulate customer growth and relatively stronger electricity sales.

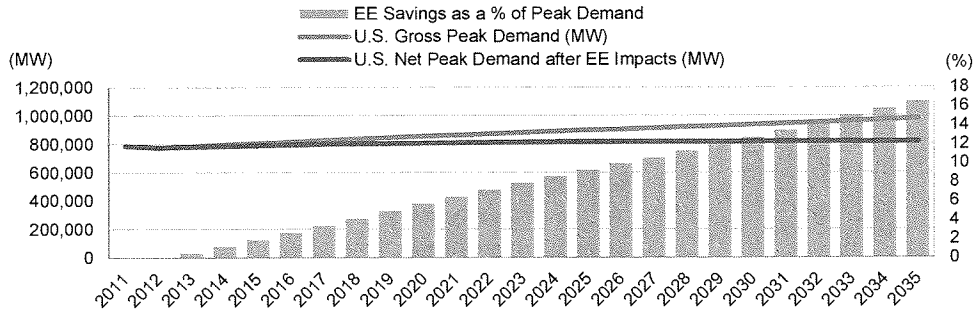
Gencos and Load Factors

Gencos, particularly IPPs, have been on the front line of weak power demand, and ratings have been under pressure since 2009. While energy efficiency has crippled aggregate electricity sales growth, many state programs also incorporate DSM programs, which can serve as a further weight on peak demand.

The combination of lower sales volumes and lower peak load has altered the operating environment for gencos where profitability was more on the "margin" and dependent on higher electricity volumes and peak load pricing.

The Forecast Energy Efficiency Impacts on U.S. Peak Demand chart below reflects a forward projection of peak demand and the impact of efficiency on peak load.

Forecast Energy Efficiency (EE) Impacts on U.S. Peak Demand



Source: WoodMackenzie.

Flattening electricity sales and flat peak demand will pressure on-peak prices, further limiting the prospect of a meaningful recovery in power prices. Similarly, reserve margins will generally remain ample. In such a scenario, gencos will face continued weak power prices and margin pressure. Market structure can also increase the DSM impact. The demand response (DR) impact has been significant in organized capacity markets. However, regional economics will provide a substantial variation to national electricity sales and peak demand trends.

Trends to Watch

Lost sales to energy efficiency are predictable and measurable, but a looming threat to retail electricity sales and wholesale power production is distributed generation. Unlike efficiency investments, DG is an expensive source of power and is currently supported by generous federal and state incentives, and net metering feed-in-tariffs and solar photovoltaic (PV) systems represent the majority of installed DG systems, but still represent only 0.2% of the total U.S. power market.

Fitch considers DG a potential competitor to utilities and gencos over the long term, and it poses challenges to the traditional utility business model and power market structures.

Regional Demographics Create Opportunities and Challenges

Fitch expects substantial regional divergence from national electricity sales volume trends. Recently, technology, the growth of the Internet, and product innovations powered growth in electricity consumption, but these same factors are at the cornerstone of energy efficiency in the future. For example, Light Emitting Diode (LED) technology has already revolutionized the

century-old lighting industry, and new LED bulbs are 75%–80% more efficient than traditional incandescent lighting produced only two years ago.

Fitch believes power demand growth will largely come from population growth. Population growth nationally runs below 1% per annum, although regional growth patterns diverge widely from the national average. Demographics, specifically the aging of the U.S. population, will drive population migration to warmer climates, particularly the Sun Belt. States with high net in-state migration include Florida, Arizona, and Nevada.

States With Highest Population Growth from April 1, 2010 to July 1, 2012

Rank	State	2012 Population	2010 Population	Change (%)
1	North Dakota	699,628	672,591	4.02
2	Texas	26,059,203	25,145,561	3.63
3	Utah	2,855,287	2,763,885	3.31
4	Colorado	5,187,582	5,029,196	3.15
5	Alaska	731,449	710,231	2.99
6	Florida	19,317,568	18,801,310	2.75
7	Washington	6,897,012	6,724,540	2.56
8	Arizona	6,553,255	6,392,017	2.52
9	Georgia	9,919,945	9,687,652	2.40
10	South Dakota	833,354	844,180	2.36

Source U.S. Census Bureau.

Strong local economic conditions are also an important contributor to customer and electricity sales growth. Fitch uses unemployment rates as a key proxy for local economic conditions. Note the strong overlap between states with low unemployment and high population growth.

10 Lowest State Unemployment Rates as of October 2013

Rank	State	Rate (%)	Rank	State	Rate (%)
1	North Dakota	2.7	6	Iowa	4.6
2	South Dakota	3.7	7	Utah	4.6
3	Nebraska	3.9	8	Wyoming	4.6
4	Hawaii	4.4	9	Minnesota	4.8
5	Vermont	4.5	10	New Hampshire	5.1

Source: Bureau of Labor Statistics.

Fitch also uses building permits as a proxy for customer growth and potential electricity sales growth since per capita electricity consumption is declining. The nascent recovery in residential housing is positive for customer growth and meter additions in certain markets.

Total residential building permits issued in 2011 totaled 610,707 units, which grew to 816,512 units in 2012. Building permits issued year to date through October 2013 exceeded the 2012 total and were 825,929, up 21.5% from the same period in 2012.

U.S. Building Permits — Five Largest States (YTD Oct. 21, 2013)

Rank	State	No. of Permits	% of National Total	YoY (%)
1	Texas	123,865	15.0	9.7
2	Florida	74,916	9.1	38.8
3	California	63,374	7.7	46.1
4	North Carolina	42,457	5.1	6.3
5	Georgia	29,517	3.6	46.9

YoY – Year over year.
Source: U.S. Census Bureau.

Regulated Utilities and Regional Demographics

With the nascent recovery in housing, there is some early evidence to support the stronger customer growth and higher electricity sales Fitch foresees in the Sun Belt and other select markets.

National electricity sales declined by 1.23% in 2008–2012 (see Electricity Sales Trend chart on page 3), while electricity sales for the sample four Sun Belt utilities (Arizona Public Service, CenterPoint Houston, Florida Power & Light, and Georgia Power) listed in the Electricity Sales table below were essentially flat in the aggregate. Although the national and individual utility data is not weather normalized, Fitch believes the electricity sales trend accurately depicts the bifurcation of the industry.

Electricity Sales

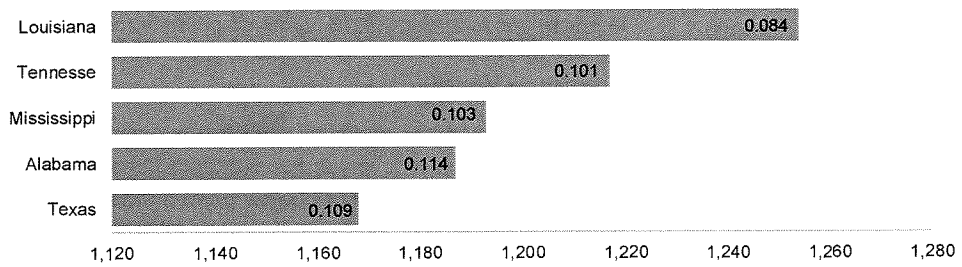
(MWh)	2008	2009	2010	2011	2012
DTE Electric Company	50.72	45.98	45.70	45.56	43.45
Florida Power & Light Company	105.41	105.41	107.98	106.66	105.11
Consolidated Edison Company of New York	58.32	56.67	58.69	57.83	57.20
Pacific Gas & Electric Company	74.78	72.39	79.63	81.26	86.11
Arizona Public Service Company	32.95	32.29	31.86	31.65	32.45
Georgia Power Company	84.30	81.40	87.20	84.30	81.80
CenterPoint Energy Houston Electric LLC	74.84	74.58	76.97	80.01	78.59

Source: Company reports.

The difference between the national electricity sales decrease of 1.23% and a flat regional electricity sales trend may appear modest, but prior to 2008, the industry never experienced consecutive annual declines in electricity sales, and sales declines in any one year never exceeded 1%. Consequently, Fitch considers the electricity sales divergence as material and likely to grow as the stronger housing data materializes into completions and meter connections.

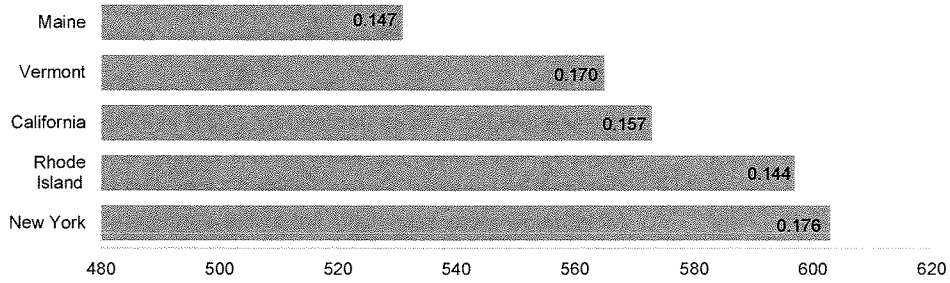
Sun Belt utilities will not only benefit from stronger customer growth, but electricity usage per customer is also much higher, driven principally by cooling demand from warmer weather. Residential electricity sales in the Sun Belt region run approximately 20%–25% higher than the national annual average of 11,280 kWh (940 kWh per month) per household. In addition, electricity prices throughout the Sun Belt are generally at or below national averages, which may limit the impact of customer conservation. The national average electricity price in 2012 was $0.118 per kWh.

Average Monthly Residential Consumption — Five Highest States
(kWh)



Source: EIA.

Average Monthly Residential Consumption — Five Lowest States
(kWh)



Source: EIA.

The Average Monthly Residential Consumption charts on pages 7 and above reflect high- and low-consumption states with the corresponding cost of electricity. While many other factors may be present, a correlation exists between consumption and price.

Other high-growth states previously referenced, including Florida, Georgia, Nevada, and Arizona, also have high monthly electricity consumption and below average retail prices at 1,081 kWh/$0.1142; 1,098 kWh/$0.1117; 935 kWh/$0.1183, and 1,089 kWh/$0.1129, respectively.

Gencos and Regional Factors

The underlying electricity consumption and regional growth patterns that affect utilities have an even greater impact on gencos. Most gencos maintain some open margin position and have spare capacity that benefits in periods of high demand, such as during the summer heat wave in 2010. With peak and total load relatively flat from 2007 to 2012, power prices and natural gas prices bottomed in 2012.

Average annual peak load growth forecasts continue to be reduced in all regions except in the SERC Reliability Corporation — Virginia; Carolinas (VaCar) subregion, which remained unchanged; and Texas, which remained relatively flat, reflecting the underlying strong growth of the Texas economy.

Gross Peak Demand

(10-Year Average Annual Growth Projections)

Region	2013F (%)	2008F (%)
TRE — Texas	1.70	1.80
SPP	1.60	1.90
SERC — VaCar	1.40	1.40
FRCC — Florida	1.20	2.20
NPCC — New England	0.80	1.10
NPCC — New York	0.60	1.10

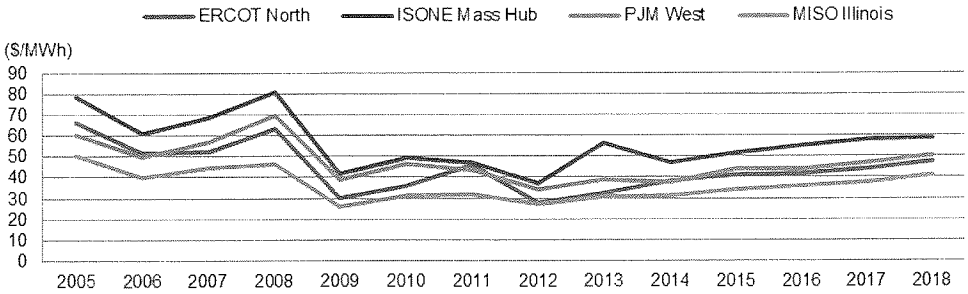
TRE – Texas Reliability Entity. SPP – Southwest Power Pool.
SERC — VaCar – SERC Virginia, Carolinas.
FRCC – Reliability Coordinating Council.
NPCC – Northeast Power Coordinating Council. F – Forecast.
Source: Wood MacKenzie.

Power prices increase gradually in Fitch's models and forecasts (with the exception of Texas, where Fitch expects a stronger and faster rebound in prices). Fitch's power market consultant, Wood MacKenzie, also projects a gradual increase in power prices through 2018, although prices remain below pre-recessionary 2008 levels.

Trends to Watch

The housing recovery continues and Fitch expects housing starts in the U.S. to hit a 1.1 million pace in 2014. The recovery in housing from Great Recession lows of less than 600,000 units still leaves housing starts well below peak annual levels of 1.7 million units. A resurgence in housing starts to prior levels would cause Fitch to reevaluate its power demand assumptions, with utilities and gencos serving the Sun Belt accruing particular strength.

Comparison of Historical and Forecast Round-the-Clock Power Prices
(2005–2019)



ERCOT – Electric Reliability Council of Texas. ISONE – Independent Service Operator Region of New England.
PJM – Pennsylvania-New Jersey-Maryland Interconnection. MISO – Midwest Independent Transmission System Operator.
Source: Wood Mackenzie, Fitch.

Natural Gas Prices Stable, Off Lows

Fitch expects moderately higher natural gas prices in 2014. Fitch's 2014 price deck for natural gas is $4.00/mcf against an adjusted $3.75/mcf price deck for 2013. Fitch revised its natural gas price to $3.75/mcf from $3.50/mcf in July 2013, the first upwards prices revision in many years, reflecting improving fundamentals. The longer term price deck remains at $4.50/mcf. Fitch expects natural gas prices to be relatively stable throughout 2014, as seasonal factors such as weather-related demand (summer heat wave or cold winter) and Gulf of Mexico storms no longer have a significant impact on natural gas prices.

Despite the modest upward revision, natural gas prices will likely remain well below pre-recession levels, which were in the $8.00/mcf range.

Fitch Natural Gas Price Deck

($/mcf)		2014	2015	Long-Term
Natural Gas — Henry Hub U.S.	Base	4.00	4.25	4.50
Natural Gas — Henry Hub U.S.	Stress	3.25	3.50	3.50

Mcf – Thousand cubic feet.
Source: Fitch.

Higher production from increased drilling in the newer shale plays is expected longer term, as innovations in drilling technology continue to drive down production costs and increase gas supply at relatively low prices. At forecast levels, natural gas prices will continue to dampen power prices, since natural gas prices are a significant driver for power prices in a majority of U.S. regions.

Regulated Utilities and Natural Gas Prices

Weak power prices and low natural gas prices create a benevolent backdrop for regulated utilities by keeping customer rates low, since fuel and purchased power costs are the biggest components of base rates. However, for electric utilities, the benefit of the declining power price environment on customer rates has already been fully recognized. Fitch expects the higher natural gas price forecast in 2014 to work its way into fuel and purchased power tariff adjustments and pressure customer retail rates in 2014.

U.S. retail electricity prices grew approximately 5.3% per year from 2003 until 2008. Two events in 2009, the steep and rapid decline of natural gas prices from the shale drilling revolution and weak power demand following the Great Recession, served to dampen retail electricity prices. Retail electricity prices grew just 1.1 % per year from 2009 to 2012. In 2013, retail electricity prices are running approximately 1.9% above 2012 levels, suggesting an escalation in retail electricity prices.

Fitch sees additional pressure on retail electricity rates from the maturation of the elevated capital investment cycle that runs through 2014.

Average Residential Retail Price of Electricity

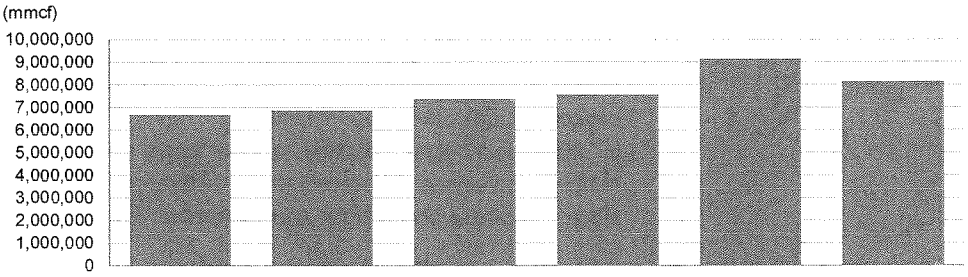
Source: EIA, Department of Commerce.

Fitch has a positive sector outlook on natural gas distribution companies (LDCs). LDCs benefit from the relatively low and stable natural gas price environment, which eases customer conservation efforts and minimizes working capital needs. Fitch considers LDCs to have strong growth opportunities.

LDC growth opportunities, supported by customer additions, are less sensitive to the housing cycle and represent both residential and commercial customer conversions from other fuels, principally heating oil and propane. LDCs in New England and the Mid-Atlantic states will benefit from heating oil conversions for the foreseeable future, which should sustain customer growth rates of 2%–3% well into the future.

Natural gas usage as a transportation fuel and in electricity generation has grown substantially in recent years, reflected in higher throughput volumes of LDCs' pipeline and distribution systems.

Natural Gas Consumption For Electricity Generation



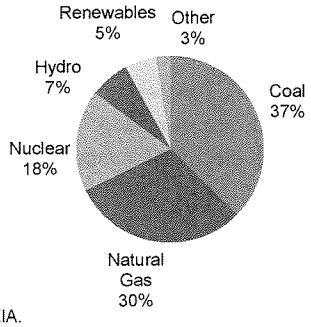
Mmcf – Million cubic feet.
Source: EIA.

Gencos, Natural Gas Prices, and Generation Mix

Low natural gas prices have had a pronounced impact on the nation's generation mix. Gas prices were weak throughout 2012, touching an April Henry Hub low of $2.03/million British thermal units (MMBtu), resulting in some coal to gas switching. However, this trend has reversed with the moderately higher gas prices (see the Natural Gas Consumption for Electricity Generation chart above.

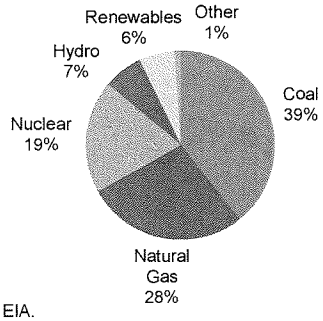
Coal-fired generation has rebounded from 2012 levels, and total generation nationally reflects more normal dispatch as gas prices have rebounded. Moreover, the higher natural gas prices provide a lift from the depressed power price level in 2012. Regional wholesale power prices continue to weigh on traditional coal-based genco conditions, as reflected in the 2012 bankruptcy of Edison Mission Energy Corp. and distressed sale of Ameron Generation Company to Dynegy Inc.

2012 Power Generation



Source: EIA.

LTM September 2013 Power Generation Mix



Source: EIA.

Trends to Watch

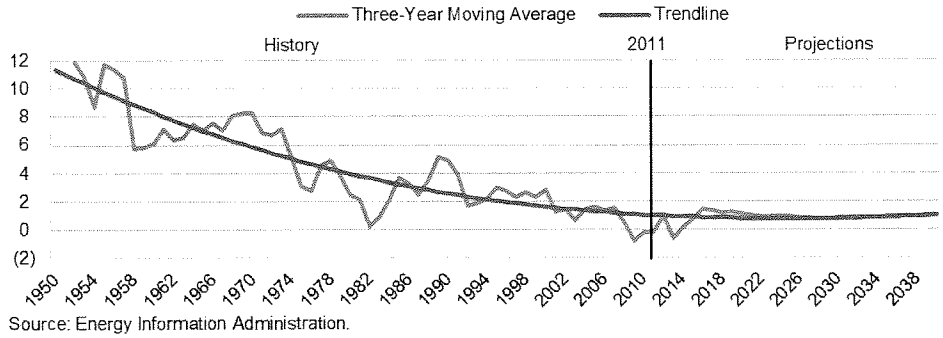
Net generation from nonhydro renewable sources continues to grow and now totals more than 6% of U.S. net generation, although that contribution varies widely by region. Fitch expects continued growth in renewables to meet state renewable portfolio standards (RPS) mandates, even if federal subsidies were reduced or eliminated. New wind and solar generation capacity required to meet RPS targets, many of which is from 2015 to 2020, will be a constraint on wholesale prices, offsetting some of the benefits of higher natural gas prices and coal retirements. Levelized cost of electricity (LCOE) for wind and solar continues to fall due to technological and operating improvements. Notably higher capacity factors (now approaching 50%) for wind along with lower manufacturing costs and higher efficiency for solar PV, are competitive threats to gencos and the existing generation fleet.

Business Model Challenged

The U.S. electric utility industry is transitioning from a period of high growth in the 1970s to 1990s, to a low-growth environment. Fitch considers the low electricity growth outlook as structural, driven by efficiency and longer term by distributed generation. Electricity growth forecasts continue to be revised downwards by the Energy Information Administration (EIA) and other independent market consultants.

Electricity sales increased just 0.7%–0.9% under the EIA's most recent forecast. The declining trend in electricity sales growth is striking. This low-growth environment will be exacerbated in most regions outside the Sun Belt.

U.S. Electricity Demand Growth, 1950–2040
(%, Three-Year Moving Average)



Source: Energy Information Administration.

Electricity sales growth forecasts have been revised downward in recent years, and Fitch would not be surprised to see further downward revisions. The impact of efficiency has been

understated and efficiency has spawned new industries — ESCOs, which provide building retrofits and building management services to reduce energy consumption, and DSM companies that offer reduced pricing for interruptible electricity service to bundled customers.

The economics of efficiency are compelling and reflect a favorable LCOE profile compared with traditional utility-supplied power. Lighting, which represents approximately 15%–20% of residential and commercial electricity consumption, is representative of the economics of efficiency.

In the table below, Fitch compares the LCOE of a traditional incandescent bulb to a new LED buib.

LED Versus Incandescent Cost Comparison

Light Bulb	Purchase Price	Expected Life (Hours)	Watts	kWh Consumed per 1,000 Hours	Retail kWh Price	Operating Cost per 1,000 Hours	Bulb Cost per 1,000 Hours	Total LCOE Cost per 1,000 Hours
LED	20.00	25,000	13	13	0.12	1.56	0.80	2.36
Traditional	1.00	1,000	60	60	0.12	7.20	1.00	8.20

LCOE – Levelized cost of electricity.
Source: Fitch.

Fitch assumed a $0.12/kWh price, which approximated the national average. Despite the significantly higher initial capital cost, the LED consumes 75%–80% less energy and has a significantly longer expected life. Overall, the LED bulb is 70% more economical than the traditional bulb. The high initial price of the LED may be a deterrent to some residential customers, but commercial customers have been aggressive early adopters of the LED technology. Almost all large retailers, restaurants, and hotels have comprehensive energy efficiency programs, with lighting a prominent component.

The favorable cost profile of LED lighting is magnified in regions where the average cost of electricity is above the national average.

LED Versus Incandescent at Different Retail Price Points

	LCOE per 1,000 Hours $0.08/kWh	LCOE per 1,000 Hours $0.12/kWh	LCOE per 1,000 Hours $0.16/kWh	LCOE per 1,000 Hours $0.20/kWh
LED 13 Watt	1.84	2.36	2.88	3.40
Traditional 60 Watt	5.80	8.20	10.60	13.00
Net Savings	3.96	5.84	7.72	9.60

LCOE – Levelized cost of electricity.
Source: Fitch.

Expected improvements in LED technology and lower manufacturing costs are expected to result in substantially lower LED prices in just a few years.

A new round of federal efficiency standards for many household appliances and equipment begin to take effect in 2014–2016. Refrigerators, washing machines, dishwashers, and hot water heaters, among others, will meet new stricter guidelines that will reduce energy consumption by 20% or more on all new appliances sold.

Regulated Utilities

The business of reducing electricity consumption challenges the traditional utility business model, which has relied on higher electricity sales and growth capex to increase rate base. While industry capex peaks in 2013, it is expected to remain elevated into 2015. As these investments enter rate base, the impact on retail rates will be greater due to the weak electricity sales trend. Fitch has some concerns as to possible over-investment and the ultimate recovery on such investments.

Many utilities have tariff mechanisms that include energy efficiency riders that decouple or insolate margins from lost sales to efficiency. These riders afford some protection over the short term.

Utilities provide essential services, and Fitch considers the core business of transmission and distribution as integral to energy policy under current EIA base case forecasts. Given the predictable growth of efficiency investments, utilities should be well suited to provide fee-based energy-management services and capture at least a portion of the margin from lost electricity sales.

Gencos

Only the strong will survive, and Fitch expects the shake-out of weaker players to continue. Through consolidation, the industry can achieve greater fleet rationalization, and fuel and regional diversification, key objectives in a weak power price environment with substantial regional market differentials. Vertical integration with expanded retail channels, which are somewhat countercyclical, affords greater balance to commodity exposure.

2013 Review

Utilities fared well in 2013. The favorable backdrop of low interest rates, low natural gas prices, and easy capital markets access provided a favorable backdrop to relatively strong and stable financial performance. Even the weather cooperated, with seasonal winter heating and summer cooling degree days close to norms and less storm activity. Within this environment, rating activity was limited and the median IDR for regulated utilities inched into the cusp of 'BBB+' to 'A–', from 'BBB+'.

ROEs continued to be under pressure in 2013. Through November 2013, 20 general rate cases were settled, with a median authorized ROE of 9.92%, compared with a median authorized ROE of 10.25% for 2012. Federal Energy Regulatory Commission (FERC)-regulated transmission ROEs are also under pressure following a challenge to its discounted cash flow methodology. An initial decision would reduce the contested ROE by approximately 50 bps to 10.6% from 11.14%. A final decision is expected in early 2014.

Gencos faced a decidedly more hostile operating environment. However, corporate activity is the dominant credit story in 2013. There was notable downsizing of the operations of affiliated gencos. Edison Mission Energy Corp, which filed Chapter 11 on Dec. 17, 2012, was bought by NRG Energy, Inc. (NRG, B+) in a transaction value at $2.6 billion. Ameren Generating Co. (not rated [NR]) was sold to Dynegy Inc. (NR) in November 2013, and PPL Montana LLC (NR) announced the sale of its hydroelectric portfolio for $900 million to NorthWestern Corp. (BBB/Rating Watch Positive). The saga of Energy Future Holdings Corp.'s generation subsidiary, Texas Competitive Electric Holdings Co. LLC remains unsettled, but a bankruptcy or other restructuring appears imminent.

The Ohio market restructuring will continue into 2014 with FirstEnergy Corp. (BB+) completing the sale of its 1,476-MW Harrison Power Station from its merchant Allegheny Energy Supply (BB+) subsidiary to a regulated affiliated, Monongahela Power Company (BBB).

In the year's most interesting transaction, NRG Energy Inc. (NRG) created NRG Yield (NR), an entity that owns a portfolio of contracted conventional power and distributed generation assets. NRG Yield is an income vehicle similar to other income trusts, and affords expanded market access and liquidity to NRG.