

Report to the  
Regulatory Flexibility Committee  
of the Indiana General Assembly



*Electric • Natural Gas • Water • Wastewater • Communications*

2010

Indiana Utility Regulatory Commission



## **EXECUTIVE SUMMARY**

The Indiana Utility Regulatory Commission (Commission or IURC) presents its *Report to the Regulatory Flexibility Committee of the Indiana General Assembly for 2010* (Report or 2010 Report). The 2010 Report highlights key issues faced by the Commission and the Electric, Natural Gas, Communications, and Water/Wastewater utilities in the state of Indiana.

This year's Report provides an overview of recent issues; considers the current industry landscape; and discusses the challenges facing the utility industry as well as the successes. It also contains the results of two new reporting requirements, which include: the Pipeline Vertical Depth Study and the Four-Year Study on Video Service Availability. This Executive Summary emphasizes accomplishments achieved by the Commission and the issues most frequently discussed this past year, while providing context for technical and cross-industry issues that are more fully addressed in the Report. For your convenience, a list of acronyms and a glossary are appended.

## **COMMISSION ACHIEVEMENTS**

With the economic downturn, the Commission's docket rapidly filled with rate cases. From 1990 to 2005, very few major rate cases were filed. However, since 2009, virtually every large jurisdictional utility has filed a rate case with the Commission; has a rate case pending before the Commission; or is preparing a rate filing to be made with the Commission. Rate cases take an enormous amount of staff resources and every division is affected. Based on its current and anticipated caseload for the next two years, the Commission will see demands at a level never before experienced.

In 2009, the Commission successfully handled several high-profile cases, including: an emergency rate case filed by Indianapolis Water Company (IWC), the demand-side management investigation, the review of the Universal Service Program for natural gas utilities, and the ongoing construction of Duke Energy Indiana's Integrated Gasification Combined Cycle Project (IGCC Project) in Edwardsport.

In the IWC case, the Commission moved swiftly and decisively in order to avert potentially disastrous consequences, which resulted in a stable condition conducive to resolution. The base

rate case is still undergoing review and an order is expected this fall. With regard to demand-side management, the Commission's final decision allowed for targeted development on an integrated program that is designed to be cost-effective and verifiable; this is the first program of its scope in Indiana. Another case that received a considerable amount of attention involved the Universal Service Program. In its final order, the Commission allowed the natural gas utilities to reinstate their respective bill assistance programs until each one provides the Commission with a more complete record that can be comprehensively reviewed in a base rate case. Lastly, the Commission has stayed involved with oversight of the IGCC Project by holding regular hearings and engaging its own engineering firm to assist in oversight.

In order to improve transparency and allow for more executive level input into the budgeting process, the IURC created a finance and budget committee. The committee has oversight responsibility for all of the agency's budgetary and financial matters, including preparation and presentation of monthly expenditures, reports/analysis, and a biennial budget. The Commission also continues to support its financial taskforce that is developing a more formalized and systematic monitoring plan to identify "trip wires" or signals of impending financial issues for Indiana utilities. Developing these two internal groups has allowed the Commission to take a more holistic approach to finance, exploring its impact at an agency, state and national level.

## **ELECTRIC**

In 2009, Indiana's average retail rates were the 15<sup>th</sup> lowest in the nation, as compared to the 12<sup>th</sup> lowest for 2008. Consequently, Indiana's electric rates continue to remain attractive, primarily due to its reliance on coal. However, the general trend of increased coal prices observed since 2002 has eroded Indiana's competitive price advantage. Staff analysis shows some Indiana utilities have seen coal prices increase more than 75% since 2002. Neighboring states' average retail rates for 2009 rank as follows: Kentucky 3<sup>rd</sup>, Ohio 29<sup>th</sup>, Illinois 30<sup>th</sup>, and Michigan 34<sup>th</sup>.<sup>1</sup>

The State Utility Forecasting Group (SUFG) at Purdue University has been tasked by the legislature to identify and forecast future electric needs in Indiana. According to the SUFG's

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<sup>1</sup>Energy Information Administration, Average Retail Price of Electricity to Ultimate Customers by End-Use Sector by State, Table 5.6B, historical result archive.

2009 forecast,<sup>2</sup> Indiana will need approximately 1,320 MW of additional resources (all types of generating capacity, demand response, efficiency, and transmission to import power) by 2015 to meet expected load growth. This forecast also projects electricity usage to grow at an annual rate of 1.55% over the twenty-year forecast and for peak demand to grow at an annual rate of 1.61%. Although the utilities are required to meet their individual capacity needs through resource planning, the Commission has also developed policies and rules to help them meet their goals.

For example, the Commission issued a landmark order in 2009 that required jurisdictional electric utilities to achieve an annual energy savings goal of 2% within 10 years with interim savings goals for years one through nine. While the utilities are required to offer certain core programs (residential lighting, home energy audit program, low-income weatherization program, energy efficient schools program, and a commercial and industrial program), they are responsible for designing and implementing the actual programs through a third-party administrator. Another third-party administrator will then oversee the evaluation, measurement and verification of the demand-side management (DSM) programs to ensure their effectiveness, and report those results to the Commission. With regard to energy savings as a percentage of utility sales, Indiana ranks 22<sup>nd</sup> nationally and 4<sup>th</sup> among the seven Midwestern states. For the amount spent on energy efficiency initiatives, Indiana ranks 31<sup>st</sup> and 6<sup>th</sup>, respectively. During the course of the investigation, three Midwestern states, Illinois, Ohio and Michigan established annual DSM savings targets for electric utilities. Based on the savings goals approved by the Commission, Indiana rivals Illinois and surpasses the other two states.

Generation capacity from renewable resources, including wind and landfill gas, is increasing in Indiana. Renewable resources provide about 1% of the generation capacity serving Indiana customers, and this number continues to increase. In June 2010, the Commission began its informal review of net metering practices in Indiana to determine whether the existing rules within the existing Indiana Administrative Code<sup>3</sup> should be changed, and if so, to what extent. Net metering allows customers to supplement their electric usage and mitigate a portion of their cost. According to the current rule, an eligible net metering customer is one in good standing who owns and operates a solar, wind, or hydroelectric generating facility with a capacity of less

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<sup>2</sup> <http://www.purdue.edu/discoverypark/energy/pdfs/SUFG/2009SUFGforecast.pdf>

<sup>3</sup> See, 170 I.A.C. 4-4.2-1

than or equal to 10 kW on their premises. At a minimum, the five investor-owned utilities (IOU) must offer net metering to residential customers and K-12 schools that install a net metering facility. However, the IOUs, or any other electric utility, may still offer net metering to commercial or industrial customers. The Commission has invited legislators, interested stakeholders and the public to comment on the rules and their experiences with them. The Commission continues to review the feedback received by these participants and estimates that it will take further action this fall.

Another investigation pending before the Commission deals specifically with tree-trimming policies and practices, specific provisions in the utilities' tariffs related to tree-trimming practices, and related customer complaints. Respondents to the investigation include all jurisdictional electric utilities. Although tree trimming is necessary in order for the utilities to provide adequate and reliable service without service interruptions, there are no standardized rules or regulations regarding this issue at the state or federal level. Rather, there are certain federal recommendations and standards. Specific considerations by the Commission include, but are not limited to, the following: proper/reasonable notification practices, debris removal after storm events, adoption of industry standards, and uniform clearance standards. The Commission expects that an order will be issued this fall.

Since 2009, the Commission has worked on rate reviews requested by Northern Indiana Public Service Company<sup>4</sup> (NIPSCO) and Southern Indiana Gas and Electric Company (SIGECO),<sup>5</sup> municipal electric operations for Crawfordsville<sup>6</sup> and Columbia City,<sup>7</sup> municipal steam operations for Citizens Thermal Energy<sup>8</sup> and electric cooperatives including Jackson County REMC<sup>9</sup> and Harrison County REMC.<sup>10</sup> Even though each of the utility's needs and situations is unique, federal requirements, aging infrastructure, and new capacity needs influence their ability to recover necessary operating and maintenance expenses. The expenditure of

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<sup>4</sup> Cause No. 43526

<sup>5</sup> Cause No. 43839

<sup>6</sup> Cause No. 43773

<sup>7</sup> Cause No. 43832-U

<sup>8</sup> Cause No. 43821

<sup>9</sup> Cause No. 43861

<sup>10</sup> Cause No. 43684

Commission time and resources on regular rate cases ensures changing industry conditions are properly reflected in the retail rates on both a company-wide and customer-class specific basis.

With respect to future issues that may affect the electric industry, the Electric section of this Report focuses on a number of key issues including:

- Regional Transmission Organizations (RTOs) – Because of the importance and pervasiveness of the RTOs’ impact for Indiana utilities and their customers, the Commission’s involvement with the Federal Energy Regulatory Commission (FERC), as an advocate for Indiana, has increased dramatically.
- Demand-Side Management and Demand Response – This includes energy conservation programs, advanced metering programs, and the “smart grid.”
- Regulation of Greenhouse Gases – Potential regulation of carbon emissions continues to be a critical environmental issue and will likely increase in significance for Indiana and the nation depending on the parameters and passage of climate change legislation in Congress.

## **NATURAL GAS**

During the last eighteen months, natural gas prices have decreased, primarily due to an unprecedented new supply of gas from unconventional sources; a decline in industrial demand; a cooler-than-normal summer in 2009; and the worldwide recession. For 2009, initial pricing started relatively low, in comparison to 2008, and moved even lower. NYMEX gas futures hit bottom on September 3, 2009 at \$2.51/Dth<sup>11</sup> and peaked on January 6, 2010 at \$6.01/Dth, a spread of \$3.50. This is in contrast to 2008’s volatile market that had a price spread of roughly \$10.00. Before these costs are passed along to customers, the Natural Gas Division must review each request by a utility for a gas cost adjustment (GCA) to ensure that the costs are prudent and in the public interest. The Office of Utility Consumer Counselor (OUCC) also reviews the request on behalf of the public. Last year, the Natural Gas Division reviewed 77 GCA petitions.

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<sup>11</sup>Natural Gas Futures Prices (NYMEX), [http://tonto.eia.doe.gov/dnav/ng/ng\\_pri\\_fut\\_s1\\_d.htm](http://tonto.eia.doe.gov/dnav/ng/ng_pri_fut_s1_d.htm)

In 2009, the Legislature passed the “Call Before You Dig” law, requiring anyone undertaking a digging project to call the Indiana Underground Plant Protection Service Center at the toll-free 8-1-1 number before digging. In response to calls received, a trained representative is dispatched to mark the utility lines free of charge. Once the lines are marked, individuals may begin their digging project; however, they must hand dig within two feet of the buried utility line to prevent damage to the underground facilities. If there is a violation of the law, the Commission’s Pipeline Safety Division serves as the investigative unit. If a violation is found, the information is then forwarded to the Governor’s Advisory Committee, which was formed in 2010.

Upon receiving a recommendation from the Advisory Committee, and after notice and opportunity for a public hearing, the Commission must uphold or reverse the finding; approve or disapprove the recommendation(s) of the Advisory Committee; and/or collect any civil penalties and deposit the penalties in the underground plant protection account. Since July 1, 2009, Pipeline Safety has registered more than 60 possible violations.

With respect to future issues that may impact the natural gas industry, the Natural Gas section of this Report focuses on a number of key issues including:

- Renewables – Indiana, as well as the nation, has seen an increase in the number of renewable energy sources, including landfill methane gas, renewable natural gas from anaerobic digestion of waste from livestock, and coal bed methane.
- Increased Supply – The emergence of unconventional sources of natural gas supply such as shale gas has dramatically increased the overall supply of natural gas in our country and has contributed to the relatively low prices this past year.
- Distribution Integrity Management Program – As of February 12, 2010, operators must develop and implement written integrity management programs by August 2, 2011. The Commission must then review jurisdictional operators’ plans for compliance.

## **WATER/WASTEWATER**

Of all the industries, water/wastewater is the most capital intensive due to high capital costs and relatively low revenues; investing more capital per dollar of revenue earned than any other industry. Costs are increasing for water and wastewater utilities and are driven by the following needs: replacement of aging infrastructure; compliance with U.S. Environmental Protection Agency standards such as water quality and wastewater effluent; growing demand; and the relocation of facilities for city and state road projects. For example, from 1984 to 2008 average water and wastewater treatment cost rose 310% while the consumer price index only rose 207%.<sup>12</sup> A 2003 report<sup>13</sup> issued by the Indiana Advisory Commission on Intergovernmental Relations estimates that statewide wastewater and drinking water infrastructure needs will require \$12.4 to \$13.9 billion in funding from the year 2000 to 2020.

Many water and wastewater utilities sought rate increases this past year for improvements to existing infrastructure and new projects. One of the most notable rate cases involved IWC, which filed an emergency rate case in early 2009, followed by a standard rate case later that year. The City of Indianapolis, which owns IWC, also announced the potential transfer of its water and wastewater utility to Citizens Energy Group. If approved, the wastewater system would be the first of Indiana's 108 combined sewer systems under Commission jurisdiction. Indiana American Water, the largest investor-owned utility, also sought a rate increase in 2009.

The Commission regulates approximately 116 out of 824 water utilities, and 47 out of 531 wastewater utilities. This is primarily due to an opt out provision in Indiana Code and the fact that the Commission has never had jurisdiction over municipal sewer utilities. When a utility opts out of the Commission's jurisdiction, the IURC no longer oversees its rates and charges or rules and regulations. It also eliminates the agency's ability to provide dispute resolution between utility customers and their utilities. The primary complaint with this arrangement has to do with the difference between inside-city and outside-city customer rates. Many municipalities charge outside-city customers higher rates or a surcharge, with premiums ranging from modest

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<sup>12</sup> "Historical Water Price Trends," Steve Maxwell, AWWA Journal, April 2010

<sup>13</sup> "Financial Needs for Wastewater and Water Infrastructure in Indiana," January 2003

amounts to 100% or in some cases, even higher, than rates paid by inside-city customers for the same service.

With respect to future issues that may impact the water and wastewater industries, the Water/Wastewater section of this Report focuses on a number of key issues including:

- Infrastructure – Indiana’s water project-funding needs over the next 20 years are \$5.9 billion. The greatest need, \$4.5 billion, is for underground infrastructure.
- Troubled Utilities – Small, troubled utilities continue to present regulatory challenges for the Commission, which is actively monitoring select small utilities in an effort to educate owners and prevent utilities from becoming troubled.
- Outside-city Rates – Many municipalities charge customers outside their corporate boundaries higher rates than inside-city customers. This raises questions about whether the city rate is cost-justified and non-discriminatory.

## **COMMUNICATIONS**

The year 2010 marked the implementation of the final phase of House Enrolled Act 1279 (HEA 1279), a bill that largely eliminated all regulatory authority over rates and service quality for retail telephone service in Indiana. Per the requirements of the 2006 legislation, the Commission examined its administrative rules and policies and eliminated those that were no longer necessary under the new regulatory framework. The Commission also initiated a rulemaking to modify or repeal sections of the IURC’s telecommunications rules located in 170 IAC 7. The Commission then issued a General Administrative Order announcing which sections would no longer be enforced after July 1, 2009. The rulemaking should be complete in the fall of 2010.

While HEA 1279 eliminated many of the Commission’s duties, it also added new responsibilities and designated the Commission as the sole video franchise authority in the state as of July 1, 2006. Prior to this date, local franchise authorities, such as counties and municipalities, issued franchises to video service providers. However, this is no longer the case.

Providers had the option to remain under the existing agreements until they expire or seek a state-issued franchise from the Commission.

In order to monitor the availability of video services in the state, HEA 1279 tasked the IURC with collecting data regarding video services offered in Indiana's Metropolitan Statistical Areas (MSAs) from 2006 through 2010. In the Commission's Four-Year Study on Video Service Availability, data shows there has been a steady migration of video service providers in Indiana's MSAs away from local franchise oversight to state-issued franchises. The data also shows the heavy use of technologies such as fiber optic cabling and the use of digital transmission for video signals. There appears to be no correlation between the per capita income in an MSA and number of providers offering service there; however, MSAs with higher population densities have greater numbers of video providers offering service. Most of the infrastructure build-outs undertaken by video service providers from 2006 to 2010 in Indiana MSAs with local franchise agreements occurred without a requirement to do so under the controlling local franchise. The IURC has received no complaints regarding economic redlining under I.C. § 8-1-34-28 by video providers with state-issued franchises.

Another responsibility of the Commission is to monitor and implement area code relief. Two possible remedies are an area code split, which is a geographic split of the existing area code into two or more areas, or an overlay, which would result in 10-digit dialing. According to a recent report by the North American Number Plan Administrator (NANPA), the 812 area code, serving southern Indiana, is projected to exhaust the third quarter of 2013. In order for the Commission to take action, the NANPA must file a petition with the Commission on behalf of the telecommunications industry. The Commission will then hold hearings so that it can receive testimony from the affected stakeholders to determine the best course of action.

With respect to future issues that may impact the communications industry, the Communications section of this Report focuses on a number of key issues including:

- Competition and Investment – With the deregulation of the communications industry, Indiana has seen competition increase and new technology be deployed in certain areas of the state.

- Indiana Universal Service Fund (IUSF) – The IUSF generates funds that are used to subsidize the rates for services offered by companies in high-cost areas in an effort to keep rates reasonable and affordable.
- Mergers – Since 2008, four mergers were announced that directly affect Indiana providers and consumers. Depending on the companies’ business models, this could affect the industry landscape.

# 2010 ELECTRIC REPORT

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## I. ELECTRIC OVERVIEW

### Industry Structure

**The Commission has jurisdiction over the electric service provided to approximately 2.6 million customers in Indiana. In 2009, Indiana’s average retail rates were the 15<sup>th</sup> lowest in the nation.**

The Indiana Utility Regulatory Commission (Commission) sets retail rates for electric investor-owned utilities (IOUs), some Rural Electric Membership Cooperatives (REMCs) and municipal electric utilities.<sup>1</sup> Additionally, the Commission reviews and approves the construction of generation facilities for Indiana’s electric utilities and long-term financing for IOUs, Indiana Municipal Power Agency (IMPA), and Wabash Valley Power Association (WVPA). The twenty-five retail electric utilities under Commission jurisdiction generated nearly \$8 billion in revenue in 2009 and served more than 2.6 million electric customers. The amount of plant in service is approximately \$28 billion.<sup>2</sup>

Under certain circumstances, the Commission may review financing arrangements for REMCs and individual municipal electric utilities, but this typically occurs through rate cases. State law allows municipal and cooperative utilities to remove themselves or “opt out” of the Commission’s jurisdiction.

**Indiana’s use of coal contributes to its relatively low-cost electricity.**

Indiana’s annual ranking for average retail rates from 1998 to 2009 ranged from 10<sup>th</sup> lowest in 1998, to 4<sup>th</sup> lowest in 2002, to 15<sup>th</sup> lowest in 2009. Neighboring states’ average retail rates for 2009 rank as follows: Kentucky 3<sup>rd</sup>, Ohio 29<sup>th</sup>, Illinois 30<sup>th</sup>, and Michigan 34<sup>th</sup>. The variability in ranking is the result of many factors, including the timing of rate cases and rate adjustments due to fuel charges in Indiana as well as the timing of rate proceedings in other states. Indiana’s use of coal contributes to its relatively low cost of electricity. However, the general trend of

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<sup>1</sup>The cooperative and municipal utilities under IURC rate jurisdiction can be found in Appendix A – Electric Utility Revenues.

<sup>2</sup>2009 Utility Annual Report filings

increased coal prices observed since 2002 has reduced Indiana's relative price advantage. Staff analysis indicates that most Indiana utilities have seen coal prices increase more than 75% since 2002. Consequently, Indiana's ranking over this period slipped from 4<sup>th</sup> to 15<sup>th</sup>.

Five major IOUs operate in the state of Indiana in exclusive service territories with other portions of the state similarly assigned to municipal utilities and REMCs. IOUs are for-profit enterprises funded by debt and equity. Indiana's IOUs are vertically integrated, which means they own facilities for generation, transmission, and distribution. These utilities are the most significant in terms of generation and the number of customers served, accounting for more than 90% of the electric power sales made by the state's regulated electric utilities to Indiana retail customers. The IOUs, listed in descending order of 2009 total operating revenue, are:

- Duke Energy Indiana, Inc. (DEI), a subsidiary of Duke Energy Corporation, serves 775,000 customers in areas throughout central and southern Indiana, excluding the metropolitan centers of Indianapolis and Evansville, with headquarters in Plainfield. In 2009, the company's total operating revenue was \$2,354,692,352;
- Indiana Michigan Power Company (I&M), a subsidiary of American Electric Power Company, Inc. (AEP), serves 454,000 customers in northeast and north central Indiana with headquarters in Ft. Wayne. In 2009, the company's total operating revenue was \$2,085,781,133;
- Northern Indiana Public Service Company (NIPSCO), a subsidiary of NiSource Inc., serves 457,000 customers in northwest and north central Indiana with headquarters in Merrillville. In 2009, the company's total operating revenue was \$1,213,923,081;
- Indianapolis Power and Light Company (IPL), a subsidiary of the AES Corporation, serves 469,000 customers in the greater Indianapolis area, where it is headquartered. In 2009, the company's total operating revenue was \$1,067,996,891; and
- Southern Indiana Gas & Electric Company (SIGECO), a subsidiary of Vectren Corporation, serves 141,000 customers in southwest Indiana with headquarters in Evansville. In 2009, the company's total operating revenue was \$528,673,984.

As of January 2010, 15 of the 72 municipally-owned utilities operating in Indiana remained under Commission jurisdiction for rate regulation. Of these 72 municipally-owned electric

utilities, 51 are members of IMPA, including 10 of the 15 regulated by the Commission. A group of municipalities created IMPA in 1980 to jointly finance and operate generation and transmission facilities. Additionally, IMPA was established to purchase wholesale power and meet members' needs through a combination of member-owned generating facilities, member-dedicated generation, and purchased power. The Commission does not regulate the rates that IMPA charges its members.

As of January 2010, only 4 of the 40 electric distribution cooperatives operating in Indiana remained under Commission jurisdiction for rate regulation. Cooperatives are customer-owned utilities, all of which are members of either Hoosier Energy Rural Electric Cooperative (Hoosier Energy) or WVPA. These two organizations are power generating and transmission cooperatives formed to supply power to distribution cooperatives. The Commission's regulation of Hoosier Energy and WVPA is limited to decisions to purchase, build, or lease generation facilities. In addition, the Commission retains jurisdiction over WVPA's long-term financing.

**There are two Regional Transmission Organizations operating in Indiana:  
the Midwest Independent System Operator and PJM Interconnection, LLC.  
RTOs dispatch all of the generating facilities in their regions to ensure  
that the lowest cost combination of resources is used at any given moment.**

There are two Regional Transmission Organizations (RTOs) operating in Indiana: the Midwest Independent System Operator (Midwest ISO) and PJM Interconnection, LLC (PJM). These organizations are regulated by the Federal Energy Regulatory Commission (FERC). In addition to being tasked with the reliable and non-discriminatory operation of regional transmission facilities, the Midwest ISO and PJM also direct the operation in real time of all generating facilities in their regions to ensure that the lowest-cost combination of generation resources is being used at any given moment. Additionally, RTOs engage in long-term resource planning in order to achieve greater optimality in the construction of new resources (including peak load reduction and energy efficiency) and act as a market monitor to guard against anticompetitive behavior.

The Midwest ISO operates in fifteen states from Pennsylvania in the east to Montana and the Canadian province of Manitoba in the west and is responsible for the operation of nearly 94,000

miles of interconnected high-voltage power lines that support the transmission of more than 100,000 megawatts (MW) of energy in the Midwest. DEI, NIPSCO, IPL, SIGECO, Hoosier Energy, WVPA, and IMPA are all members of the Midwest ISO. The Midwest ISO is headquartered in Carmel, Indiana. PJM coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. PJM dispatches about 163,500 MW of generating capacity over 56,350 miles of transmission lines. AEP, including its Indiana subsidiary I&M, is a member of PJM. IMPA and WVPA are also members of PJM. PJM is headquartered in Valley Forge, Pennsylvania.

The benefits of RTOs for Indiana’s consumers are difficult to quantify, but appear positive.<sup>3</sup> In addition to greater reliability, RTOs encourage lower costs due to more efficient regional planning than is possible by individual utilities acting alone. Because of the vast regional scope of the RTOs, Indiana customers should receive the financial and operational benefits of a more diverse resource mix and additional customer load diversity (e.g., Indiana might experience a peak demand due to hot weather while Montana has much more moderate weather) allowing the RTO to satisfy demand with relatively lower-cost resources. Additionally, because the reliability risk is diversified over the entirety of the RTOs’ footprints – from the Rocky Mountains to the Atlantic Ocean – the need for resources is reduced as evidenced by the ability to maintain lower planning and operating reserve margins than were maintained by the Indiana utilities prior to the development of the RTOs.<sup>4</sup> A reserve margin is the amount of extra capacity available to serve load growth and to respond in the event of a system contingency, such as the planned or unplanned outage of a generation plant or a high-capacity transmission line.

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<sup>3</sup>The Midwest ISO states that it “...provides annual benefits of between \$555 million and \$850 million. These benefits derive from improved reliability, increased efficiencies in the use of generation resources, and improved regional planning. During the next 10 years, this savings is expected to provide net benefits to the region of between \$4.6 billion and \$6.9 billion.” <http://www.midwestmarket.org/page/Value%20Proposition>  
PJM has not conducted a similar analysis of net benefits thus leaving PJM’s value to conjecture.

<sup>4</sup>The electric industry has historically maintained planning reserve margins in the 15% to 20% range. With the development of RTOs, reserve margins have fallen to reflect the benefit of more efficient regional coordination. In the Midwest ISO, for example, Indiana utilities have an 11.9% reserve requirement.

**To better ensure that Indiana customers and utilities receive the benefits of participating in RTOs, the Commission has devoted staff resources to participate in the RTO processes. Because of the importance and the pervasiveness of the RTOs' impact for Indiana utilities and their customers, the Commission's involvement with the FERC has increased dramatically.**

While participation in RTOs provides benefits to Indiana end-use customers, it may be challenging to translate the costs and revenues associated with RTO participation into the traditional cost-of-service model used to set rates in Indiana. To better ensure that Indiana customers and utilities receive the benefits of participating in RTOs, the Commission has devoted staff resources to participate in the RTO processes. Because of the importance and pervasive impact of the RTOs on Indiana utilities and their customers, the Commission's involvement with the FERC has increased dramatically.

### **Age-Profile**

Aging infrastructure is a concern across all utility sectors. For the electric industry, an aging generation fleet is of particular concern due to the potential risk to system reliability and the rising costs associated with new construction. The last coal-fired generation unit in Indiana was completed in 1989.

In recent years, Indiana utilities have generally utilized wholesale purchases from other sources, rather than building capacity, to maintain reserve margins. Because it takes approximately three years to construct new gas-fired peaking generation, five to ten years to construct new coal-fired generation, and still longer to bring new nuclear generation online, long-term planning is critically important.

Table 1 shows the age profile for the coal and natural gas-fired fleet of electric generation owned by Indiana utilities (the columns in the table are cumulative). About 67% of the coal-based fleet is more than thirty years old, and more than 26% of that fleet is more than forty years old. Natural gas-fired generation is much newer, with only 28% of that fleet more than ten years old. Gas-fired combustion turbines generally have higher marginal operating costs than coal-fired units and, as a result, typically only operate during periods of high peak demand.

**Table 1**

*Age Profile of Generating Units Owned by Indiana Utilities*

<b>Years Old and Older</b>	<b>Number of Coal Based Units</b>	<b>MW of Generation (Summer Rating)</b>	<b>Percent of Total Coal Based Generation</b>	<b>Peaking (Gas, Oil) Units</b>	<b>MW of Generation (Summer Rating)</b>	<b>Percent of Total Peaking Generation</b>
<b>50</b>	27	1,831	11.1%	10	288	5.7%
<b>40</b>	40	4,321	26.2%	21	489	9.8%
<b>30</b>	57	11,112	67.4%	29	854	17.0%
<b>20</b>	66	16,220	98.5%	30	919	18.3%
<b>10</b>	68	16,475	100.0%	38	1,405	28.0%
<b>0</b>	68	16,475	100.0%	57	5,012	100.0%

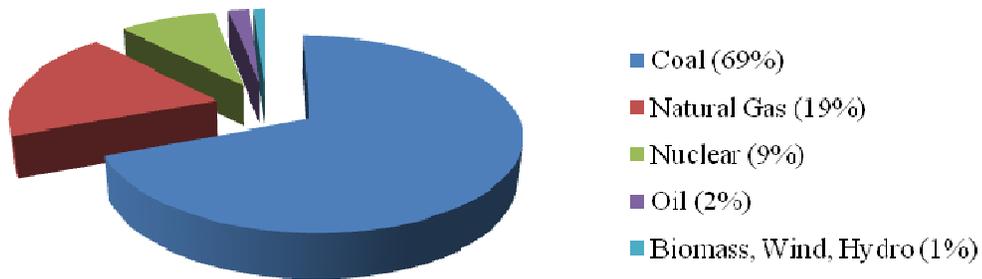
Customers in the northeastern portion of Indiana are served by I&M’s Cook Nuclear Generation Station located in Bridgman, Michigan. Cook Units 1 and 2 became operational in 1975 and 1978, respectively. In 2005, the units were relicensed by the Nuclear Regulatory Commission for commercial operation until 2034 for Unit 1 and 2037 for Unit 2.

*Existing Generation Portfolio*

Generation capacity from renewable resources, including wind and landfill gas, is increasing in Indiana. Renewable resources currently provide about 1% of the generation capacity serving Indiana consumers. Chart 1 shows the fuel mix of generation resources available to meet the electricity needs of Indiana consumers.

**Chart 1**

*Generation Capacity by Fuel Type*



## Demand

**According to the SUFG's 2009 forecast, Indiana will need approximately 1,320 MW of additional resources (all types of generating capacity, demand response, efficiency, and transmission to import power) by 2015 to meet expected load growth and maintain a 16.3% reserve margin.**

In order to keep track of Indiana's resource needs, the State Utility Forecasting Group (SUGF) at Purdue University has been tasked by the legislature to identify and forecast future needs. According to the SUGF's 2009 forecast,<sup>5</sup> Indiana will need approximately 1,320 MW of additional resources (all types of generating capacity, demand response, efficiency, and transmission to import power) by 2015 to meet expected load growth and maintain a 16.3% reserve margin. This forecast also projects that electricity usage will grow at an annual rate of 1.55% over the twenty-year forecast and that peak demand will grow at an annual rate of 1.61%. While the current recession may temporarily slow the growth of energy and demand, the expectation is that forecasted rates will resume over the forecast horizon. The SUGF will be updating its most recent forecast by the end of 2011.

### Existing Legal and Policy Foundations

Indiana electric utilities operate under a traditional regulatory regime administered by the IURC. Under this regulatory framework, the utility owns and operates generation, transmission, and distribution facilities in order to provide electric retail service to customers in a defined exclusive service territory. Retail customers are billed for service based on the average embedded cost to serve, including an authorized reasonable rate of return on investment. Generation resources owned by utilities are economically dispatched such that generation output meets customer demand.<sup>6</sup> Indiana utilities are responsible for short-term and long-term planning to meet customer demand at the lowest reasonable cost.

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<sup>5</sup> <http://www.purdue.edu/discoverypark/energy/pdfs/SUGF/2009SUGFforecast.pdf>

<sup>6</sup> Under economic dispatch the lowest cost generation resources are used first with successively more expensive units coming online until total customer demand is met at any given point in time.

## II. ELECTRIC LANDSCAPE

### Infrastructure

Historically, utilities built generation and transmission resources to meet their customers' forecasted needs for power and to supply sufficient excess generating capacity to address contingencies. Transmission was constructed primarily to connect each utility's generation to its load. Transmission interconnections to neighboring utilities were constructed for reliability reasons, rather than for routine power purchases and sales. The decisions of individual utilities to build generation and transmission rarely took into consideration the resources of other utilities in the state and gave even less consideration to the resource profile of regional utilities. However, because Indiana utilities continue to have an "obligation to serve" customer needs,<sup>7</sup> they must plan and build or purchase the resources necessary to meet those needs in a reliable and cost-effective manner. RTOs now give utilities more options to meet customer needs and provide access to regional wholesale energy markets that allow utilities to more fully utilize generation resources.

#### *Large-Scale Projects and Capital Investment Recovery*

Utilities are generally viewed as capital-intensive because of their need for investment in supporting infrastructure. The long-lived nature of utility infrastructure investment is a characteristic that supports the concept of a regulatory compact.<sup>8</sup> Vertically integrated electric utilities have distribution, transmission, and generation infrastructure components, which epitomize this characteristic. The regulatory compact provides a utility's investors the opportunity to earn a fair rate of return over the long life of the infrastructure their investment purchased. This stability serves to reduce risk and, thus the return, required by investors and accordingly reduces the cost to the utility to finance infrastructure used to serve customers. This reduced cost of service is the prime benefit of the regulatory compact.

Large investments that require significant time to construct present risks for investors because utility ratemaking does not include the cost of infrastructure in customer rates until

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<sup>7</sup>See, I.C. § 8-1-2.3 *et seq.*

<sup>8</sup>The regulatory compact is effectively a non-statutory agreement between the state and the utility provider where in exchange for an obligation to provide service to all customers in a given monopoly service area the utility is provided an opportunity to earn a fair return on the required investment to provide such service.

construction is completed and the project is found to be used and useful through a rate case. This exposes the investment on two fronts. First, conditions may change during the construction period and call the used and useful nature of the project into question. Second, the financing cost cash flow required during construction is not sourced from ratepayers. Indiana and other states have addressed these challenges through a certificate of need process<sup>9</sup> and the allowance of a cash return on financing costs during construction in certain instances.<sup>10</sup>

The certificate of need process provides the Commission and interested parties an opportunity to evaluate the merits of a project before it is undertaken. As such, the preapproved finding of need and prudence reduces risks for the utility, which results in lower financing costs for the project. The allowance of a cash return during construction pays the financing cost when such costs are incurred in lieu of deferring them until construction is complete and then paying both the amount borrowed and the related interest. The improved cash flow during the construction period is also recognized as a significant credit enhancement by credit rating agencies. Consequently, both of these tools serve to reduce the lifetime costs of the investment, a cost paid by a utility's ratepayers.

#### *New Source Review*

From 1999 to 2000, the U.S. EPA filed a number of complaints against electric utilities across the country for alleged violations of the New Source Review (NSR) provisions of the Clean Air Act (CAA). The U.S. EPA alleged that maintenance projects performed at various coal-fired generation units were major modifications, as defined in the CAA, and that the utilities violated the CAA when they undertook such projects without obtaining permits and installing the best available emission controls for SO<sub>2</sub>, NO<sub>x</sub>, and particulate matter. The government seeks to require installation of additional pollution controls on various generating units and unspecified civil penalties in amounts up to \$32,500 per day for each violation. Federal action on NSR lawsuits or noticed violations has touched every Indiana electric IOU. A sampling of recent activity follows.

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<sup>9</sup> See, I.C. § 8-1-8.5, I.C. § 8-1-8.7, I.C. § 8-1-2-23

<sup>10</sup> See, I.C. § 8-1-8.8

In October 2009, IPL received a notice of violation from the U.S. EPA alleging violations at IPL's three coal-fired electric generating facilities dating back to 1986. IPL's recent 10-K filing with the Securities and Exchange Commission (SEC) highlights the impact of these federal environmental actions. IPL statements note that "...settlements and litigated outcomes of similar cases have required companies to pay civil penalties and to install additional pollution control technology projects on coal-fired electric generating units. A similar outcome in this case could have a material impact to our business. We would seek recovery of any operating or capital expenditures related to pollution control technology projects to reduce regulated air emissions..."<sup>11</sup>

DEI also litigated NSR lawsuits that were originally brought by the U.S. EPA in November 1999 for various projects at its Cayuga, Gallagher, Wabash River, and Gibson Stations. A jury verdict was returned on May 22, 2008, which found in favor of Cinergy and DEI on all but three units at Wabash River. Following a new trial awarded by the court due to actions at the original trial, on May 19, 2009, a jury found in favor of DEI on four of the remaining six projects at issue. The two projects in which the jury found violations were undertaken at Units 1 and 3 of the Gallagher Station in Indiana. The parties filed a proposed consent decree with the court on December 22, 2009 for public comment and approval. The substantive terms of the proposed consent decree require: (i) conversion of Gallagher Units 1 and 3 to natural gas combustion by 2013; (ii) installation of additional pollution controls at Gallagher Units 2 and 4 by 2011; and (iii) additional environmental projects, payments and penalties. In its most recent SEC 10-K filing, DEI estimated that actions in the consent decree will cost at least \$88 million. The company further stated that "ultimate resolution of these matters relating to NSR, even in settlement, could have a material adverse effect on Duke Energy Indiana's consolidated results of operations, cash flows or financial position. However, Duke Energy Indiana will pursue appropriate regulatory treatment for any costs incurred in connection with such resolution."<sup>12</sup> As of September 30, 2009, Wabash River Units 2, 3, and 5 have been retired.

In July 2008, Hoosier received a request for information from the U.S. EPA under Section 114(a) of the Clean Air Act. Two subsequent requests were received. Hoosier has submitted all

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<sup>11</sup> IPALCO Enterprises Inc. 10-K 12/31/2009

<sup>12</sup> Duke Energy Indiana Inc. 10-K 12/31/2009

information requested to date. In August 2009, the U.S. EPA issued a Notice of Violation under the NSR provisions of the Clean Air Act. Hoosier is currently negotiating consent decree provisions with the U.S. EPA.

*Edwardsport IGCC*

**The Edwardsport IGCC facility will be the first commercial-scale clean coal plant of its kind built in the United States in the last 10 years.**

In an Order issued on November 20, 2007, the Commission approved the construction of DEI's Edwardsport IGCC generating facility, which will have a capacity of 618 MW and be designed to use Indiana bituminous coal. Once complete, the Edwardsport IGCC facility will be the first commercial-scale clean coal plant of its kind built in the United States in the last 10 years. The facility is located on approximately 220 acres adjacent to DEI's existing Edwardsport Generating Station in Knox County, Indiana, and has an approved estimated cost of \$2.35 billion with an in-service date of 2012. DEI has filed a request with the IURC to update the estimated capital cost of the project to \$2.88 billion.<sup>13</sup> DEI expects to receive approximately \$450 million in state and federal tax incentives for the project.

Under traditional ratemaking, DEI would have constructed the facility and not been allowed recovery of the costs from ratepayers until the plant was completed (in approximately four years). However, applying Indiana's clean coal technology statutes to the facility, DEI proposed and the Commission approved a pay-as-you-go plan, whereby the costs of the plant (i.e., bricks and mortar) are passed on to ratepayers on a periodic basis as part of an ongoing review process as the plant is under construction. This is otherwise known as construction work in progress or CWIP. As a part of the review process, the Commission established an independent oversight plan to monitor construction and retained the services of consultant Black and Veatch for this purpose. As of July 2010, construction was considered approximately 45% complete.

**The IGCC facility will use cleaner technology to reduce traditional air emissions by approximately 50% compared to a state-of-the-art pulverized coal plant.**

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<sup>13</sup>Cause No. 43114 IGCC4-S1

The IGCC facility will utilize state-of-the-art technology and a gasification process that will convert bituminous coal into a combustible gas called synthesis gas or “syngas” that can then be used to generate electricity. The technology will reduce traditional air emissions by approximately 50% and provide 90% or higher mercury capture at a fraction of the cost of a pulverized coal unit. Carbon capture and sequestration (CCS) is also being explored as an option for this plant. The Commission authorized DEI to spend up to \$17 million for a carbon capture study to analyze its feasibility. The choice of capture technology is dependent on the type of coal generation technology used because each capture strategy creates unique conditions that affect the performance of the generation plant and the technology for separating CO<sub>2</sub>, making it ready for compression and storage.

With respect to carbon storage or sequestration, significant feasibility and cost issues will need to be resolved before it becomes possible to implement. This includes the cost of permanent geologic storage, insurance, legal liability, property rights, and regulatory issues. For example, the storage potential of known geologic formations is vast, but proper site selection must consider whether the location is economically feasible to reach; has adequate total storage volume, porosity, and permeability to store CO<sub>2</sub>; and a cap rock sealant to keep the CO<sub>2</sub> trapped. State and federal entities must also consider legal, physical, and safety issues when developing an appropriate regulatory framework for CO<sub>2</sub> storage. Another issue that must be addressed is identifying the entity responsible for the long-term care of an injection site, in addition to monitoring the integrity of the well, developing remediation plans, and examining the effectiveness of these plans. Effective resolution of these regulatory and institutional issues is critical to the successful widespread use of carbon sequestration and the continued use of coal. As directed by the Commission, DEI has a proposal in Cause No. 43653 to spend between \$42 million and \$121 million to further evaluate carbon sequestration through site assessment, site characterization, and implementation.

### *Wind*

Although initial wind studies indicated that Indiana was not a prime location for the development of significant amounts of wind generation, improvements in wind turbine energy conversion efficiency as well as wind study methodologies have since demonstrated that there are acceptable locations in Indiana for the installation of wind resources. As such, Indiana has

become the fastest growing state for the development of new wind resources, which are primarily located in Benton and White counties.<sup>14</sup> Table 2 shows the development of wind resources in Indiana.

**Table 2**  
***Indiana Wind Farms***

<b>Wind Projects</b>	<b>County</b>	<b>Nameplate Capacity (MW)</b>	<b>Estimated Availability at Peak (MW)*</b>	<b>Completion Date</b>
Benton County Wind Farm	Benton	130	10	2008
Fowler Ridge Wind Farm I	Benton	300	24	2009
Fowler Ridge Wind Farm II	Benton	350	28	N/A
Fowler Ridge Wind Farm III	Benton	99	8	2009
Hoosier Wind Farm	Benton	106	8	2009
Meadow Lake Wind Farm I	White	200	16	2009
Meadow Lake Wind Farm II	White	99	8	2010
Meadow Lake Wind Farm III	White	103.5	8	2010
Meadow Lake Wind Farm IV	White	199.5	16	2010
Spartan Wind Farm	Newton	101	8	2011
<b>TOTAL</b>		<b>1,689</b>	<b>135</b>	

\*Assumes 8% of nameplate capacity (Midwest ISO wind capacity credit) will be available during summer peak.

The passage of either a state or federal renewable portfolio standard (RPS) or the regulation of greenhouse gas emissions (e.g., carbon emissions regulation) would likely make wind resources desirable. Notwithstanding, wind resources present specific challenges such as its intermittent nature, which does not allow it to be dispatched at the time of peak electricity demand. Due to this challenge, the Midwest ISO recently created a centralized wind forecasting system, which has helped the Midwest ISO better predict available wind resources on an hour-to-hour basis. The development of efficient and economic storage technologies, such as batteries, that store wind energy for later use, would also alleviate this problem. However, utilizing a

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<sup>14</sup>American Wind Energy Association Annual Wind Industry Report

battery backup system would also dramatically increase the cost of wind-generated electricity and, potentially, severely impact its economic viability.

In order to plan for the summer 2010 load, Indiana utilities and the Midwest ISO assumed an 8% capacity credit for wind energy resources available for peak demand periods. Table 2 uses this capacity credit. Using the credit, a 100 MW wind farm would typically have an expected output of 8 MW (8% of its nominal capacity) during the summer peak periods. This reflects the weather-driven, variable nature of wind energy production.

### *Biomass*

According to the State Utility Forecast Group's 2009 Indiana Renewable Energy Resources Study, landfill gas is the primary biomass fuel used to generate electricity in Indiana. Total generation capacity from Indiana's landfills is 48.4 MW.<sup>15</sup> On June 10, 2009, the Commission approved a certificate of public convenience (CPCN) for WVPA for the acquisition and construction of an additional 15 MW<sup>16</sup> of landfill gas generation capacity. Another alternative fuel receiving increased attention is woody biomass. Two such companies, Liberty Green Renewables and Bioenergy Power, LLC have recently petitioned the Commission to decline jurisdiction to require each to obtain a CPCN so that they may contribute up to a combined total of approximately 55 MW<sup>17</sup> of net electricity for sale in the wholesale power market.

### *Nuclear Waste and Spent Fuel*

The Nuclear Waste Policy Act (NWPA) was passed in 1982 and required the U.S. Department of Energy (U.S.DOE) to build and operate a permanent repository that was to begin accepting waste from nuclear power plants no later than January 31, 1998. Since 1983, retail customers served by utilities operating nuclear plants have paid into the Nuclear Waste Fund (NWF) in the amount of one-tenth of a cent for every kilowatt-hour produced by a nuclear generator. The NWF now exceeds \$33 billion.

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<sup>15</sup>2009 Indiana Renewable Energy Resources Study, September, 2009, State Utility Forecasting Group (SUFSG)

<sup>16</sup>Petition of WVPA, (Ind. Util. Reg. Comm'n. Cause No. 43640, Jun 10, 2009)

<sup>17</sup>Petition of Liberty Green Renewables Indiana LLC, (Ind. Util. Reg. Comm'n, Cause No. 43851, Cause pending) and Petition of Bioenergy Power, LLC, (Ind. Util. Reg. Comm'n, Cause No. 43882, Cause pending)

I&M utilizes the Cook Nuclear Generation Station located in Bridgman, Michigan to serve its customers. This facility has two pressurized water reactors: Unit 1, which has a nameplate generation of 1,048 MW and Unit 2, which has 1,107 MW of nameplate generation. The two units became operational in 1975 and 1978, respectively, and, in 2005, the units were re-licensed by the Nuclear Regulatory Commission (NRC) for commercial operation until 2034 for Unit 1 and 2037 for Unit 2. Approximately 65% of the Cook plant costs and power generated is allocated to Indiana retail customers. Through the fourth quarter of 2008, I&M's customers paid to the DOE NWF \$275.5 million on a total company basis with Indiana's share approximately \$193 million.

Currently, the Cook facility stores spent irradiated fuel on-site in a storage pool. These types of storage pools are only meant to be a temporary solution until the spent fuel can be moved to a permanent storage facility. A permanent storage facility was approved by Congress in 2002 at Yucca Mountain located in Nevada. However, on March 5, 2009, Energy Secretary Steven Chu stated during a Senate hearing that "the Yucca Mountain site was no longer viewed as an option for storing reactor waste."

In July 2009, the U.S. House of Representatives voted 388 to 30 to not completely fund the Yucca Mountain repository in the fiscal year 2010 budget; and, in March 2010, the Yucca Mountain license application with the Nuclear Regulatory Commission was withdrawn. With its existing on-site pool for spent fuel nearing capacity and the Yucca Mountain site on hold, possibly permanently, I&M has devised with an interim solution until a more permanent one can be agreed upon. The solution is to utilize dry cask storage, a method of enclosing high-level radioactive waste in containment cylinders for on-site storage. The company states that industry experts recognize this method as the current preferred solution. The company's program is nearing completion and the initial loading is scheduled to occur in 2011. This places I&M in the position of seeking cost recovery to accommodate the interim solution of constructing and utilizing dry cask storage despite the fact that their ratepayers have already paid into the now defunct NWF, which was to provide a permanent storage solution by 1998.

There are legal options available to utilities that believe DOE has breached its contractual obligations, causing the utilities to incur additional costs to deal with the disposal issue. Recent

Federal Circuit cases suggest that utilities may be successful in recovering damages in federal court.

## *Transmission*

### Planning

One of the primary advantages of Indiana utilities' membership in RTOs is the change in planning – from the narrower needs of individual utilities to a broader regional perspective. The RTOs analyze and plan for electricity flows across the entire region thereby permitting greater optimization for the timing, sizing, and location of new transmission facilities. They also allow for more cost-effective planning and construction of transmission facilities. The transmission planning process includes stakeholder participation to ensure a thorough review of the evaluation process and resulting transmission plan.

For example, the 2009 Midwest ISO Transmission Expansion Plan (MTEP) identified 274 projects totaling an estimated \$903 million required to maintain the reliability of the system through 2019. Since the regional planning process was established in 2003, \$7.2 billion in new construction has been approved, and projects totaling \$2.7 billion have been completed. The Midwest ISO estimates that these new transmission facilities will result in the ability to defer new generating capacity with an associated annual savings of \$60 million to as much as \$111 million. In December 2009, the PJM approved \$1.4 billion in electric transmission systems additions and upgrades. With these newest upgrades, PJM's Board has authorized more than \$15 billion in total transmission investment through the Regional Transmission Expansion Planning (RTEP) process since 1999. PJM's RTEP includes upgrades and new projects to maintain system reliability and to interconnect new generation. The plan considers the growth and changes in the broad, multi-state region.

### Indiana Transmission Projects

In May 2008, SIGECO began the siting process for its first-ever 345 kV transmission line. The Midwest ISO approved the sixty-six mile line that will connect SIGECO's A.B. Brown generating plant with Big Rivers Electric Corp.'s Reid plant, located to the south, and DEI's

Gibson plant, located to the north.<sup>18</sup> The project reflects SIGECO's unique geography in southwestern Indiana and the resulting problems with import capability and heavy line loading. The project has a scheduled in-service date of June 2011 and a cost estimate of \$66 million.

In 2008, Duke Energy and AEP formed a joint venture, called Pioneer Transmission, LLC (Pioneer Project), to build and operate a 240-mile, high-voltage 765 kV transmission line from the Rockport generating station in southwestern Indiana to Greentown, which is east of Kokomo. The preliminary estimated cost of the line and associated facilities was \$1 billion. The Midwest ISO and PJM jointly studied the proposed project in their planning processes and found that the project failed to pass the required benefit cost test to be included in the RTOs' transmission plans. However, in the future, this project, or a similar one, could be included in plans as the RTOs change the planning criteria for new transmission projects to interconnect low-carbon generation resources.

The Federal Power Act (FPA) and recent amendments give the Federal Energy Regulatory Commission (FERC) increasingly broad powers over the siting, construction, and rates associated with electric transmission and a corresponding diminution of state authorities. However, unlike many other states that have authority over site selection of transmission facilities, the IURC does not have such statutory authority. As a result, the U.S. DOE and the FERC have federal statutory authority to approve the siting of transmission within Indiana. The "Pioneer" proposal, despite the fact that it is proposed to be constructed solely within Indiana, demonstrates that the only legal recourse for Indiana is to be a party – like any other party – in proceedings before the FERC. The ability of Indiana to influence transmission within Indiana and regionally, is severely compromised by the lack of siting authority.

### **Modernization and Efficiency**

Even though the majority of Indiana's electric needs are met through coal-fired generation owned by the utilities, energy efficiency, demand-side management, and demand response programs<sup>19</sup> are also being developed to enhance the value of Indiana's energy services.

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<sup>18</sup>SIGECO's A. B. Brown plant and DEI's Gibson plant are both located in southwest Indiana near Evansville. Big River's Reid plant is located in Henderson, Kentucky.

**Indiana jurisdictional electric utilities must achieve an annual energy savings goal of 2.0% within ten years, with interim savings goals for years one through nine.**

<b>Year</b>	<b>Annual Electric Savings Goal</b> (% based on weather-normalized average electric sales for prior three years)
2010	0.3%
2011	0.5%
2012	0.7%
2013	0.9%
2014	1.1%
2015	1.3%
2016	1.5%
2017	1.7%
2018	1.9%
2019	2.0%

In December 2009, the Commission completed its investigation into energy conservation and savings and issued an order that instructed the state’s jurisdictional electric utilities to create core demand-side management (DSM) programs. Through a reasonable but aggressive timeline, the utilities are expected to achieve an annual energy savings goal of 2 percent within 10 years with interim savings goals for years one through nine.

Due to nonexistent or inconsistent DSM program offerings between jurisdictional

utilities, the Commission ordered the utilities to move forward with the following core programs: a home energy audit program; low-income weatherization program; residential lighting program; energy efficiency schools program; and commercial and industrial program.

The Commission also ordered the formation of a DSM Coordination Committee (Committee) that consists of representatives from jurisdictional electric utilities, consumer groups and the Office of Utility Consumer Counselor. The Committee is responsible for developing program designs, coordinating the development and maintenance of a statewide database for all program results, issuing requests for proposals (RFP), and creating periodic joint reports for the Commission on the status of the DSM programs. Since its formation, the Committee has issued two RFPs: one for an independent third party administrator, who will

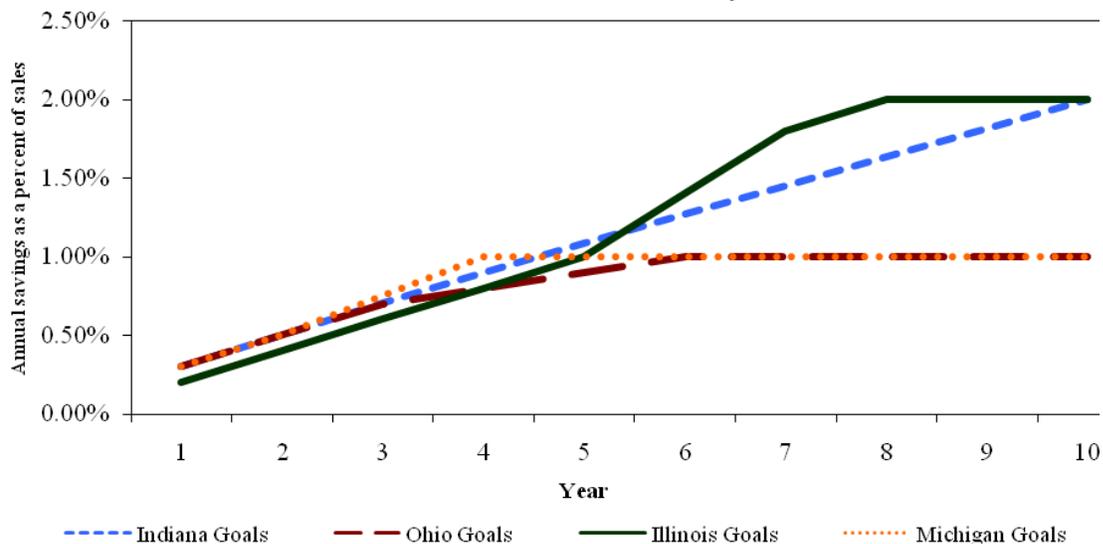
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<sup>19</sup>Energy efficiency refers to measures or technologies that reduce the consumption of energy while demand response resources refer to measures, technologies, or incentives and pricing programs that reduce or curtail load during peak periods.

oversee and coordinate the core programs for the utilities, and another for an evaluation administrator, who will undertake the evaluation, measurement and verification of the DSM programs to ensure their effectiveness. The Committee is reviewing bids submitted by interested parties this summer and plans to select the administrators this fall.

With regard to energy savings as a percentage of utility sales, Indiana ranks 22<sup>nd</sup> nationally and 4<sup>th</sup> among the seven Midwestern states. For the amount spent on energy efficiency initiatives, Indiana ranks 31<sup>st</sup> and 6<sup>th</sup>, respectively. During the course of the investigation, three Midwestern states, Illinois, Ohio and Michigan established annual DSM savings targets for electric utilities. Based on the savings goals approved by the Commission, Indiana rivals Illinois and surpasses the other two states. The graph below depicts how the savings goals differ between the states.

**Chart 2**  
**Midwest Electric Efficiency Goals**



DSM programs benefit consumers by saving energy, which is the most cost-effective way of meeting future energy supply needs. It also has the corresponding benefit of reducing the need to build additional generation capacity. The initial core programs are to be designed and offered by end of calendar year 2010 for all customer classes – residential, commercial and industrial.

### *Demand Response Programs*

Demand response programs have a long history in the electric industry, and the types of programs available have expanded in recent years. The U.S. DOE defines demand response as “changes in electric usage by end-use customers from their normal consumption patterns in response to changes in the price of electricity over time, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized.”

Traditionally, Indiana utilities have relied upon interruptible load contracts with large industrial customers to reduce the need for utility-owned generation capacity. Increased use has also been made of appliance load control programs, with emphasis on the control of air conditioners during times of peak load. Indiana utilities have 1,010 MW of interruptible load and 103 MW of air conditioner load control. Demand response programs emphasize the relationship between customer consumption patterns during peak periods in response to high wholesale market prices or when system reliability is at risk. Indiana is among many states working to increase cost-effective customer participation in demand response programs. The Commission continues its investigation, Cause No. 43566, relating to participation by customers in demand response programs offered by the PJM and the Midwest ISO. In response to the Commission’s 2010 Summer Reliability Survey, Indiana’s utilities reported a potential load reduction of 1,398 MW.

### *Smart Grid and Advanced Metering*

Enhancing and upgrading the nation’s electric transmission and distribution systems are key priorities for utilities and the federal government. Generally, “smart grid” refers to a variety of technologies<sup>20</sup> and two-way communications systems, that when added to the grid, help utilities better manage the flow of electricity and the integrity of their system. As communications and information technology advances, the integration of these new systems into substations, transmission, and distribution systems becomes more of a priority. The Commission seeks to

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<sup>20</sup>One component of smart grid is the smart meter that allows for real-time or near real-time electric consumption data to be used to reduce load, help localize and minimize outages, and facilitate more accurate pricing. These advanced meters use two-way communication to send the data to the necessary locations and allow for the interaction of advanced features.

evaluate investment proposals for smart grid technologies on a case-by-case basis, while maintaining the expectation to see tangible benefits for Indiana utilities and ratepayers, particularly as it relates to the application of federal funding and customer pricing plans. The following examples detail proposed smart grid projects in Indiana:

1. DEI has proposed a smart grid plan<sup>21</sup> featuring an initial deployment of approximately 40,000 AMI meters, two-way communication devices, and related distribution automation in the area northwest of Indianapolis. Included in its proposal are stationary battery storage and charging infrastructure for plug-in electric vehicles. DEI was selected to receive a cost share grant from the U.S. DOE to help fund smart grid investment in Indiana and Ohio.<sup>22</sup>
2. IPL was also selected by the U.S. DOE to receive stimulus funding for smart grid investments. Funds will be used to offset expenses associated with the deployment of IPL's own advanced technology infrastructure, thereby giving IPL customers' full benefit of such funds. Earlier this year, the Commission approved the deployment of replacement meters for all IPL commercial and industrial customers and up to 22,000 residential and small commercial and industrial customers stating that the company has taken an appropriate step towards modernizing the grid to ensure reasonable adequate energy services and facilities in the future.<sup>23</sup>
3. I&M has been conducting a smart meter pilot program involving approximately 10,000 customers in South Bend. The company's plan calls for utilization of the new technology to pilot certain time-of-day rates and direct load control programs. Earlier this year, the Commission approved I&M's request for an extension of its experimental tariff to be used during the smart meter pilot program. The extension was necessary as the company needed to address technical issues associated with meter installation and to have a full summer season with the experimental tariffs in place.

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<sup>21</sup>Supplemental testimony of Duke Energy Indiana, 4/15/2010, (Ind. Util. Reg. Comm'n. Cause No. 43501, Cause pending)

<sup>22</sup>Terms and conditions of the grant are still pending however the company was one of 6 awardees that were selected for the highest grant amount available.

<sup>23</sup>Order for IPL's Phase II DSM program (Ind. Util. Reg. Comm'n, Cause No. 43623, Feb. 10, 2010)

## **Regulatory Development**

### *Tree-Trimming Practices*

Ongoing maintenance efforts by Indiana's electric utilities that address tree growth near power lines are critical to the provision of safe and reliable electric service for their customers. On April 1, 2009, the Commission opened an investigation, Cause No. 43663, into the tree-trimming policies and practices of Indiana's electric utilities. Respondents to the investigation include all jurisdictional electric utilities. The Commission conducted six field hearings at locations throughout the state to solicit a diverse sample of customer perspectives. Specific issues identified for consideration by the Commission include, but are not limited to, proper/reasonable notification practices, debris removal after storm events, adoption of industry standards, and uniform clearance standards.

### *Financial Taskforce*

In the wake of the financial crisis, the Commission formed a team in late 2008 to closely follow the capital markets and understand their impact on Indiana's regulated utilities. Because utilities are capital-intensive companies, they must be able to raise debt and equity when necessary. This taskforce has met with representatives of Moody's, an agency that assigns financial health ratings to each of a utility's capital obligations, to discuss their evaluation process and its impact on Indiana utilities. The taskforce has also begun semi-annual informal conversations with senior financial officers of the five IOUs to discuss emerging financial issues. Members have also authored relevant articles concerning the confluence of regulatory and financial issues, which have been shared with other IURC personnel.

### *ARRA Funding*

The American Recovery and Reinvestment Act of 2009 (ARRA) will provide billions of dollars of funding over the course of the next few years to support a wide variety of electricity-related programs. Electricity-related ARRA programs include, but are not limited to, the following: energy efficiency, renewable energy, energy storage, smart grid, electric and hybrid vehicles, demand response, coal-fired power plants with carbon capture and storage, and transmission.

In anticipation of an increase in workload, the IURC applied for and received a three-year grant of slightly less than \$1 million from the U.S. DOE to enhance its staff resources. The intent is to supplement Commission staff with in-depth skill sets that are traditionally difficult to find and that are not currently at its disposal. The Commission has designated three specific areas of concentration to address areas of high importance:

1. The Commission recently hired an executive manager in the area of long-term Integrated Resource Planning.
2. The Commission intends to hire one specialized analyst in the area of carbon capture and storage (CCS), a technology that is of critical importance to the economic future of Indiana. This position will work specifically with key stakeholders on defined CCS projects to further understanding of how these technologies can be used.
3. The Commission intends to hire one specialized electric analyst in the area of energy efficiency/demand-side management. This position will serve as a lead analyst on a number of DSM programs and initiatives that are likely to come before the Commission. The IURC is currently using ARRA grant funds to support its use of an outside consultant to facilitate implementation of a consistent statewide approach to DSM programs in the state.

## **Pricing and Economics**

### *Rate Cases*

**Rate cases should be a regular occurrence to ensure changing industry conditions are properly reflected in the retail rates on both a company-wide and customer class specific basis.**

Rate cases allow the Commission and other parties to comprehensively review all costs and revenues incorporated into base rates, potentially identifying decreasing costs that offset increasing costs. They also allow parties to focus on complicated issues such as return on equity, depreciation, and taxes. Additionally, such proceedings provide an opportunity to allocate the total revenue need of the company to the various customer classes based on their cost of service

and to design retail rates to recover that cost of service. Table 3 shows when the base rates for the five IOUs were approved and when the utilities are expected to file their next rate cases.

**Table 3**  
*IOU Rate Case Filings*

<b>Utility</b>	<b>Last Rate Case</b>	<b>Date of Order</b>	<b>Expected Rate Case Filings in the Future</b>
<b>DEI</b>	Cause No. 42359	May 18, 2004	2011 – 2012 timeframe
<b>NIPSCO</b>	Cause No. 43526	August 25, 2010	No later than September 30, 2012
<b>I&amp;M</b>	Cause No. 43306	March 4, 2009	March 2014
<b>IPL</b>	Cause No. 39938	August 24, 1995	Unknown
<b>SIGECO</b>	Cause No. 43111	August 15, 2007	Pending - Cause No. 43839

Prior to PSI Energy’s (now DEI) rate case filing in December 2002, the base rates for Indiana’s five investor-owned utilities were last revised in the early- to mid-1990s. Several factors contributed to the way in which the utilities were able to maintain financial stability without increasing base rates during this extended period. First, the utilities’ base rates reflected the relatively high cost of capital from the period in which they were set. As the cost of capital declined over time, the utilities were able to utilize the savings in this area to offset expense increases in other areas. Second, the last series of rate cases was, for the most part, driven by the utilities’ need to incorporate significant new assets into rate base, specifically new baseload generating facilities and environmental compliance equipment. Third, state legislation allowed the utilities to recover a variety of costs (e.g., environmental compliance and clean coal technology) through tracking mechanisms and thereby avoid the comprehensive review of a rate case.

Since 2009, the Commission has worked on rate reviews requested by the investor-owned electric utilities including NIPSCO<sup>24</sup> and SIGECO<sup>25</sup>, municipal electric operations for Crawfordsville<sup>26</sup> and Columbia City,<sup>27</sup> municipal steam operations for Citizens Thermal

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<sup>24</sup>Cause No. 43526

<sup>25</sup>Cause No. 43839

<sup>26</sup>Cause No. 43773

<sup>27</sup>Cause No. 43832-U

Energy<sup>28</sup> and electric cooperatives including Jackson County REMC<sup>29</sup> and Harrison County REMC.<sup>30</sup> The NIPSCO rate case was initiated in order to replace rates and rate structures that were set in 1987. The time that had passed since NIPSCO's last rate alignment with its cost of service contributed to a very complex and highly litigated proceeding. The SIGECO proceeding is the company's second rate review in the last four years.<sup>31</sup> As part of that proceeding, it has proposed a rate design that attempts to decouple its non-industrial sales volumes from its fixed cost recovery through an annual rate adjustment mechanism that redistributes those costs over the existing sales volumes.

The recent rate case proceedings for four of the five IOUs served to refresh what in many ways had become a dated picture of their service cost and associated rate design. The regularity of all-in rate reviews was the subject of legislative initiatives in recent sessions, and while no conclusion was reached, the concept of periodic regular rate cases seems reasonable. The pace of industry change, resources of the stakeholders, and the proper use of alternative ratemaking mechanisms should all be inputs to the discussion.

#### *Adjustable Rate Mechanisms*

**Indiana's regulatory statutes include adjustable rate mechanisms (trackers) as an integral part of regulation. Expenses that are characterized as largely outside the utility's control, variable, and materially significant are the intended goals of such trackers.**

Indiana's regulatory statutes include adjustable rate mechanisms (trackers) for expenses and capital investments. Tracking mechanisms provide for a timelier recovery of specifically defined costs than a rate case. An expense tracker allows retail rates to be adjusted outside the context of a base rate case to reflect changes in operating expenses but does not include a return on such expenses. Expenses that are characterized as largely outside the utility's control, variable, and materially significant are the intended goals of such trackers. Examples of expense trackers include the fuel adjustment and RTO charges.

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<sup>28</sup>Cause No. 43821

<sup>29</sup>Cause No. 43861

<sup>30</sup>Cause No. 43684

<sup>31</sup>Cause No. 43111, Final Order 8/15/07

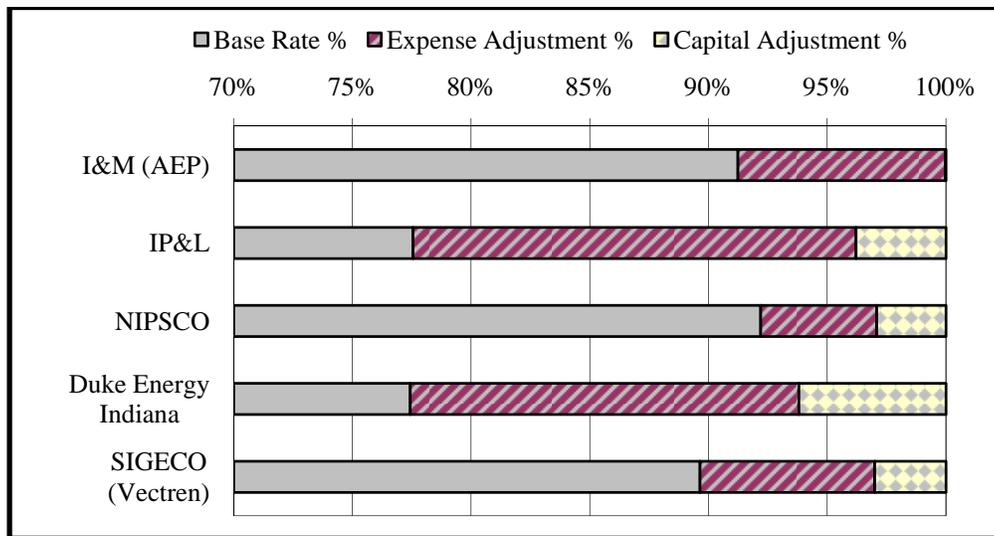
By comparison, a capital investment tracker allows a utility to reflect certain clean coal and energy generation capital costs in its rate base and to reflect the associated return on such investment in retail rates outside of a base rate case. A capital investment tracker reduces the lag time between capital expenditures and cost recovery for the utility and is typically viewed favorably by credit rating agencies. Capital trackers have historically been utilized by utilities to support major investments in upgrading coal generation plants to comply with increasingly stringent environmental regulations.

Table 4 shows a breakdown of how base rates, expense adjustments, and capital adjustments contribute to a residential customer’s bill. The relative weighting of these elements varies in part due to the size of the utility, the magnitude of a company’s construction program, and how much time has elapsed since the last base rate case.

**Table 4**

***Indiana Investor-Owned Electric Utilities, July 1, 2010 Residential Billing***

% of Bill Comparison



The fuel adjustment clause (FAC) has existed in Indiana for more than three decades and tracks a utility’s largest variable and unpredictable operating expense: fuel. Other expenses tracked have expanded in recent years to include demand-side management programs, emission allowances, purchased power capacity, clean coal technology operation and maintenance, and Midwest ISO/PJM management expenses. Direct pass-through of expense or revenue reflects

current conditions in retail rates in a more real-time manner than traditional base rate case regulation. The pass-through of unpredictable revenues and expenses to ratepayers reduces volatility in the utility's earnings and may enhance the utility's credit rating.

The FAC by statute, and most other adjustable rate mechanisms by design, are expedited summary proceedings in order to provide more timely cost recovery. However, as the number of items, dollar values,<sup>32</sup> and utility decision points being reviewed has increased with no increase in oversight resources or time to review and process the matters at hand, effective regulation is challenged. Recent experience highlights a number of incidents, including over \$40 million in refunds to customers required of NIPSCO, that have led the Commission to undertake a review of the FAC oversight process to evaluate whether the process is either appropriate or in the best interest of regulation.

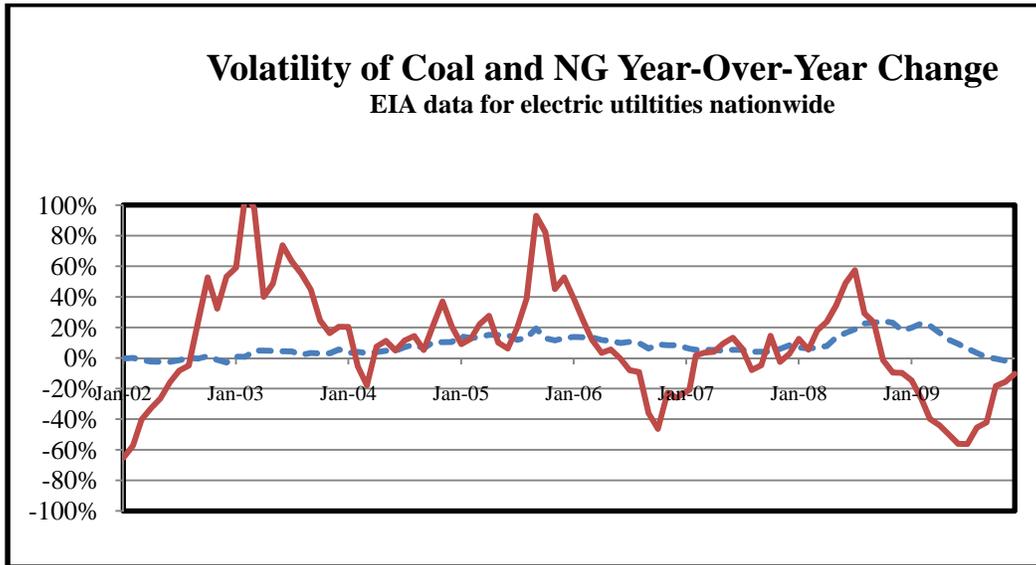
### Volatility of Fuel Cost

As previously noted, the cost of fuel is the most significant variable expense for electric generating utilities; and because this expense is tracked, it has a direct impact on customer rates. Chart 3 reflects the volatility of natural gas as well as the less volatile, but nonetheless steady, rise in coal prices. The fuel most often used to generate electricity in Indiana is coal, which is purchased in part under contracts that have durations ranging from 1 to 20 years, with the preponderance of such contracts having an initial term of two to three years. Natural gas use as a fuel for electricity generation by Indiana utilities generally occurs only on the margin and is, therefore, procured on a short-term or spot market basis. This scenario subjects the marginal price of electricity to volatility as reflected in Chart 3.

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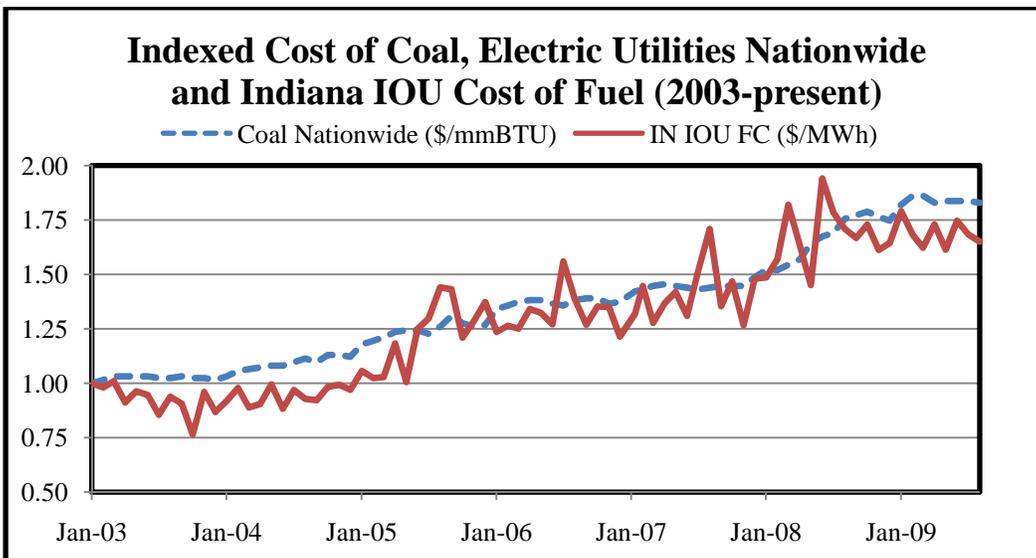
<sup>32</sup>For 2009, the Indiana electric IOUs reported \$1.69 billion of jurisdictional fuel costs. The FAC cost recovery mechanism provided for the collection of \$698 million of these costs.

**Chart 3**



As shown in Chart 4, the cost of coal nationwide has steadily increased in recent years. Prudent fuel costs incurred by a utility are passed through an adjustable rate mechanism and are reflected in customer rates dollar for dollar. Chart 4 indicates that the extensive use of coal in Indiana has led to an increase in customer rates over time in a manner that corresponds to the increase in the cost of coal.

**Chart 4**



### **III. ELECTRIC GROWTH & INNOVATION**

#### **Legislative Initiatives**

##### *State*

##### Net Metering

Net metering and feed-in tariffs were two prominent energy issues before the Indiana General Assembly during the 2009 legislative session. Net metering allows customers to satisfy their own electricity needs while retaining the electric utility as a back-up provider. Net metering allows a customer to apply short-term generation amounts in excess of their own needs to future billing periods, but does not provide the customer with the ability to sell or monetize unused generation. This critical feature economically limits the maximum size of the customer system to an amount that meets a customer's needs. The net metering participant avoids the full retail rate of the energy it self-supplies. Because the avoided full retail rate is comprised of both variable (energy) and fixed costs, the participant avoids charges for costs the utility does not avoid. If properly constructed, net metering arrangements limit the risk to the host utility; however, utility cost recovery risk still exists. Absent a mechanism to recover lost fixed costs from other customers, the utility would under-recover the cost of providing service to the net metering customer.

The Commission has determined that it is appropriate to revisit the net metering issue from an administrative perspective and to further engage interested parties to better understand the needs of Hoosiers with regard to this service offering. As such, the Commission is conducting several public hearings across the state to gather feedback on whether to adopt new net metering rules or modify the Commission's existing administrative rules under 170 IAC 4-4.2.

##### Feed-in Tariffs

Feed-in tariffs are arrangements that compensate energy providers at a pre-set price for a period up to 20 years. In contrast to net metering, the rate or price is set high enough to encourage the development of the specified renewable energy technology (e.g., solar, wind, biomass). Some argue nascent renewable generation resources often require technology-specific subsidies to financially compete with well-developed, utility-scale generation resources.

Additionally, delineation between technologies and unit scale are often included in the set prices. Electricity provided under a feed-in tariff is purchased by the utility and the associated price of that electricity is included in the cost of fuel recovered from the utility's ratepayers. A properly set generation price under a feed-in tariff will balance the desired renewable energy production amount against the rate impact resulting from incenting that amount. The IURC recently approved a three-year pilot feed-in-tariff program for IPL that includes reporting requirements that should enhance the ability of the IURC to monitor developments regarding the degree of subsidy that all ratepayers must fund to achieve this objective.

### *Federal*

#### Carbon Emissions Legislation

Potential regulation of carbon emissions continues to be a critical environmental issue and will likely increase in significance for Indiana and the nation as recent congressional activity has focused on implementing a cap-and-trade program. Under such a program, the federal government would set annual national limits on the aggregate emission of greenhouse gases, issue emission allowances consistent with the national limits, and enable firms or other entities to buy and sell these allowances. The national limit would be reduced over time and the number of emission allowances issued each year would decline by a corresponding amount.

There are multiple bills pending in both the U.S. Senate and House of Representatives that include provisions regarding CO<sub>2</sub> and other greenhouse gas (GHG) emissions. Several of the bills that have received a significant amount of attention and scrutiny include:

- *H.R. 2454: American Clean Energy and Security (ACES) Act of 2009, sponsored by Representative Waxman (D-CA)*
  - The bill would require the implementation of a cap-and-trade model. It calls for a reduction in U.S. carbon emissions to 97% of 2005 levels by 2012, 83% by 2020, 58% by 2030, and 17% by 2050. The bill passed in the House on June 26, 2009. The bill requires 15% of the annual allowances to be auctioned off.
- *The American Power Act, sponsored by Senators Kerry (D-MA) and Lieberman (I-CN)*
  - Released on May 12, 2010, the bill would create a cap-and-trade system for GHG emissions with the goals of reducing emissions to 95.25% of 2005 levels by 2013,

83% of 2005 levels by 2020, and 17% of 2005 levels by 2050. Introductory floor and ceiling prices would be set at \$12/ton and \$25/ton respectively, increasing at 5% over inflation annually.

- *S. 2877: Carbon Limits and Energy for America's Renewal, sponsored by Senator Cantwell (D-WA)*
  - The bill requires the President to establish standards to reduce GHGs at the same rate as ACES. Carbon shares would be auctioned with steadily increasing upper and lower price constraints or collars.

The Energy Information Administration (EIA) completed an analysis of the impact of the Waxman-Markey bill through 2030 using a number of different scenarios.<sup>33</sup> The study found that average electricity prices in 2020 were only 3 to 4 percent higher than the reference case. Electricity prices in 2030, however, were projected to be 19 percent above the reference case due to higher emission allowance prices and the phase-out between 2025 and 2030 of the allocation of free emission allowances to utilities that distribute electricity to retail customers. The study also found that receiving free allowances in proportion to output softens the impact of increased energy prices on energy intensive industries and industries that are vulnerable to international trade.

According to data for 2008 provided by the EIA, Indiana-based generation facilities accounted for 2.73% of the nation's nameplate electric capacity; whereas, Indiana accounted for 2.87% of the nation's retail sales of electricity and 5.02% of CO2 emissions from the total U.S. electric power industry. The allowances allocated to Indiana could vary considerably depending on the basis for allocating allowances.

Regions of the country that are more heavily dependent on coal-fired generation, including Indiana, will be much more adversely affected by carbon constraints than other regions. This result was highlighted by a study performed by the SUFG on the proposed carbon legislation in 2007. While the EIA projected the impact on the average price of electricity for the nation to be 10.4% in 2020 and 14.8% in 2025, the SUFG estimated the increase in Indiana electricity prices to be 33.6% in 2020 and 44.6% by 2025.

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<sup>33</sup>Energy Information Administration, Energy Market and Economic Impacts of H.R. 2454, the American Clean Energy and Security Act of 2009, August 2009

On June 15, 2010, the U.S. Environmental Protection Agency (U.S. EPA) released an analysis<sup>34</sup> on the American Clean Power Act which found the bill would add \$79 to \$146 to the average American household's annual energy cost. The U.S. EPA also predicted that allowance prices under the bill would remain between approximately \$13 and \$20 each for 2013 to 2020.

If carbon legislation is passed, it is likely that the gap between relatively high-cost states and those that have comparatively lower electric rates will narrow, but the relative position of Indiana to surrounding states may not change significantly. Kentucky (in particular), Ohio, Illinois, and a very large part of the region will see large per capita increases in their cost of service too (in the form of higher power costs) because of the dominance of coal-generated electricity in this region. Illinois and Ohio have considerable amounts of nuclear power; therefore, with regard to carbon dioxide legislation, they will be impaired less than Indiana. However, Illinois and Ohio are facing substantially higher costs due to problems associated with their retail competition efforts. In sum, Indiana's position relative to surrounding states may not change substantially. However, the more dramatic change, with potential major implications for economic development, could stem from the erosion of Indiana's economic advantage due to low cost electricity compared to historically high-cost areas such as California and the upper northeastern U.S.

#### Carbon Dioxide Regulation

**The U.S. EPA is another source of CO<sub>2</sub> emission regulations.**

The U.S. EPA is another source of CO<sub>2</sub> emission regulations. On April 2, 2007, the Supreme Court found greenhouse gases (GHGs), including CO<sub>2</sub>, to be air pollutants covered by the Clean Air Act.<sup>35</sup> On December 7, 2009, the U.S. EPA finalized its findings under the Clean Air Act that GHGs in the atmosphere endanger both the public health and the environment for current and future generations. The endangerment finding obligates the U.S. EPA, under Section 202(a) of the Clean Air Act, to issue GHG emission standards for motor vehicles, which makes GHG emissions subject to regulation under the Clean Air Act for the first time. Under the Clean Air Act, air pollutants subject to regulation are subject to the Act's "Prevention of Significant

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<sup>34</sup>U.S. EPA Analysis of the American Power in the 111<sup>th</sup> Congress (6/14/10)

<sup>35</sup> *Massachusetts v. EPA*, 549 U.S. 497 (2007)

Deterioration” and operating permit provisions for stationary sources. Consequently, the U.S. EPA intends to require stationary sources of GHGs to obtain permits stating new plants or expansions use the best available technology to cut emissions.

On May 13, 2010, the U.S. EPA issued its final GHG Tailoring Rule to define when permits under the New Source Review (NSR) Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required. Some key aspects of the new rule include:

- The U.S. EPA will phase in permit requirements and regulation of GHGs for large stationary sources beginning in 2011. Step 1 will take effect on January 2, 2011 and last through the first half of 2011. During Step 1, only those facilities that already must apply for CAA permits as a result of non-GHG emissions (approximately 400 facilities) will need to address their GHG emissions in permit applications. Cases with increases of 75,000 tons per year of total GHG would need to determine Best Available Control Technology (BACT).
- In Step 2, GHG emissions from larger sources will phase in starting in the latter half of 2011, and between then and June 2013, requirements will cover new construction projects that emit at least 100,000 tons per year of GHG and modifications at existing facilities that increase GHG emission by at least 75,000 tons per year. The U.S. EPA estimates about 550 sources will need to obtain Title V permits for the first time due to this Step.
- The U.S. EPA commits to undertake another rulemaking, which is to begin in 2011 and conclude by July 1, 2012, focusing on an additional step for phasing in GHG permitting and to discuss whether smaller sources can be permanently excluded from permitting. Regardless, permitting for sources smaller than 50,000 tons per year will not be required until at least 2016.
- The U.S. EPA plans to develop supporting guidance and other information to assist permitting authorities and will actively work with states on technical information and data needs related to identifying BACT requirements for permits.

## Renewable Portfolio Standards

Currently, there is no federal RPS. The Database of State Incentives for Renewables & Efficiency reports that there are 29 states, plus the District of Columbia, that have some type of RPS. Indiana is not one of these states. Several bills have been introduced by Congress that contain national RPS provisions. Some of these bills include:

- *H.R. 2454: American Clean Energy and Security (ACES) Act of 2009, sponsored by Representative Waxman (D-CA)*
  - The bill contains a combined renewable resource and electricity saving standard of 6% in 2012, gradually rising to 20% in 2020. Three quarters of the requirement must be met by renewable energy, except upon receiving a petition from a state governor to lower the renewable portion to 60% of the requirement. Qualifying renewables include: wind, solar, geothermal, biomass, hydropower, marine and hydrokinetic, landfill gas, wastewater treatment gas, coal-mine methane, and qualified waste-to-energy.
- *S.1462 American Clean Energy Leadership Act of 2009, sponsored by Senator Bingham (D-NM)*
  - The bill contains a combined RPS/energy efficiency standard of 3% for 2011-2013, gradually rising to 15% by 2021. Qualifying renewables include: wind, solar, ocean, geothermal, biomass, landfill gas, hydropower, and hydrokinetic.
- *H.R. 890 American Renewable Energy Act, introduced by Representatives Markey (D-MA) and Platts (R-PA)*
  - The bill would establish an RPS of 6% in 2012, steadily growing to 25% by 2025. Qualifying renewables include: wind, solar, geothermal, combustion of biomass or landfill gas, qualified hydropower, or marine and hydrokinetic energy.

## **Technology**

### *Plug-in Hybrid Electric Vehicles*

In the latest push to eliminate the United States' dependence on fossil fuels, Congress has promoted the development of alternative fuel vehicles. In fact, the Energy Independence and

Security Act of 2007 (EISA) contained incentives for the development of hybrid vehicles using a mix of electricity and traditional fuels. The Energy Improvement and Extension Act of 2008 then gave tax breaks to manufacturers of plug-in hybrid electric vehicles. The key to the success of these vehicles is their ability to store the energy they need to operate. This explains why Congress has provided additional incentives through the ARRA. This Act contained solicitations for up to \$2 billion in federal funds for the development of the advanced batteries needed to run the electric vehicles as well as the associated advanced technologies.

Typical driving patterns show that many vehicles are used primarily during the day, so they would need to recharge at night. Because electric usage currently peaks during the day and falls off during the night, capacity in the system should be sufficient to support the initial adaptation of hybrid electric vehicles expected in the next few years.

DEI and IPL have been working together along with other members of the Energy Systems Network to develop and facilitate an electric vehicle demonstration project in Central Indiana (also referred to as “Project Plug-IN”). The project continues to evolve, but will likely include vehicles provided or purchased by: the manufacturing partners as part of a loaned fleet; the Project Plug-IN partners for their own use; and DEI and IPL customers who are early adopters of electric vehicles or plug-in hybrid electric vehicles.

As a part of its Smart Grid Pilot, DEI is proposing to install, in five residential homes, a 2.5 kW roof-mounted photovoltaic array and a 5-10 kW lithium ion battery integrated with charging infrastructure for plug-in electric vehicles. DEI wants to test how electric vehicles are charged by consumers when economic incentives are provided through rates to encourage off-peak charging, which minimizes the need for additional resources to meet the demand for electricity.

#### *National Institute of Standards and Technology & Smart Grid*

The EISA charged the National Institute of Standards and Technology (NIST) with developing an appropriate framework for achieving interoperability of smart grid devices. The federal agency has defined the smart grid as “a nationwide network that uses information technology to deliver electricity efficiently, reliably and securely.”

NIST, a division of the U.S. Commerce Department, released its initial draft of cybersecurity standards in September 2009 and expects to issue its final report by mid-2010. The FERC will then initiate a rulemaking to formally adopt those standards. Uncertainty still remains as to how FERC will enforce those standards at the electricity distribution level, which is regulated by state commissions.

## IV. ELECTRIC APPENDIX

### Appendix A – Jurisdictional Electric Utility Revenues

Year Ending December 31, 2009

Rank	Utility Name	Operating Revenues	% of Total Revenue
1	Duke Energy Indiana, Inc.	\$ 2,354,692,352	30.12%
2	Indiana Michigan Power Co.	2,085,781,133	26.68%
3	Northern Indiana Public Service Co.	1,213,923,081	15.53%
4	Indianapolis Power & Light Co.	1,067,996,891	13.66%
5	So. Indiana Gas & Electric Co. d/b/a Vectren	528,673,984	6.76%
6	Richmond Municipal	83,474,038	1.07%
7	Northeastern REMC	81,437,046	1.04%
8	Anderson Municipal	71,360,839	0.91%
9	Harrison County REMC	47,173,038	0.60%
10	Jackson County REMC	46,858,011	0.60%
11	Mishawaka Municipal	46,262,805	0.59%
12	Logansport Municipal	36,033,782	0.46%
13	Crawfordsville Municipal	30,975,098	0.40%
14	Frankfort Municipal	25,440,123	0.33%
15	Peru Municipal	23,002,949	0.29%
16	Auburn Municipal	21,674,990	0.28%
17	Lebanon Municipal	17,006,294	0.22%
18	Marshall County REMC	12,249,789	0.16%
19	Tipton Municipal	9,663,335	0.12%
20	Columbia City Municipal	9,016,710	0.12%
21	Knightstown Municipal	2,207,173	0.03%
22	Troy Municipal	1,320,266	0.02%
23	Kingsford Heights Municipal	572,707	0.01%
24	Straughn Municipal	137,732	0.00%
25	Greenfield Mills, Inc. Power & Light	35,512	0.00%
	Total	\$ 7,816,969,678	100.00%

# 2010 NATURAL GAS REPORT

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## I. NATURAL GAS OVERVIEW

### Industry Structure

**The Indiana Utility Regulatory Commission regulates the rates and charges of intrastate pipelines and local distribution companies, and through its Pipeline Safety Division, the infrastructure that transports natural gas.**

The Indiana Utility Regulatory Commission (Commission) regulates the rates and charges of intrastate pipelines and local distribution companies (LDCs), by reviewing and issuing decisions in proceedings on gas cost adjustments, rates and charges, financial arrangements, service territory requests and investigatory proceedings. The Commission also analyzes various forms of alternative regulatory proposals, such as decoupling, trackers, and customer choice initiatives. Through its Pipeline Safety Division (Pipeline Safety), the Commission regulates the infrastructure that transports natural gas throughout the state.

The natural gas industry consists of three systems: producers (the gathering system), interstate and intrastate pipelines (the transmission system), and LDCs (the distribution system). Interstate pipelines, regulated by the Federal Energy Regulatory Commission (FERC), carry natural gas across state boundaries; and intrastate pipelines, regulated by state commissions, carry natural gas within state boundaries. States, including Indiana, that have certified pipeline programs are delegated federal authority by the U.S. Department of Transportation to conduct inspections, investigate accidents, and enforce state and federal safety regulations.

### *Production Overview*

The production of natural gas begins with raw natural gas extracted from the wellhead where initial purification of natural gas occurs before entering the low-pressure, small diameter pipelines of the gathering system. The natural gas is then re-purified at the processing station. Purified natural gas consists of approximately 90 percent methane compared to raw natural gas that is generally 70 percent methane combined with a variety of other compounds. For safety

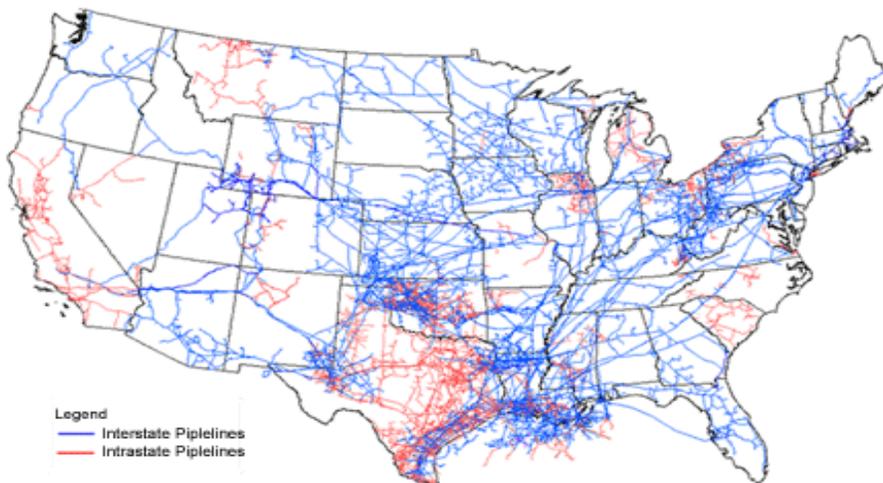
reasons, before allowing natural gas into the pipeline system, it is required to meet certain standards.<sup>1</sup> This pipeline quality natural gas is a commodity.

### *Transmission System*

**The vast majority of natural gas consumed in Indiana is from out-of-state production, predominantly the Gulf of Mexico.**

The vast majority of natural gas consumed in Indiana is from out-of-state production, predominantly the Gulf of Mexico. In 2008, Indiana consumed approximately 551 million dekatherms (Dth) of natural gas,<sup>2</sup> of which roughly 4.7 million Dth,<sup>3</sup> or less than one percent, was from production within the state. This illustrates Indiana's reliance upon the transmission system to carry natural gas from the gas producing regions of the country into the state.

*The national natural gas mainline transmission grid is made up of approximately 217,000 miles of interstate pipelines and 89,000 miles of intrastate pipeline.*



Source: Energy Information Administration, Natural Gas Transportation Information System, Natural Gas Pipeline Maps Database (December 2006)

The transmission system includes: interstate and intrastate pipelines that carry gas from producing regions to LDCs, industrial consumers, and power generation customers. The Heartland Pipeline (Heartland) and the Ohio Valley Hub (OVH) pipeline are the two intrastate

<sup>1</sup>[http://www.naturalgas.org/naturalgas/processing\\_ng.asp](http://www.naturalgas.org/naturalgas/processing_ng.asp)

<sup>2</sup>[http://tonto.eia.doe.gov/dnav/ng/ng\\_cons\\_sum\\_dcu\\_SIN\\_a.htm](http://tonto.eia.doe.gov/dnav/ng/ng_cons_sum_dcu_SIN_a.htm)

<sup>3</sup>[http://tonto.eia.doe.gov/dnav/ng/ng\\_prod\\_sum\\_dcu\\_sin\\_a.htm](http://tonto.eia.doe.gov/dnav/ng/ng_prod_sum_dcu_sin_a.htm)

pipelines under the Commission’s jurisdiction. The Commission governs the pipelines’ operations, services and rates.

Heartland is a 25-mile pipeline running west to east connecting the Midwestern Gas Transmission (MGT) interstate pipeline in Sullivan, Indiana to Citizens Energy Group’s (Citizens) underground storage facility in Greene County. Heartland supplies firm and interruptible transportation services with a design capacity of 80,000 Dth per day on a firm basis and up to an additional 10,000 Dth per day on an interruptible basis. OVH is a 9.2 mile pipeline located in Knox County. It connects two interstate pipelines (Texas Gas Transmission and MGT) to the Monroe City Gas Storage Field and has a storage capacity of approximately 2.7 million Dth and a firm transmission capacity of 60,000 Dth per day. Firm transportation service takes priority over interruptible service.<sup>4</sup> Consequently, interruptible transportation service customers receive an incentive (slightly lower cost) due to the possibility of interrupted gas supply, especially during peak periods.<sup>5</sup>

*Distribution System*

**The Commission regulates the rates and charges of 21 natural gas distribution utilities in Indiana, with operating revenues totaling \$2.1 billion.**

Gas passes through the transmission system and enters the distribution system where LDCs take ownership to sell and deliver the gas to retail customers. The Commission regulates the rates and charges of 21 natural gas distribution utilities in Indiana with operating revenues totaling \$2.1 billion<sup>6</sup> (Appendix A). These utilities maintain plant in service of approximately \$4.4 billion, serving roughly 3.4 million customers.

Of the regulated utilities, one is a not-for-profit, two are municipalities, and eighteen are investor-owned utilities (IOUs). Pursuant to statute, municipal utilities may elect to “opt out” of the Commission’s jurisdiction for rates and charges in favor of local control in determining rates;

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<sup>4</sup><http://www.aga.org/Kc/aboutnaturalgas/glossary/default.htm?id={6864429D-6294-4BE9-9CB2-64939E9A82FC}>

<sup>5</sup><http://www.aga.org/Kc/aboutnaturalgas/glossary/default.htm?id={6EC7604A-70E0-4508-A990-41D3AC4C21B9}>

<sup>6</sup>2009 Annual Reports filed with the Commission

however, these utilities still remain under the jurisdiction of the Commission’s Pipeline Safety Division.<sup>7</sup> Seventeen gas utilities have elected to “opt out” of the Commission’s oversight.

The three largest IOUs providing gas service in Indiana are Northern Indiana Public Service Company (NIPSCO), Indiana Gas Company, Inc. (Indiana Gas), and Southern Indiana Gas & Electric Company, Inc. (SIGECO). NiSource is the parent company of NIPSCO, and Vectren Energy Delivery (Vectren) is the parent company of Indiana Gas and SIGECO. NIPSCO and SIGECO are combination utilities, providing gas and electric service. Citizens, a public charitable trust (treated as a municipal utility for regulatory purposes), serves mainly the Indianapolis metropolitan area. Citizens and the three IOUs mentioned above represent the largest natural gas utilities in Indiana.

### Age-Profile

**While the majority of the transmission and distribution mains in Indiana are less than 50 years old, almost half of all transmission mains are between 40 and 50 years old.**

Indiana’s natural gas infrastructure consists of more than 75,920 miles of jurisdictional intrastate pipelines, including more than 39,500 miles of distribution and service mains<sup>8</sup> and approximately 1,950 miles of transmission mains as demonstrated by Table 1.

**Table 1**

*Age Profile of Jurisdictional Transmission and Distribution Mains in Indiana*

Years Old and Older	Transmission Mains		Distribution Mains	
	Number of Miles Mains	Percentage of Total Main Miles	Number of Miles Mains	Percentage of Total Main Miles
<b>70</b>	0.1	0.01%	674.0	1.70%
<b>60</b>	2.9	0.15%	396.4	1.00%
<b>50</b>	284.6	14.59%	2,740.1	6.93%
<b>40</b>	685.1	35.13%	9,395.9	23.75%
<b>30</b>	246.8	12.66%	4,788.3	12.10%
<b>20</b>	175.2	8.98%	7,105.5	17.96%
<b>10</b>	257.9	13.22%	8,231.2	20.81%
<b>0</b>	179.7	9.21%	5,439.7	13.75%
<b>Other</b>	117.8	6.04%	786.9	1.99%
<b>Total</b>	1,950.1	100.00%	39,558.0	100.00%

<sup>7</sup>See, I.C. § 8-1.5-3-9

<sup>8</sup>Service mains are used to transport natural gas from the distribution system to the end user’s property for final use.

A majority of the transmission and distribution mains in Indiana are less than 50 years but more than 20 years old. A third of all of the transmission mains were built during the 1960s. While the age of the distribution system is younger than the transmission system, the distribution system requires frequent construction of new mains in order to meet the demand of new customers. In the last 20 years, approximately 35% of the distribution mains were placed in service as compared to roughly 22% of the transmission system. Federal guidelines for integrity management<sup>9</sup> require that operators make every effort to assess threats to their pipelines, age being an obvious threat. The replacement of aging infrastructure will continue to be an ongoing focus as demand for service continues to increase.

## **Demand**

**Nationally, the state's annual residential natural gas pricing ranked as the 14<sup>th</sup> lowest.**

LDCs serve three customer classes: residential, commercial, and industrial. The residential customer class consists of single-family homes and small multi-family dwellings. In 2009, Indiana's residential class consumed approximately 140 million Dth of natural gas.<sup>10</sup> Nationally, the state's annual residential natural gas pricing also ranked as the 14<sup>th</sup> lowest.<sup>11</sup> Most residential customers use the LDC as their natural gas supplier, but residential customers in NIPSCO's service territory have the option of electing an alternative natural gas supplier under NIPSCO's "Choice Program," which was approved by the Commission through an alternative regulatory plan.<sup>12</sup> Those customers (approximately 14% of NIPSCO's total residential customers and 25% of total commercial customers) have elected to contract with an alternative supplier for their natural gas needs, with NIPSCO providing the transportation service.

The commercial customer class typically consists of office, retail, and wholesale facilities in addition to larger residential complexes. Some commercial class customers may choose to

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<sup>9</sup>Integrity management is a risk-based approach to pipeline safety resulting from the Pipeline Safety Act of 2002 and 2006.

<sup>10</sup>[http://tonto.eia.doe.gov/dnav/ng/ng\\_cons\\_sum\\_dcu\\_SIN\\_a.htm](http://tonto.eia.doe.gov/dnav/ng/ng_cons_sum_dcu_SIN_a.htm)

<sup>11</sup>[http://www.eia.gov/dnav/ng/ng\\_pri\\_sum\\_a\\_EPG0\\_PRS\\_DMcf\\_a.htm](http://www.eia.gov/dnav/ng/ng_pri_sum_a_EPG0_PRS_DMcf_a.htm)

<sup>12</sup>NIPSCO Choice Program was originally approved in Cause No. 40342 as a two-year pilot program that included the approval of affiliate guidelines applicable to NIPSCO and its affiliate companies. The Choice Program was extended in Cause Nos. 41338 and 42097 and most recently approved by the Commission in Cause No. 43837 on March 3, 2010. The Commission's approval extended the Choice Program until March 31, 2012.

receive bundled service or transportation service from the LDC. In 2009, Indiana’s commercial class consumed approximately 78.6 million Dth of natural gas.<sup>13</sup>

The industrial customer class typically purchases the highest volume of gas both individually and collectively. This class may receive bundled service or buy gas directly from one or more producers and/or marketers, paying the LDC for transportation costs associated with delivering the gas from the city gate to the industrial customers’ facilities. In 2009, Indiana’s industrial customers consumed about 242 million Dth, the fourth highest volume in the U.S.<sup>14</sup>

### **Existing Legal and Policy Foundations**

#### *Pipeline Safety Act of 1968 and the State’s Pipeline Safety Program*

**The Pipeline Safety Act of 1968 promotes pipeline safety through exclusive federal authority for regulation of interstate pipeline facilities, and federal delegation to the states for all or part of the responsibility for intrastate pipeline facilities.**

The Pipeline Safety Act of 1968 established the federal pipeline safety program. The state’s program promotes pipeline safety through exclusive federal authority for the regulation of interstate pipeline facilities and federal delegation to the states for all or part of the responsibility for intrastate pipeline facilities. The federal program authorizes grants-in-aid for up to 80 percent of a state agency’s personnel, equipment, and activity costs for its pipeline safety program. However, the federal grant for the year under review is limited to the average of the state’s share of costs over the previous three years. Grants are based primarily on the annual evaluation of the state’s program. Historically, the annual evaluation of Indiana’s program has resulted in high marks (105.5 out of 107 points for the most current evaluation). Furthermore, the federal/state partnership is the cornerstone for ensuring uniform implementation of the pipeline safety program nationwide.

**Indiana enforces each federal safety standard through injunctive and monetary sanctions.**

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<sup>13</sup>[http://tonto.eia.doe.gov/dnav/ng/ng\\_cons\\_sum\\_dc\\_u\\_SIN\\_a.htm](http://tonto.eia.doe.gov/dnav/ng/ng_cons_sum_dc_u_SIN_a.htm)

<sup>14</sup>[http://tonto.eia.doe.gov/dnav/ng/ng\\_cons\\_sum\\_a\\_EPG0\\_vin\\_mmcf\\_a.htm](http://tonto.eia.doe.gov/dnav/ng/ng_cons_sum_a_EPG0_vin_mmcf_a.htm)

Indiana participates in the federal pipeline safety grant allocation program through a voluntary certification submission. Under this certification, the Commission, on behalf of the federal government, assumes safety responsibility with respect to intrastate facilities over which it has jurisdiction under state law (submissions for gas and hazardous liquid programs are separate certifications). These laws allow Indiana to enforce each federal safety standard through injunctive and monetary sanctions. The state may also adopt additional or more stringent standards for intrastate pipeline facilities, provided such standards are compatible with federal regulations.

Pipeline Safety administers the Indiana pipeline safety program as established by statute.<sup>15</sup> Annually, the division completes a minimum of one in-depth inspection of each gas pipeline operator and covers 50 percent of each operator's inspection units. These inspections may cover operating procedures, operating records, specialized inspections, follow-up inspections, field inspections, operator training, or any combination of these types of inspections. Upon discovery of a probable violation, an operator receives a written notice and is subject to additional enforcement, as needed. In 2009, Pipeline Safety conducted 895 inspections of 95 operators and 224 associated inspection units, resolving 208 probable violations.

Additionally, Pipeline Safety investigates new operators, determines jurisdictional authority, and incorporates new operators into the program. It also conducts on-site investigations into each pipeline accident reported to the National Reporting Center, unless the incident is determined to be non-jurisdictional. Upon completion of an investigation, Pipeline Safety prepares a written report.

Pipeline Safety is also responsible for the prevention of damage to underground facilities. It also promotes the education of public and emergency officials/responders in recognizing, reporting, and responding to gas-related emergencies and conducts training sessions for pipeline operators in the state. Additionally, Pipeline Safety maintains records for each operator, inspection, and compliance action. Records include, but are not limited to, inspection records, correspondence and compliance actions, incident reports and state and federal annual reports.

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<sup>15</sup>See, I.C. § 8-1-22.5

**State pipeline safety programs are strongly encouraged  
to develop data-driven, risk-based inspection plans.**

The federal program strongly encourages state pipeline safety programs to develop data-driven, risk-based inspection plans. As operators are now required to develop plans to identify and assess risks to their systems, pipeline safety programs are also under pressure to define elements of risk and determine an operator's overall "risk score." This is done so that riskier operators are more easily identified and given additional scrutiny, resulting in greater safety for the public.

*Federal Energy Regulatory Commission Orders*

The impact of federal regulation is important to the LDCs, especially since the Federal Energy Regulatory Commission (FERC) oversees the rates, terms and conditions of sales for resale and transportation of natural gas in interstate commerce. The FERC operates as an independent agency in the regulation of interstate pipelines, interstate infrastructure proposals, and liquefied natural gas (LNG) terminals. While the marketplace determines the price of commodity gas, based on supply and demand, the IURC reviews and approves prudent gas purchases along with distribution-related costs. All costs approved by the IURC include FERC-related costs associated with supplying gas to the end-use consumers.

As a result of FERC Orders 636 and 712, pipeline companies changed from being merchants of natural gas to transporters of the commodity. This allowed for open-access transportation services regardless of who owns the gas, thereby increasing competition among sellers. As a result, interstate pipeline companies separated or unbundled transportation and sales services. Pipeline companies began offering a variety of transportation services such as unbundled no-notice, firm transportation, open-access storage, and a capacity release program. The capacity release program led to a secondary market, allowing for the release of surplus firm capacity for transportation and storage. Pipeline companies and LDCs realize benefits from having greater flexibility in managing pipeline contracts and with the value of capacity on interstate pipelines. This capacity value is shared with customers in gas cost filings amongst Indiana's largest utilities, benefiting natural gas customers.

## II. NATURAL GAS LANDSCAPE

### Infrastructure

#### *Rockies Express Pipeline*

The Rockies Express Pipeline (REX) is a major interstate pipeline project that begins in Rio Blanco County, Colorado and ends in Monroe County, Ohio. The portion of the pipeline in Indiana traverses Vermillion, Parke, Putnam, Hendricks, Morgan, Johnson, Shelby, Decatur, and Franklin counties. The joint developers of the project were: Kinder Morgan Energy Partners, L.P.; Sempra Pipelines and Storage, a unit of Sempra Energy; and ConocoPhillips. Construction spanned roughly four years and was completed during the summer of 2009 at a cost of approximately \$6.6 billion.

**REX is the largest natural gas pipeline in North America.**

REX is the largest natural gas pipeline in North America, spanning nearly 1,700 miles with a capacity of 1.8 billion cubic feet per day.<sup>16</sup> REX links natural gas supplies in the Rocky Mountains to major markets in the upper Midwest and Eastern U.S. Historically, a substantial price disparity existed between Rocky Mountain gas and gas supplies in the eastern U.S. The presence of REX in Indiana contributes to the diversification of the state's natural gas sources of supply and contributes to competitive pricing.

Federal inspectors requested assistance from Pipeline Safety to observe and report on the construction of the REX pipeline. Inspectors dedicated more than 238 days and nearly 1,790 man-hours to this endeavor during the time REX crews worked in Indiana. Pipeline Safety also monitored the restoration of the right-of-way for the REX pipeline.

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<sup>16</sup><http://pipelineandgasjournal.com/michels%E2%80%99-crews-tackle-construction-three-major-north-american-pipeline-projects>

## Modernization and Efficiency

### *Energy Efficiency*

**The Commission has issued orders fulfilling the requirements of the Energy Independence and Security Act of 2007, approving decoupling and energy efficiency programs.**

The federal Energy Independence and Security Act of 2007 (EISA) was signed into law on December 19, 2007. The EISA provisions promote energy independence in the United States by increasing energy efficiency measures and increasing usage requirements for clean renewable fuels. The requirement in Title V, “Energy Savings in Government and Public Institutions,” affects the Commission by amending the Public Utility Regulatory Policies Act of 1978. The amendment requires natural gas utilities to adopt policies that establish energy efficiency as a priority in their business operations and planning processes. The amendment also requires regulatory agencies to evaluate rate design modifications and provide for the following:

- Institution of decoupling programs;
- Creation of incentives for utilities to successfully manage energy efficiency programs; and
- Adoption of rate designs promoting energy efficiency in each customer class.

In response to the EISA, the Commission has issued orders approving decoupling mechanisms and energy efficiency programs.<sup>17</sup>

Utility-sponsored energy efficiency programs are included in most of the approved decoupling rate designs that separate a utility’s profits from its sales while providing for an allowed rate of return. Although decoupling does not by itself achieve energy efficiency, the two concepts are linked due to the fact that gas utilities may advocate conservation efforts with the assurance of cost recovery.

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<sup>17</sup>In Cause Nos. 42943 and 43046, the Commission approved an alternative regulatory plan that included a sales reconciliation decoupling mechanism for SIGECO and Indiana Gas. In Cause No. 43051, the Commission approved an alternative regulatory plan simplifying the residential gas rates as well as an Energy Efficiency Rider for NIPSCO. In Cause No. 42767, the Commission approved an alternative regulatory plan that included a decoupling mechanism and energy efficiency program for Citizens Gas & Coke Utility. In Cause No. 43624, the Commission approved an alternative regulatory plan that included an energy efficiency program for Citizen Gas of Westfield.

**The Commission has established independent oversight boards to govern the energy efficiency programs.**

The Commission has established independent oversight boards to govern the energy efficiency programs. These oversight boards are comprised of representatives from various energy groups, utilities, state agencies, consumer groups, and educational institutions such as the State Utility Forecasting Group at Purdue University. Each utility selected an independent third-party administrator through a bidding process. The representatives on the oversight boards along with the third-party administrator use a consensus decision-making process to approve a proposed portfolio of programs, as well as the associated costs and measures to determine program effectiveness.

The Commission reviews the programs of each utility through monthly scorecards detailing monthly, year-to-date, and yearly planning goals for therm savings, measures implemented, and budget expenditures. In the near future, the Commission anticipates that various utility programs will be consolidated into a single statewide program to allow for economies of scale and significant market influence not realized by smaller, individual programs. Additionally, customers will benefit from a unified oversight board that will establish consistency in program structure, communications, and education efforts throughout the state.

*Shale Gas*

**The Potential Gas Committee cites an unprecedented increase in U.S. natural gas resources to 515 trillion cubic feet, an increase of 39% from 2006.**

The emergence of unconventional sources of natural gas supply such as shale gas has affected the overall supply of natural gas in our country. A recent report by the Potential Gas Committee<sup>18</sup> cites an unprecedented increase in the amount of U.S. natural gas resources of 515 trillion cubic feet, an increase of 39% from 2006, due to newly available drilling techniques of shale gas potential throughout the Appalachian basin, the Mid-Continent, Gulf Coast, and Rocky Mountain areas. Shale gas, during the last few years, has been competitively priced. However,

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<sup>18</sup>The Potential Gas Committee is an incorporated, nonprofit organization consisting of experienced volunteers in the natural gas field working independently in association with the Colorado School of Mines.

the price of discovery and the actual production of shale gas varies depending on the location and geological formation.

Recent concerns have raised questions regarding the drilling techniques for shale gas and its impact on the environment. While there is no definitive correlation linking drilling with environmental concerns, many states, where drilling has occurred, have experienced air pollution and contaminated drinking wells due to poorly cased wells and the illegal disposal of fluids. As a result, the federal government launched a review of the commonly used drilling technique known as hydraulic fracturing.<sup>19</sup> These concerns may eventually increase the cost of drilling or temporarily halt drilling until concerns can be addressed. If legislation regarding drilling is passed, the commodity cost of natural gas may increase in the future.

### *Renewables*

<b>Indiana has several opportunities for using renewable energy options.</b>
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Indiana has several opportunities for using renewable energy options as an alternative to conventional fuels such as natural gas, fuel oil, and coal. Since landfills are the largest human-generated source of methane emissions in the United States, capturing and using this methane for energy is a growing source of renewable energy. Currently, there are 20<sup>20</sup> operational landfill methane gas (LMG) utilization projects in Indiana, with the potential to develop additional facilities in the future.

Another source of renewable energy is the creation of methane gas or renewable natural gas (RNG) from anaerobic digestion of waste from livestock. In northern Indiana, a project involving two dairy farms is being considered for the farms to become a supplier of pipeline-grade RNG. These farms are capable of producing approximately 900,000 Dth annually. However, in order for the farms to supply RNG, the utility will require upgrades to enable the gas to be transported throughout its system. Therefore, cooperation is necessary between the farms and the utility serving that area. At this early stage, production volumes are low.

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<sup>19</sup>Hydraulic fracturing is a technique used to create fractures that extend from the well bore into rock or coal formations so that the gas may travel more easily from the rock pores to the production well - <http://www.earthworksaction.org/FracingDetails.cfm>

<sup>20</sup><http://www.epa.gov/lmop>

**Interest in agricultural, organic, and human-generated waste  
may lead to additional alternatives to conventional fuels.**

Given recent concerns regarding energy efficiency and environmental pollution, interest in agricultural, organic, and human-generated waste may lead to additional alternatives to conventional fuels. Since sustainable sources of natural gas provide economic and environmental benefits, continued success of these types of projects is important to Indiana's energy future. Consequently, the Commission expects to review new proposals for RNG projects in the near future.

Coal bed methane (CBM) is another alternative energy source of natural gas that is extracted from coal beds. Generally, CBM is contained in the un-mined coal seams that lie a few hundred feet below the surface. CBM is recovered by drilling into the coal seam using water and sand at high pressure, thus fracturing the seam. This is similar in nature to shale fracturing. As water levels around the coal seam are lowered, the gas releases up into the well. Currently, CBM accounts for approximately 7% of natural gas production in the United States.<sup>21</sup> There is a CBM project in operation in southern Indiana. Jericho, LLC received a Certificate of Public Convenience and Necessity to own and operate as a public utility with a coal bed methane gathering system. Jericho is producing roughly 1.6 million cubic feet of CBM on a daily basis with forecasts of up to approximately 2.0 million cubic feet in the future. All of the CBM gas produced is purchased by ProLiance Energy<sup>22</sup> and transported via the Heartland Pipeline.<sup>23</sup>

Given Indiana's vast coal reserves, the prospect of using local coal sources for synthetic gas production is another alternative to importing natural gas into our state. The process, which is called "gasification," converts coal into substitute natural gas (SNG). The SNG<sup>24</sup> produced is pipeline quality that may be used for home heating, manufacturing facilities, or in the generation of electricity. In the "Legislation" section of the Report, the gasification process is discussed and a more detailed explanation is provided.

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<sup>21</sup><http://waterquality.montana.edu/docs/methane/cbmfaq.shtml#whatiscoalbedmethane>

<sup>22</sup>ProLiance Energy is an Indianapolis-based natural gas marketing and supply company.

<sup>23</sup>Order in Cause No. 43500, approved on December 17, 2008

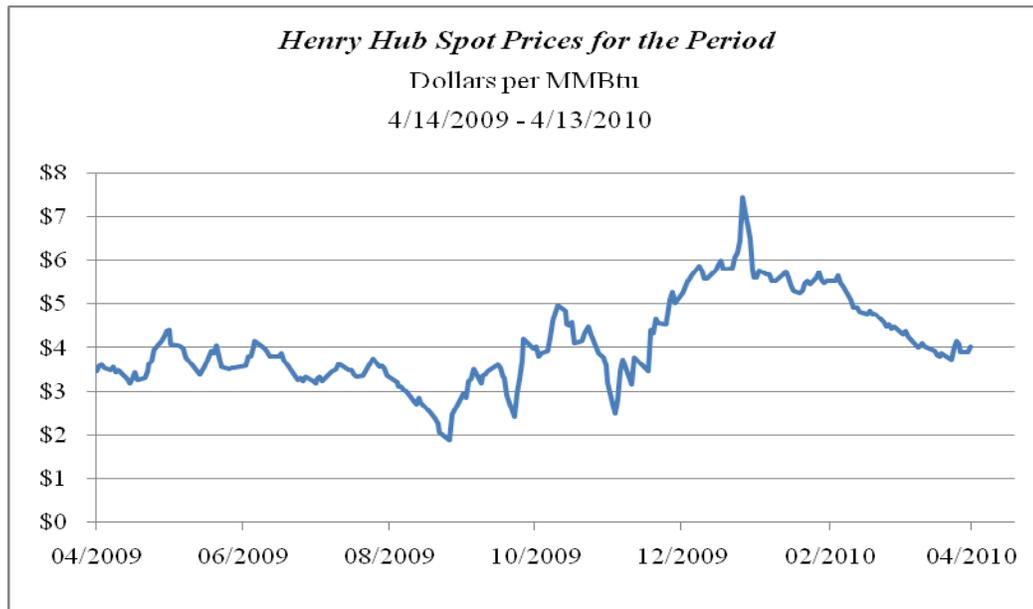
<sup>24</sup>See, I.C. § 4-4-11.6 and modified by I.C. § 4-4-1.9-1.2

## Pricing and Economics

### Pricing

**NYMEX gas futures bottomed out on September 3, 2009 at  
\$2.51/Dth and peaked on January 6, 2010 at \$6.01/Dth.**

Pricing in the natural gas market was less volatile in 2009 than in previous years. For 2009, initial pricing started relatively low in comparison to 2008 and moved even lower. NYMEX gas futures bottomed out on September 3, 2009 at \$2.51/Dth<sup>25</sup> and peaked on January 6, 2010 at \$6.01/Dth, a spread of \$3.50. This contrasts with 2008's volatile market, with a price spread of roughly \$10.00. The most prominent impact on pricing is supply and demand. The abundance of supply can be attributed to: an influx of unconventional gas sources (i.e., shale gas); a decline in demand; a cooler-than-normal summer in 2009; and the worldwide recession. The following chart demonstrates the variation in pricing from April of 2009 to April of 2010.



It is important to note that utilities *do not* profit from the gas commodity portion of consumers' bills as it is a dollar-for-dollar pass-through of the gas cost. In order for utilities to recover these costs, the overall weighted cost of gas and a utility's purchasing practices must be

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<sup>25</sup>Natural Gas Futures Prices (NYMEX), [http://tonto.eia.doe.gov/dnav/ng/ng\\_pri\\_fut\\_s1\\_d.htm](http://tonto.eia.doe.gov/dnav/ng/ng_pri_fut_s1_d.htm)

reviewed by the Commission and the Office of the Utility Consumer Counselor, the state agency that represents ratepayers in proceedings before the Commission. In order for costs to be approved, each utility must demonstrate that its purchases were prudent. The Commission encourages utilities to incorporate a portfolio mix that is diversified (i.e., a balance of purchases such as fixed, hedged, and storage gas) to mitigate price volatility and to have a flexible program to take advantage of market conditions.

One of the chief factors driving natural gas demand is concern for the environment. For instance, many electric utilities use natural gas, a cleaner burning fuel than coal, as a source for electric production. Weather also has a significant impact on the demand for natural gas. As expected, when the weather is colder-than-normal during the heating season, the demand for natural gas increases. Demand also increases if the weather is hotter-than-normal during the non-heating season, as natural gas is used to generate electricity in times of peak demand. Because gas consumption is often lower in the summertime, gas utilities typically use this opportunity to replenish storage with lower-cost gas in preparation for the winter heating season. However, extreme temperature variations can increase the demand for natural gas during summer months, thereby affecting the price of gas as well as the price of electricity. During the summer of 2009, cooler-than-normal temperatures compounded with an abundance of supply, allowed utilities to fill their storage capacity with relatively low-priced gas.

**While demand is a significant driver of market volatility, other factors such as supply, storage, weather, and economic conditions contribute as well.**

Supply is also a concern, especially when demand for natural gas increases. To keep balance in the market, new sources of supply are needed, especially because some conventional sources of supply produce less natural gas now than in the past and existing wells experience a decline in production as they mature. In addition, higher natural gas prices over the last few years have increased interest in exploration for unconventional sources that were once considered too costly to extract. New technology and lower extraction costs have also led to increased drilling of non-conventional gas supplies (e.g., coal bed methane, shale gas, and tight sands), contributing significantly to the supply of natural gas. As a result, these new sources, along with an increase

in overall working storage of natural gas led to a decline in natural gas prices during the spring of 2010.

### *Adjustable Rate Mechanisms*

**On average, the cost of gas reflected in the GCA mechanism accounts  
for approximately 74 percent of a residential customer's bill.**

An adjustable rate mechanism (tracker) allows for the timely recovery of costs that are substantially outside the utility's control (e.g., federal regulations, market volatility). Through an expedited and abbreviated process, the Commission reviews the costs associated with the tracker mechanism. The examples below describe authorized trackers available for consideration:

- Gas Cost Adjustment (GCA) – Pursuant to statute,<sup>26</sup> the GCA mechanism allows a gas utility to recover the commodity cost of gas not recovered through rates established during a rate case.
- Pipeline Safety Adjustment (PSA) – The PSA allows the gas utility to recover prudently incurred, incremental non-capital expenses necessary in order to meet the requirements of the Federal Pipeline Safety Improvement Act of 2002 (PSIA), which imposed many new requirements on pipeline operators.
- Energy Efficiency Funding Component (EEFC) & Sales Reconciliation Component (SRC) – The EEFC funds the promotion of energy efficiency. The SRC allows recovery of expenses from residential and commercial ratepayers that would otherwise be lost due to reductions in revenue caused by energy efficiency programs.
- Normal Temperature Adjustment (NTA) – The NTA reduces the risk of a gas utility not recovering its approved margin due to warmer-than-normal temperatures and mitigates the possibility of over-earning due to colder-than-normal temperatures during the heating season.

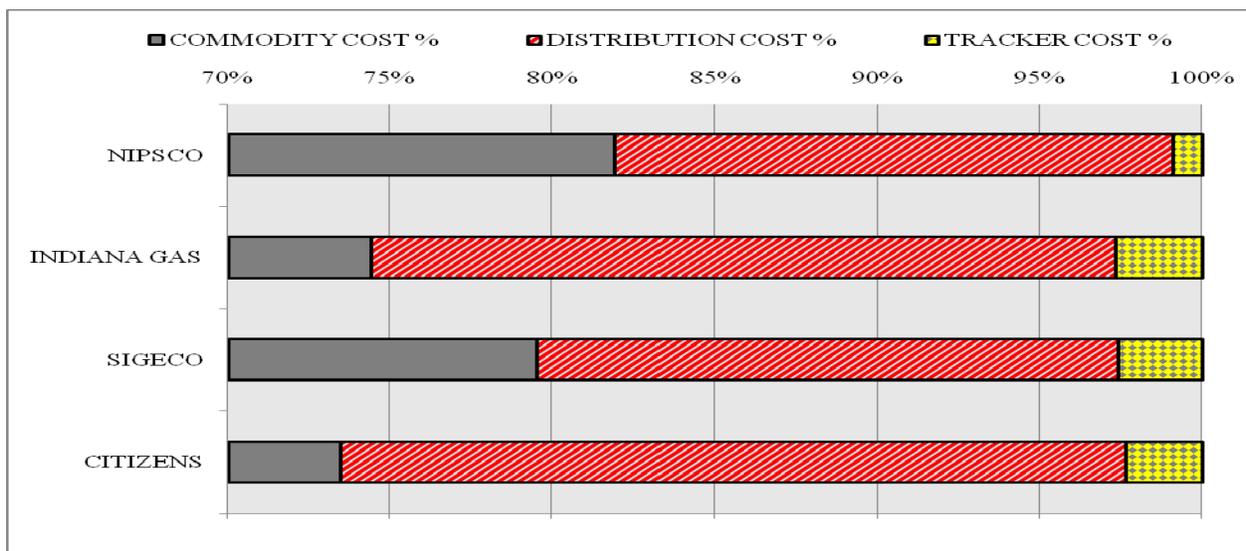
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<sup>26</sup>See, I.C. § 8-1-2-42(g)

Trackers provide an opportunity for utilities to achieve authorized returns between rate cases by recovering certain costs outside of the utility’s control. The recovery of costs associated with consumer benefits or the normal operations of the utility improves the financial health of the utility which benefits both the utility and consumers. On average, gas usage (i.e., commodity cost) accounts for approximately 74 percent of a residential customer’s bill; whereas, all operating costs account for approximately 24 percent. All other trackers approved by the Commission account for less than 2 percent of a customer’s monthly gas bill. The following table demonstrates this cost analysis.

**Table 2**

***Four Largest Indiana Gas Utilities Percentage of Residential Billing Components***



*Decoupling*

**Decoupling separates the recovery of a gas utility’s fixed costs from the volume of natural gas sold.**

Traditional ratemaking allows a utility to recover fixed costs based on an estimated test year volume of natural gas sold. Depending on sales, a utility may over- or under-recover costs. Fixed costs are non-commodity costs such as operational costs that do not vary with the quantity of gas sold. Under traditional ratemaking, a utility captures a portion of its fixed costs through

the volume of natural gas sold. Therefore, a utility can recover fixed costs fully only when customers consume as much or more natural gas as was established in the utility's last rate case. For this reason, the Commission received a number of proposals to modify current rate structures. These alternative rate design proposals are known as "decoupling," in which the recovery of a gas utility's fixed costs is separated from the volume of natural gas sold.

The acceptance of a decoupled rate design by the Commission was premised on its judgment that for that industry it was superior to the prior volumetric rate design in aligning customer interests and regulatory principles. The first usage was closely monitored to gain firsthand experience, and, thus far, the application is meeting expectations.

## **Regulatory Development**

### *Universal Service Programs*

The Commission's order in Cause No. 43669 authorized Citizens, NIPSCO, and Vectren to reinstate their respective bill assistance programs to provide Hoosiers in need with assistance during the winter heating season. The individual utility programs are categorized under the term Universal Service Program (USP). In order for these programs to continue beyond October 31, 2012, each utility must file a base rate case requesting relief that includes the assistance program. This will provide the Commission with an opportunity to further examine the costs and benefits of the programs. Currently, the programs are designed to encourage customers qualifying for USP assistance to also apply for American Recovery and Reinvestment Act weatherization assistance program funds.

### *Damage Prevention Requirements*

States are required under the Pipeline Integrity, Protection, Enforcement, and Safety Act of 2006 (PIPES Act) to create and improve damage prevention programs. The purpose of this effort is to reduce the occurrence of third-party excavation damage to underground natural gas and hazardous liquid pipelines. Indiana has incorporated many, but not all of the required damage prevention elements.

One area in need of improvement is the review of the adequacy of an operator's internal performance measures. Operators now keep records of locate requests and conduct internal

audits to verify the competency of employees and contractors performing these tasks. Pipeline Safety inspectors regularly verify locate ticket information during operator construction inspections and verify procedures during audits. However, a formal process needs to be developed and followed by all jurisdictional operators to provide consistent measures and validation of operators' and the state's damage prevention programs.

Additionally, Indiana does not have a statewide program of standardized training of employees of operators, excavators, and locate companies. Instead, training is conducted by each individual company. It is expected that compliance with internal performance measures and standard training initiatives may be achieved through the Indiana 811 Damage Prevention committee and the Indiana Damage Prevention Council. While the core purpose of Indiana 811 is to provide for safe excavation from initial notification through excavation, this effort must include all stakeholders' involvement from policymaking to implementation in order to succeed.

#### *Distribution Integrity Management Program*

The final federal rule establishing integrity management requirements for gas distribution pipeline systems became effective on February 12, 2010. Operators must now develop and implement written programs by August 2, 2011. This significant rulemaking is similar to the integrity management rule for transmission pipelines, but affects distribution operators. The primary focus of this rule is to help ensure pipeline integrity and improve on the safety record of energy transportation by pipelines.

Pipeline Safety is responsible for reviewing jurisdictional operators' plans and verifying compliance with the rule, which requires operators of distribution pipelines to create, implement, and follow a written program designed to reduce risk to their system(s). The written program must include: knowledge of location, materials, and components; identification of system threats; evaluation and ranking of accessible risk; identification and implementation of measures to address each risk; performance measures, including an evaluation of the effectiveness of program; periodic evaluation and improvement; and reporting of results.

### III. NATURAL GAS GROWTH & INNOVATION

#### Legislative Initiatives

*Senate Enrolled Act 423 (SEA 423) – Substitute Natural Gas (P.L. 2-2009<sup>31</sup>)*

Governor Daniels, in keeping with Indiana’s homegrown clean energy initiative, signed into law a measure for a proposed gasification facility on March 24, 2009. Coal gasification offers one of the most versatile and the cleanest ways to convert coal into electricity, hydrogen, and other valuable energy products. A gasification facility will convert Indiana coal into pipeline quality gas (i.e., SNG) for use by retail end-use customers. Any proposed facility is required to file a docketed proceeding with the Commission to define its public utility status and the utilities need to seek approval of the contracts.

On March 25, 2010, Governor Daniels signed into law House Enrolled Act 1086<sup>32</sup>, which contained provisions allowing for the development of a gasification facility, proposed in SEA 423. These new provisions allow the Indiana Finance Authority to enter into contracts for the sale of SNG with third parties, with proceeds from and costs of those sales being reflected on customers’ bills. In addition, SEA 423 also established Commission authority over the allocation of the costs and proceeds from the sale, transportation, and delivery of SNG to retail end-use customers. To date, no filing has been made to the Commission regarding these matters.

**The gasification process is complex but has numerous environmental benefits.**

Rather than burning coal directly, gasification (a thermo-chemical process) breaks down coal into its basic chemical constituents. In a gasifier, coal is typically exposed to steam and carefully controlled amounts of air or oxygen under high temperatures and pressures. Under these conditions, molecules in coal break apart initiating chemical reactions that produce a mixture of carbon monoxide, hydrogen, and other gaseous compounds.

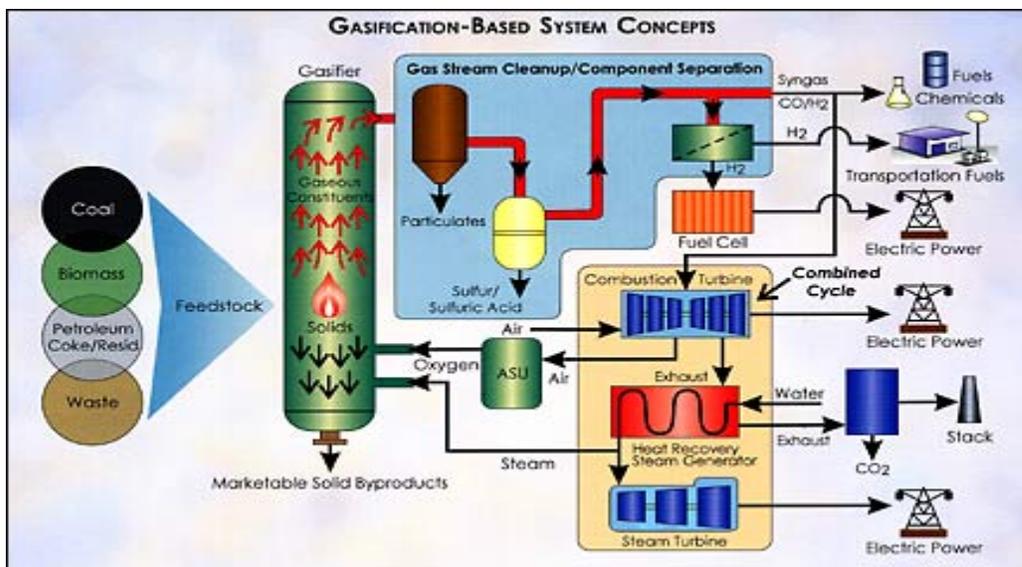
The environmental benefits of gasification stem from the ability to achieve extremely low SO<sub>x</sub>, NO<sub>x</sub>, and particulate emissions from burning coal-derived gases rather than pulverized

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<sup>31</sup>SEA 423 created a new section, I.C. § 4-4-11.6, and modified I.C. § 4-4-1.9-1.2.

<sup>32</sup>P.L. 113-2010

coal. Sulfur in coal, for example, is converted to hydrogen sulfide, which can be captured by processes presently used in the chemical industry. In an Integrated Gasification Combined Cycle (IGCC) plant, the syngas produced is virtually free of fuel-bound nitrogen due to the fact that NO<sub>x</sub> from the gas turbine is limited to thermal NO<sub>x</sub>. Diluting the syngas allows for NO<sub>x</sub> emissions as low as 15 parts per million. The gasification process is detailed in the diagram below<sup>33</sup>



Coal gasification may offer additional environmental advantages by addressing concerns over the atmospheric buildup of greenhouse gases such as carbon dioxide. If oxygen is used in a coal gasifier instead of air, carbon dioxide is emitted as a concentrated gas stream in syngas at high pressure. In this form, it can be captured and sequestered more easily and at lower costs. By contrast, when coal burns reacting in air, of which 79 percent is nitrogen, the resulting carbon dioxide is diluted and more costly to separate.

*Senate Enrolled Act 487 (SEA 487) – Underground Plant Protection (P.L. 62-2009)*<sup>34</sup>

Indiana 811 was formed by the owners and operators of underground facilities in Indiana as a means of reducing damage to underground facilities. Indiana 811 began operation on October 5, 1981 with seven principal utility members. Membership has since grown to more than 900

<sup>33</sup><http://www.fossil.energy.gov/programs/powersystems/gasification/howgasificationworks.html>

<sup>34</sup>SEA 487 modified and created several sections throughout I.C. § 8-1-26 and added I.C. § 8-1-2.6-4(c)(4).

members. In 2003, the General Assembly revised the “Call Before You Dig” law to require all owners and operators of underground facilities to become members of the Indiana 811 by August 31, 2004. This chapter has since been substantially modified, and now includes penalties for certain infractions, effective July 1, 2009.

All owners or operators of underground facilities are required to be members of Indiana 811, and all persons excavating are required to call Indiana 811 at least two full working days, but no more than twenty calendar days, before digging. With the July 1, 2009 modifications, Pipeline Safety serves as the investigative unit for alleged violations of this chapter. If Pipeline Safety finds a violation, the information is forwarded to the Governor’s Advisory Committee.

The Advisory Committee consists of seven members appointed by the Governor, with representation from various industry-related services. The Advisory Committee assists the Commission concerning implementation and enforcement. In this capacity, the Advisory Committee may recommend the following penalties upon Pipeline Safety’s finding of a violation:

1. Civil penalties up to \$10,000;
2. Participation in education or training programs;
3. Warning letters; and/or
4. Development of a plan to avoid future violations of this chapter.

Upon receiving a recommendation from the Advisory Committee, and after giving notice and opportunity for a public hearing, the Commission acts to:

1. Uphold or reverse the finding of a violation by Pipeline Safety;
2. Approve or disapprove the recommendation(s) of the Advisory Committee; and/or
3. Collect any civil penalties and deposit the penalties in the underground plant protection account.

The Commission is in the process of adopting rules to fulfill its responsibilities. Since July 1, 2009, Pipeline Safety has registered more than 60 possible violations.

**Indiana’s pipeline safety rule was revised in March 2010 to bring intrastate hazardous liquid pipeline operators under the jurisdiction of the Commission.**

Indiana’s pipeline safety rule was revised and received final approval in March 2010, to bring intrastate hazardous liquid pipeline operators (e.g., carbon dioxide and ethanol) under the jurisdiction of the Commission. For all operators, the reportable incident threshold was increased to \$50,000 for property damage so that it coincides with the federal rule. Operators are required to file operation and maintenance plans with Pipeline Safety and those plans now must include procedures for handling abnormal operations. Operators must maintain records of their physical plant, including map(s) of in-service facilities, which must be reviewed, updated, and documented once every calendar year. The rule also requires operators to develop and complete a plan to conduct a leak survey of customer-owned, residential service or fuel lines once every five calendar years. The portion of the line to be surveyed is the “...buried...gas carrying steel piping that is between the outlet of the meter and the entry” of the residential building wall.

Master meter operators are now required to include detailed information regarding leak surveys, cathodic protection surveys, and valve inspections conducted for each property in their March 1<sup>st</sup> annual report. The report is to include the name and contact information of the individual(s) responsible for the gas system.

*Depth Study*

**Ground Penetrating Radar and Electromagnetic instruments are two technologies currently being used most often to vertically locate underground facilities.**

Indiana Code 8-1-2.6-4(c)(4) directs that beginning on July 1, 2010, a report concerning best practices for vertical location of underground facilities be included in the Regulatory Flexibility Report. The report is to assess the viability and economic feasibility of technologies used to vertically locate underground facilities. Technologies used in vertical location of facilities change frequently. While the instruments and devices have become more sophisticated, the theory underlying each technology is not new. This report addresses the most widely used processes for this identification.

Ground Penetrating Radar (GPR) and Electromagnetic (EM) instruments are the technologies used most frequently to vertically locate underground facilities. These instruments are expensive. GPR equipment cost ranges from \$15,000 to \$18,000, while EM equipment cost ranges from \$2,000 to \$8,000.<sup>35</sup>

GPR is a non-destructive method, using electromagnetic radiation to detect the reflected signals from underground structures. GPR uses an antenna to radiate short pulses of high-frequency radio waves into the ground, which bounce off buried objects or different compositions of soils. The returning waves record the variations, which are reflected in the signal. The depth range is limited by soil conditions because electromagnetic energy is dissipated into heat. Dry and sandy soils are ideal, allowing penetration of up to 15 meters. Challenging soil conditions, such as moist and/or clay-laden soils and/or soils with high electrical conductivity, only allow penetration of a few centimeters.<sup>36</sup>

GPR is primarily used in the determination and location of non-metallic piping, such as Polyvinyl Chloride (PVC), Polyethylene (PE), and other plastic pipes. GPR can work on metallic piping but, due to the electric conductivity of the pipes, is not as accurate. GPR also requires considerable expertise to effectively design, conduct, and interpret GPR surveys. Thus, the equipment is only as good as the operating technician. A GPR technician should have several years experience and knowledge of the scientific theory behind the technology in order to read and interpret results properly.

EM equipment, the most common technology in use today, and is best used for locating and tracing metallic pipes and utility cables. EM has two components: a transmitter and a receiver. The transmitter emits a radio frequency EM field that induces secondary fields in nearby metallic pipes and cables. The receiver detects these fields and traces the pipes, often to distances greater than 200 feet from the transmitter.<sup>37</sup> EM equipment is dependent on soil conditions that affect signal strength, and in crowded environments or where there are multiple facilities underground, frequencies can jump or bleed over to different facilities, giving inaccurate readings. The best

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<sup>35</sup>[www.geophysical.com](http://www.geophysical.com)

<sup>36</sup><http://soils.usda.gov/survey/geography/maps/GPR/index.html>

<sup>37</sup>[www.geovision.com](http://www.geovision.com)

results are realized when a direct electrical connection can be made to the structure being located, which reduces the chance of the signal straying to another structure.

As with GPR, the EM equipment is dependent on the skill of the operator as this equipment is very sophisticated. The operator must understand electromagnetics and soil compositions to fully comprehend the data, especially interpreting readings. Although GPR and EM are capable of providing estimates of the depth and location of underground facilities, the technology is not 100% accurate even in the hands of the most skilled technicians. Currently, there is not a federal certification program requirement, nor does the state of Indiana require a certificate to operate and interpret GPR and EM locating equipment. ACES Int'l, a not-for-profit certification and testing association, trains and certifies operators of this equipment; however, certified operators in Indiana are a rarity.<sup>38</sup>

A third technology is Global Positioning System or GPS. GPS does not measure depth, as in depth under a street or a yard, or amount of cover. GPS measures elevation from a given baseline. Technically, a GPS unit receives signals from multiple satellites and returns coordinates to define a unique location in space. This unique location never changes, and can be stored and available indefinitely. This may be the most logical method available today. Ideally, the GPS unit must be positioned directly on an exposed underground facility when the reading is taken. This is the only way to provide a true set of coordinates for the structure in that location. Over time, with the accumulation of data, consistent, reliable elevation information on a variety of underground structures can be readily available.

The Common Ground Alliance (CGA) is a member-driven association dedicated to public safety, environmental safety, and prevention of damage to underground facilities. In 1999, the CGA completed a study sponsored by the United States Department of Transportation that identified best practices regarding damage prevention. The CGA recommends hand digging or soft digging within an 18-inch tolerance on each side of the underground facilities. Vacuum digging, the use of high pressure water or air that breaks up the soil accompanied by a powerful vacuum that removes the loosened soil, is an acceptable alternative identified by CGA.<sup>39</sup>

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<sup>38</sup><http://www.acesinternational.org/>

<sup>39</sup>[www.subtronic.com](http://www.subtronic.com)

**GPR and EM equipment provides depth estimates and underground facility  
locates but no equipment manufacturer guarantees depth readings.**

GPR and EM equipment provide depth estimates and underground facility locates but no equipment manufacturer guarantees depth readings. The CGA, equipment manufacturers, and Pipeline Safety all strongly recommend hand-digging or vacuum excavation to expose underground pipe for visual verification. This is the safest means to accurately determine the true depth and location of underground facilities and the only acceptable means an excavator can use to comply with IC 8-1-26. Pipeline Safety recommends that lawmakers consider requiring that all operators of this equipment be certified by an accredited organization in order to better protect underground facilities.

## IV. NATURAL GAS APPENDIX

### Appendix A – Jurisdictional Gas Utility Revenues

Year Ending December 31, 2009

Utility Name	Revenues*	Percentage of Total Revenues
Northern Indiana Public Service Company	\$ 741,280,781	35.33%
Indiana Gas Company, Inc.	664,162,535	31.66%
Citizens Gas & Coke Utility	375,034,956	17.88%
Southern Indiana Gas & Electric Company	111,662,850	5.32%
Northern Indiana Fuel & Light Company, Inc.	46,503,111	2.22%
Kokomo Gas and Fuel Company	41,167,860	1.96%
Ohio Valley Gas Corporation	35,322,575	1.68%
Midwest Natural Gas Corporation	18,888,150	0.90%
Sycamore Gas Company (f/k/a Lawrenceburg Gas Co.)	11,753,072	0.56%
Indiana Natural Gas Corp.	10,300,861	0.49%
Community Natural Gas Co., Inc.	7,863,062	0.37%
Boonville Natural Gas Corporation	6,676,588	0.32%
Indiana Utilities Corporation	6,176,916	0.29%
Ohio Valley Gas, Inc.	5,820,998	0.28%
Citizens Gas of Westfield	4,249,202	0.20%
Fountaintown Gas Co., Inc.	4,096,488	0.20%
Aurora Municipal Gas	3,014,694	0.14%
South Eastern Indiana Natural Gas Company, Inc.	2,304,746	0.11%
Switzerland County Natural Gas Co., Inc.	1,416,156	0.07%
Valley Rural Utility	368,595	0.02%
Snow & Ogden	15,173	0.00%
<b>Total</b>	<b>\$ 2,098,079,369</b>	<b>100.00%</b>

Source: 2009 Annual Reports filed with the Commission

# 2010 WATER/WASTEWATER REPORT

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## I. WATER/WASTEWATER OVERVIEW

### Industry Structure

There are many types of legal entities that provide water and wastewater service to Hoosiers. These include investor-owned utilities, municipal utilities, not-for-profit utilities, regional water/wastewater districts, water authorities, and conservancy districts. Even though the Commission is the economic regulator of these entities, the Indiana Department of Environmental Management (IDEM) is the water quality regulator.

**The legal form of a utility determines whether the utility is subject to the Commission's jurisdiction and the extent of the Commission's regulatory oversight.**

The legal form of a utility determines the existence and extent of the Indiana Utility Regulatory Commission's (Commission) regulation. Below are a few examples:

- The rates and terms and conditions of investor-owned water and wastewater utilities are regulated by the Commission.
- The rates of municipal water utilities and water conservancy districts and territory expansions of water conservancy districts are also regulated by the Commission.
- Investor-owned water and wastewater utilities with fewer than 300 customers and municipal water utilities, regardless of the number of customers, are able to remove themselves or “opt out” of the Commission's jurisdiction.<sup>1</sup>
- Rates and terms and conditions for not-for-profit water and wastewater utilities are regulated by the Commission *unless* the utilities have opted out, pursuant to statute.
- The Commission does not regulate municipal wastewater utilities, nor does it regulate regional water/wastewater districts.<sup>2</sup>

Certificates of Territorial Authority (CTAs) authorize utility service in a defined area; however, not all utilities are required to obtain them. For example, investor-owned and not-for-

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<sup>1</sup>See, I.C. § 8-1-2.7 (not-for-profit, conservancy districts, cooperatives, and investor-owned with 300 or fewer customers) and I.C. § 8-1.5-3-9 (municipalities).

<sup>2</sup>In 2005, a law was passed that provided campgrounds, served by regional sewer districts, the ability to appeal for an informal review of a disputed matter to the Commission's Consumer Affairs Division. See, I.C. § 13-26-11-2.1.

profit wastewater utilities are required to obtain CTAs from the Commission, whereas, municipal wastewater utilities, regional wastewater districts, and conservancy districts are not. Likewise, water utilities are not required to obtain CTAs. Consequently, they have no service territory regulation except when the Commission acts to resolve territorial disputes between them, regardless of whether the water utilities are regulated by the Commission.<sup>3</sup>

**The Commission regulates approximately 116 out of 824  
water utilities and 47 out of 531 wastewater utilities.**

Although the Commission only regulates and has partial oversight over a small number of the state’s water and wastewater utilities, it should be noted that those regulated utilities serve approximately 90% of Indiana water consumers. According to the Commission’s 2008 Annual Reports and data from the IDEM, the Commission regulates approximately 116 out of 824 water utilities and 47 out of 531 wastewater utilities. Table 1 shows the ten largest regulated water utilities. Of the regulated wastewater utilities, only two serve more than 5,000 customers: Hamilton Southeastern Utilities, Inc. with 17,186 customers and Utility Center, Inc. with 11,753 customers.

**Table 1**  
***10 Largest Regulated Water Utilities***

Ranked by Number of Customers

1	Indianapolis Water	303,757
2	Indiana American Water Co.	282,992
3	South Bend Municipal Water	81,718
4	Fort Wayne Municipal Water	78,608
5	Evansville Municipal Water Works	60,610
6	Mishawaka Municipal Water	30,198
7	Hammond Municipal Water Works	28,271
8	Lafayette Municipal Water Works	26,527
9	Bloomington Municipal Water	22,591
10	Anderson Municipal Water Works	22,427

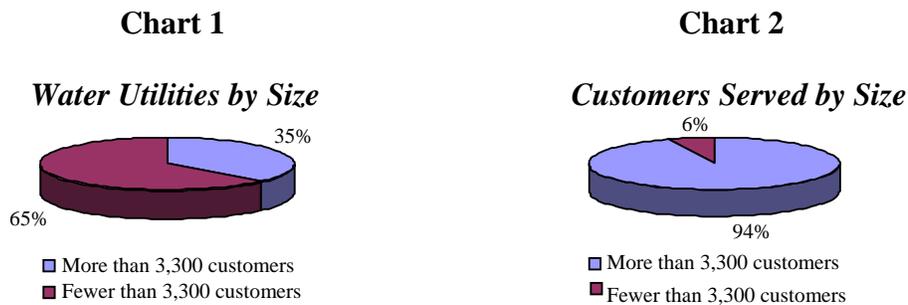
Source: 2008 Commission Annual Reports

<sup>3</sup>See, I.C. § 8-1-2-86.5

The Commission-regulated water systems have \$3.4 billion in utility plant in service, annual revenues of \$485 million, and a total rate base of \$2.1 billion. The Commission-regulated wastewater utilities have \$170.9 million in utility plant in service, annual revenues of \$23.7 million, and a total rate base of \$71.1 million.<sup>4</sup>

*Industry Characteristics*

Numerous smaller utility systems serve a relatively small percentage of the population, while a small number of larger utility systems serve the majority of the population. For example, Chart 1 shows that 65% of regulated water utilities serve fewer than 3,300 customers. Chart 2 shows that these utilities only serve 6% of the water utility customer population.



Source: Commission 2008 Annual Reports

*Acquisition and Consolidation*

**The pace of water/wastewater mergers and acquisitions by investor-owned utilities has slowed recently, but several municipalities have acquired utility property through the condemnation process.**

Over the last eight years, the pace of mergers and acquisitions by investor-owned utilities has slowed significantly as the most attractive utilities have been acquired; however, transactions are still taking place. For example, in the 1990s, Indiana-American acquired Indiana’s largest investor-owned utilities, including: Indiana Cities, United Water’s Indiana properties, Northwest Indiana Water, and several smaller utilities. As a result, Indiana-American is now the state’s largest investor-owned water utility, serving approximately 283,000 customers throughout many regions of the state.

<sup>4</sup>2008 Annual Reports filed with the Commission

In February and March of 2010, Indiana-American filed petitions to acquire the municipal water systems of Riley and New Whiteland, respectively. In March 2010, the Commission approved Indiana-American's acquisition of Marion Heights Conservancy District. In March 2009, the IURC approved the merger between Wymberley Sanitary Works, Inc. and Chimney Wood Sewage Works, Inc., the former of which is a wholly-owned subsidiary of Aqua Indiana, Inc.

Several municipalities have acquired private utilities in recent years and all such acquisitions were subject to Commission approval and oversight. In 2006, the town of Winfield acquired Winfield Utilities, Inc., an investor-owned wastewater utility. The city of Fort Wayne completed its acquisition of a large portion of Utility Center, Inc.'s system by initiating a condemnation proceeding in civil court, an action later affirmed by the Indiana Supreme Court. In its decision, the Supreme Court held that under I.C. §§ 8-1-2-92 and 93, an investor-owned utility license, permit, and franchise is conditioned on the ability of municipalities to purchase utility property.

This Supreme Court decision appears to have cleared the way for future acquisitions by condemnation. In April 2008, the town of Cedar Lake filed a condemnation action against Utilities, Inc. The parties reached a settlement that was approved by the Commission in April 2009. Earlier last year, the town of Cedar Lake initiated condemnation action against Robin's Nest Water Company, Inc. Last year, a condemnation action was also initiated by the city of Jeffersonville to obtain utility property operated by Wastewater One, Inc. and owned by the United States Army. In March 2010, all parties reached a settlement whereby Wastewater One, Inc. will turn over operation of its treatment plants at the north and south end of the former Indiana Ammunition Plant to the cities of Jeffersonville and Charlestown, while the city of Jeffersonville will acquire land from the United States Army to build a new treatment plant. In April 2010, the town of Cumberland and Gem Utilities, Inc. filed a joint petition to transfer the water and sewer assets of GEM Utilities, Inc. to the town of Cumberland. Also in April, the town of Ellettsville notified Northern Richland Sewer Corporation that it intends to acquire the utility through purchase or condemnation.

In light of the recent transactions, several issues have been raised. One issue is setting the fair value of the property to effect a change in ownership. Another issue rests with the determination of whether the customers acquired through the condemnation process should be required to pay

more for water than existing customers. Although there is a general lack of consensus on these issues, the Indiana General Assembly remedied one aspect of the condemnation matter. Going forward, when a municipality condemns the property of a public utility, all customers shall bear the costs associated with the condemnation process through their normal rates and charges.<sup>5</sup>

**If the transfer between Citizens Energy Group and Indianapolis Department of Waterworks is approved, the wastewater system would be the first of Indiana’s 108 combined sewer systems under Commission jurisdiction.**

The city of Indianapolis and Citizens Energy Group (Citizens) announced the signing of a Memorandum of Understanding on March 10, 2010, which contemplates the transfer of the water and wastewater systems to Citizens and places both utilities under the Commission’s jurisdiction. Before the water utility transfer can take place, the Commission must approve the transaction. If placed under the Commission’s jurisdiction as contemplated, the wastewater system would be the first of Indiana’s 108 combined sewer systems under Commission jurisdiction. A combined sewer system is a sewer system in which wastewater and storm water flow into a single pipe. The discharge of wastewater and storm water into a body of water is called combined sewer overflow. The large size of the utility, combined with the storm water integration, will present new challenges for the Commission.

*Troubled Water/Wastewater Utilities*

**The Commission continues to actively monitor several utilities that can be described as troubled. However, the Commission’s ability to perform this function is forestalled by the ability of investor-owned utilities to withdraw from the Commission’s jurisdiction.**

In some instances, the Commission classifies water and wastewater utilities as “troubled.” The utilities that become “troubled” are typically small utilities (fewer than 300 customers) that were constructed by a developer as part of a housing development. The Commission continues to actively monitor several utilities that can be described as troubled systems. However, the Commission’s ability to perform this function is limited by the ability of investor-owned utilities to withdraw from the Commission’s jurisdiction. Once withdrawal occurs, the Commission is no

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<sup>5</sup>See, I.C. § 8-1.5-3-8, eff. July 2009

longer able to proactively monitor the progress and development of those systems that are historically most likely to become troubled.

To determine whether or not a utility is troubled, the Commission may examine several key factors including: technical, financial, and managerial capacity; the physical condition and capacity of the plant; the utility's compliance with state and federal law and/or the Commission's orders; and provision of service to customers. If the utility has continued violations even after the Commission orders it to remedy the deficiencies, the Commission can order the acquisition of the utility by a new owner, or appoint a receiver to operate the utility and work to find a new owner.<sup>6</sup> On a practical basis, neither is a realistic option.

The Commission's primary goal, however, is to prevent utilities from becoming troubled in the first place. Both the Commission and the IDEM have rules regarding the operational abilities of water and wastewater utilities. The IDEM's New Public Water System Capacity Review requires a new public water supply system commencing operation after October 1, 1999 to demonstrate its technical, managerial, and operational abilities to serve.<sup>7</sup> These requirements include, but are not limited to, a demonstration that the proposed public water supply system shall produce drinking water that meets public water supply requirements, an infrastructure replacement plan, a five-year budget plan, a twenty-year financial plan, and a response plan to anticipate and respond to emergency situations. Commission staff members participate in this review process. The Commission has similar requirements for start-up wastewater utilities.<sup>8</sup>

### **Age-Profile**

**The water sector remains the most capital intensive of all utilities  
due to high capital costs and relatively low revenues, investing  
more capital per dollar of revenue generated than any other industry.**

Much of the United States' drinking water and wastewater infrastructure was built following World War II. A significant portion of this infrastructure has aged and will need full-scale replacement over the next few decades. This is problematic because the water sector remains the

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<sup>6</sup>See, I.C. § 8-1-30, *et seq.*

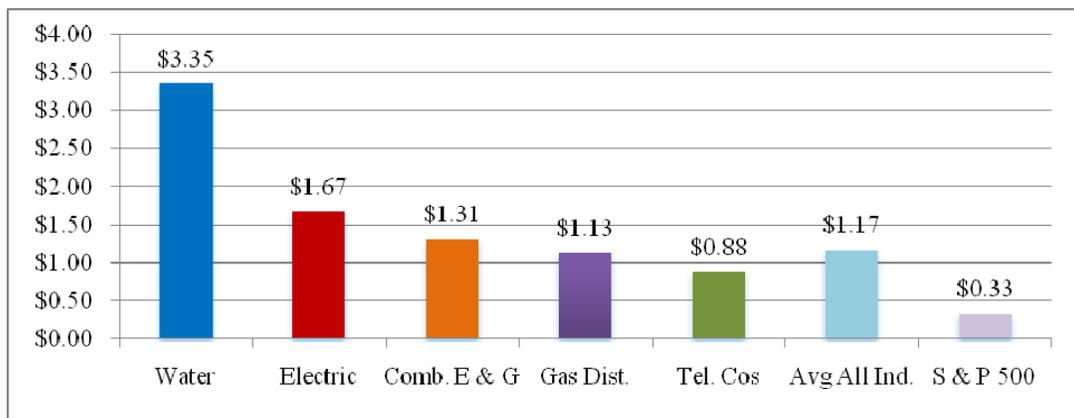
<sup>7</sup>See, 327 I.A.C. 8-3.6, Demonstration of New Public Water Supply System Capacity

<sup>8</sup>See, 170 I.A.C. 8.5-3-1, Application for Certificate of Territorial Authority

most capital intensive of all utilities (due to high capital costs and relatively low revenues), investing more capital per dollar of revenue generated than any other industry. Chart 3 shows that in 2008 the water industry invested twice as much capital per dollar of revenue as any other utility sector, close to three times the average of all industries and ten times the ratio of the entire Standard & Poor’s 500. Consequently, water utilities are increasing general rates and exploring other ways to increase revenues as discussed later in the report.

**Chart 3**

*Capital Invested per Dollar of Revenue*



Source: AUS Utility Reports – 2008

## **Demand**

### *Total Indiana Water Withdrawals*

**The demand for water comes from a variety of sources and activities. The generic term for water demand is *withdrawal*.**

The demand for water comes from a variety of sources and activities. The generic term for water demand is *withdrawal*, defined as those uses that involve the physical removal of water from a ground or surface source.<sup>9</sup> The state of Indiana divides significant water withdrawal<sup>10</sup> into six categories: Public Supply (water supply utilities, mobile home parks, apartment complexes,

<sup>9</sup>Indiana’s Water Shortage Plan, July 2009

<sup>10</sup>Significant water withdrawal is defined as each facility having the capability of withdrawing greater than 100,000 gallons per day.

and schools); Energy Production (power generation, ethanol production, coal preparation, and heating and cooling); Industrial (manufacturing process, and sand and gravel operations); Agriculture (irrigation, golf courses, and field drainage); Rural Use (livestock watering and fish hatcheries); and Miscellaneous (construction dewatering, snow-making, fish and wildlife areas, and lake-level maintenance).

**Total withdrawals in Indiana have decreased from 3,419 billion gallons (BG) in 2004 to 3,271 BG in 2008. Most of this decrease was due to a decrease in withdrawals for energy production.**

Many factors influence withdrawal, such as annual precipitation, summer temperatures, population growth, and water use efficiency. Table 2 shows public supply increasing from 250,022 million gallons (MG) in 2004 to 259,017 MG in 2008.<sup>11</sup> Furthermore, it shows that the majority of withdrawal is for energy production.

**Table 2**

***Total Indiana Withdrawals from 2004 to 2008***

Millions of Gallons

<b>Withdrawal Type</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Public Supply	250,022	265,747	255,694	274,541	259,017
Energy	2,279,527	2,224,456	2,239,931	2,212,198	2,146,042
Industry	838,083	784,843	799,533	822,730	797,471
Agriculture	39,228	62,064	37,084	61,686	57,615
Rural	4,182	4,162	3,898	4,230	4,594
Miscellaneous	7,986	7,108	6,267	6,303	6,086
<b>TOTAL</b>	<b>3,419,028</b>	<b>3,348,380</b>	<b>3,342,407</b>	<b>3,381,688</b>	<b>3,270,825</b>

Source: Department of Natural Resources

While Table 2 shows that energy production uses more water than any other category, most of that water is returned to its original source. Withdrawal includes consumptive and non-

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<sup>11</sup>According to Commission Annual Reports, total water sold from the top ten utilities in Indiana decreased from 140,093 MG in 2004 to 125,194 MG in 2008.

consumptive uses. According to Indiana’s Water Shortage Plan, “consumptive uses are those that, because of evaporation, transfer out of the basin of origin, incorporation into manufactured products or other processes, preclude the return of some or all of the withdrawn water to its source. Non-consumptive uses are those in which the withdrawn water is returned to the supply system undiminished in volume.”<sup>12</sup> Table 3 shows that 98% of energy production withdrawal is returned to its original source and that only 2% is for consumptive use.

**Table 3**  
*Percentage of Consumptive Use by Sector in Indiana*

<b>Public Supply</b>	<b>Self-Supply Domestic</b>	<b>Self-Supply Irrigation</b>	<b>Self-Supply Livestock</b>	<b>Self-Supply Industrial</b>	<b>Self-Supply Fossil Fuel Power Plants</b>
15%	10-15%	90%	80%	6%	2%

Source: Department of Natural Resources

## **Existing Legal and Policy Foundations**

### *Water and Wastewater Quality*

Utilities that provide drinking water and treat wastewater are subject to strict federal regulations to address the issues of safe drinking water and protection of the state’s ground and surface water. Water quality regulation falls under the Safe Drinking Water Act (SDWA), passed in 1974 and amended in 1996. The United States Environmental Protection Agency (U.S. EPA) is the primary federal agency to implement the SDWA and is required to set standards for drinking water. The standards, which are enforced by the IDEM, are two-fold: health-related, focusing on inorganic and organic chemicals and microorganisms; and aesthetics, focusing on taste, odor, and appearance. These standards are developed by setting a maximum contaminant level and maximum contaminant level goal, both of which are periodically updated. For example, the IDEM recently instituted a new ground water rule, which requires increased monitoring to detect viral and bacterial contamination in ground water sources of drinking water.

**Potable water and wastewater effluent are closely regulated by the U.S. EPA and IDEM.**

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<sup>12</sup>Indiana’s Water Shortage Plan, July 2009

The principal law governing the quality of surface water is the Federal Water Pollution Control Act or Clean Water Act (CWA), most recently amended in 1987. Similar to the SDWA, the U.S. EPA is charged with implementation of the CWA and sets standards for wastewater effluent, while delegating enforcement to the IDEM.<sup>13</sup> Several wastewater utilities under the Commission's jurisdiction have been under consent decrees due to violation of the CWA. In some cases, infrastructure improvements were required to resolve the problems. The cornerstone of water quality is the issuance of a National Pollution Discharge Elimination System (NPDES) permit, which allows utilities to discharge wastewater effluent into waterways. The Commission regularly makes approval of wastewater CTAs contingent on the successful receipt of NPDES permits and requires wastewater utilities to provide proof of issuance of the permit before authorization is granted.

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<sup>13</sup>To the extent that wastewater treatment is provided by a septic system or constructed wetland, the Indiana State Department of Health is the jurisdictional agency.

## II. WATER/WASTEWATER LANDSCAPE

### Infrastructure

Indiana communities and rural areas need safe, reliable and affordable water and wastewater systems to prosper economically. However, a funding shortfall in Indiana exists due to the need to replace aging infrastructure and its attendant high capital requirements. The Indiana Advisory Commission on Intergovernmental Relations report, titled “Financial Needs for Wastewater and Water Infrastructure in Indiana,” (January 2003) estimated that the statewide wastewater and drinking water infrastructure needs for the period 2000 to 2020 will require \$12.4 to \$13.9 billion in funding. Some recommended projects include: correction of combined sewer overflows (CSOs); wastewater conveyance and treatment; remediation of failing septic systems; storm water conveyance and management; drinking water production; and construction or renovation of treatment and distribution facilities. Annual investments made by governmental entities between January 1990 and March 2002 were approximately \$253 million, far short of the estimated \$658 million investment needed annually to meet the needs identified in this report.

**The U.S. EPA projects that Indiana’s drinking water infrastructure financing needs from 2007 to 2027 will be \$5.9 billion.**

The U.S. EPA’s Drinking Water Infrastructure Needs Survey and Assessment (“Needs Assessment”) supports the findings of the Indiana Advisory Commission on Intergovernmental Relations. Every four years, since 1997, the U.S. EPA provides a Needs Assessment to Congress on the anticipated costs of the investments to install, upgrade, or replace equipment in order to deliver safe drinking water over the next 20 years.<sup>14</sup> The report surveys community water systems and not-for-profit non-community water systems, with the scope limited to those needs eligible for Drinking Water State Revolving Fund assistance.<sup>15</sup>

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<sup>14</sup>For example, the 2009 Report is based on the 2007 Survey and 2005 Report is based on the 2003 Survey.

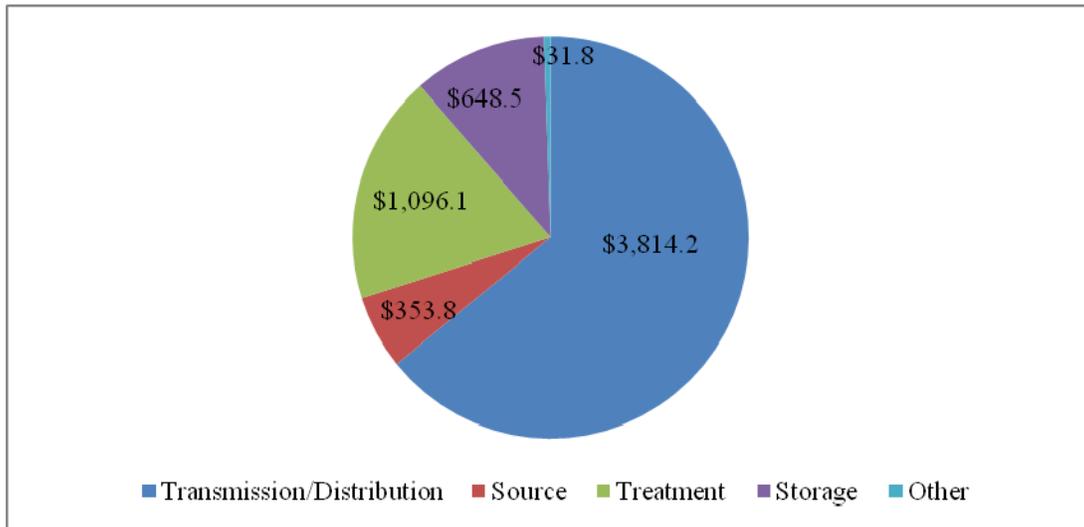
<sup>15</sup>A community water system is a public water system that serves at least 15 connections used by year-round residents or that regularly serves at least 25 residents year-round. Cities, towns, and small communities such as retirement homes are examples of community water systems. A non-community water system is a public water system that is not a community water system and that serves a nonresidential population of at least 25 individuals daily for at least 60 days of the year. Schools and churches are typical examples of non-community water systems.

According to the 2007 Needs Assessment, Indiana’s water project needs over the next 20 years were \$5.9 billion, which is an increase of 23% from the 2003 Needs Assessment.<sup>16</sup> As shown in Chart 4, the greatest need, \$4.5 billion, is underground infrastructure (transmission/distribution and storage).

**Chart 4**

***Indiana Water Utility 20-Year Needs***

Millions of 2007 Dollars



Source: 2007 Needs Assessment

*Funding Programs*

**Loans and grants are available for utility infrastructure investment through the State Revolving Fund, Rural Development Loans and Grants, and the Community Focus Fund.**

Numerous federal and state funding options are available for infrastructure investment. Grants from the U.S. EPA are leveraged in bond markets to generate State Revolving Loan Fund (SRF) loan proceeds. The Indiana Finance Authority (IFA) administers these funds through low-interest loans at 20-year terms to investor-owned, municipal and not-for-profit utilities. In 2009, the American Recovery and Reinvestment Act of 2009 (ARRA) provided the IFA with an additional \$122 million for shovel-ready wastewater and drinking water infrastructure projects.

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<sup>16</sup>Data was not broken out between Commission regulated and non-regulated water utilities.

The IFA was able to supplement these funds and make it possible to fund projects worth \$250 million. Approximately \$74.6 million in drinking water projects funded in the first two rounds of awards was granted to Commission-regulated water utilities.

**As part of the ARRA, the Indiana State Revolving Fund has received approximately \$122 million to fund water and wastewater projects.**

Rural Development Loans and Grants are also available to rural areas and towns serving a population of less than 10,000. Extended 40-year terms are available at market or below-market interest rates, depending on community demographics. As part of this program, Indiana water/wastewater utilities received approximately \$94 million for fiscal year 2009 and \$34 million as of April 2010 for fiscal year 2010.<sup>17</sup> Both amounts included ARRA funding.

Under the ARRA, a new type of debt instrument called “Build America Bonds” was developed for which the issuer (state or local government) elects to have the interest on the bonds be taxable, in return for a federal interest subsidy. In Indiana, more than \$500 million in Build America Bonds have been issued, but none by water utilities under the Commission’s jurisdiction.

Grants for planning and up to 75% of project costs are also available. Planning and construction grants are available to non-entitlement cities,<sup>18</sup> towns, or counties through the Community Focus Fund, which is administered through the Indiana Office of Community and Rural Affairs (OCRA).

**The benefits of reduced financing costs go directly to utility customers, rather than to the shareholders, owners, or parent companies.**

Although the amount of SRF funding to investor-owned and not-for-profit utilities is limited, other options are available. For example, another avenue to obtain low-interest rate loans is Private Activity Bonds (PABs), municipal bonds issued to finance facilities for investor-owned

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<sup>17</sup>The fiscal year is from October 1 to September 30.

<sup>18</sup>Non-entitlement cities must go through a state-funding program instead of receiving funds directly from the federal government.

or not-for-profit water utilities.<sup>19</sup> The benefits of reduced financing costs go directly to utility customers, rather than to the shareholders, owners, or parent companies. The federal government sets the overall loan volume cap for each state and then allocates that amount based on a formula.<sup>20</sup> Since 1995, Indiana has used all of the available federal allocation each year, with 9% of the overall dollar amount allocated to the IFA. In addition to water projects, the IFA funds other types of projects, such as manufacturing.

**Under the current funding regime, investor-owned and not-for-profit utilities are discriminated against, because they have limited access to low-cost debt.**

Under the current federal rules for the funding process, investor-owned and not-for-profit utilities are disadvantaged because they have limited access to low-cost debt. Without access to low-cost debt, costs to serve those customers increase, despite the fact that all customers pay federal income tax to support the funding programs. To gain access to additional SRF funding, several not-for-profit utilities have converted to water authorities to avoid the volume cap for PABs. The National Association of Regulatory Utility Commissioners (NARUC) and the National Association of Water Companies (NAWC) support federal legislation to lift the ban on wastewater utilities and to remove water projects from the volume cap.

#### *Utility Master Plans*

**The Commission would like to see every utility develop a master plan.**

Utilities create master plans to assess current conditions and future needs for service to a specific area. The master plan serves as a “roadmap” to the eventual build-out of the utility’s service territory, providing the utility with critical cost, sizing and phasing options. Given the fluid nature of development and economic cycles, the master plan becomes a “living document,” requiring frequent updating and re-evaluation.

This process typically begins by analyzing existing and future land use to project demand for a given utility, allowing for some gross-level sizing of piping and key pieces of infrastructure. A

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<sup>19</sup>PABs are not available to private wastewater utilities.

<sup>20</sup>See, I.C. § 4-4-11.5

conceptual layout is then developed, identifying general routes and projecting the size of the facilities. Cost estimates are developed, which provide valuable financial planning information that can be adjusted as development trends change. The master plan can further be used to coordinate construction projects to take advantage of unrelated work-in-progress, identify opportunities to up-size infrastructure, and avoid expensive conflicts among different utilities (gas, electric, and communications).

The total number of regulated water and wastewater utilities that create and maintain a master plan is relatively small, which may result in duplication of facilities, higher costs to customers, and failure to provide customers with safe and adequate service. Because of their importance, the Commission would like to see every utility develop a master plan.

### **Modernization and Energy Efficiency**

While frequently a topic in the arid Southwest, and even recently in the Southeast, water supply issues have seldom been of concern to the relatively water-rich Midwest. The water supply in Indiana has generally been plentiful, but over the past few years, water rights and access issues have arisen. In fact, Indiana has not always been able to economically access the amount of water needed, and has found that even areas that typically have plenty of water go through periods of drought.

#### *New Sources of Supply/Enhanced Reliability*

Maintaining quality ground and surface water is critical because contaminated water cannot be considered a resource. In Indiana, much of the water supply comes from underground aquifers, which utilities tap into by digging wells. To increase the reliability of water from rivers, reservoirs are constructed. Reservoirs play an important role in water treatment since they allow time for particles to settle and provide early-stage natural biological treatment. Although not a natural resource, water tanks also play an important role as a source of backup supply due to their ability to help maintain sufficient water pressure in systems for potable water and fire suppression. Not every water utility in Indiana has its own source of supply. Based on the Commission's Annual Reports, 15% of the Commission-regulated water utilities share source-of-supply infrastructure through wholesale purchase agreements.

**While statewide water shortages do not exist, water efficiency programs are being developed at the national, statewide, and individual water utility levels.**

Water efficiency programs are being developed by individual utilities and at state and national levels in an effort to manage customer usage. In 2009, the Commission approved a water efficiency plan for Indiana-American, the largest investor-owned utility in the state. At the state level, Indiana is developing its own water conservation and efficiency goals and objectives, and implementing either a voluntary or mandatory water conservation and efficiency program by October 2010 as required by the Great Lakes Compact.<sup>21</sup> At the national level, the U.S. EPA has developed the WaterSense<sup>®</sup> program that labels products, services, and practices as water efficient. This program is similar to the Energy Star program, which identifies energy efficient appliances.

**Summer watering costs utilities millions of dollars due to the need to find or build additional water supply, in addition to building water treatment plant capacity to meet peak demands while that capacity sits idle for the remainder of the year.**

One issue related to water efficiency planning is summer watering and the shortages that it may cause. Because water shortages can occur with relative frequency, it is important for utilities to address this issue. Summer watering costs utilities millions of dollars due to the need to find or build additional water supply, in addition to building water treatment plant capacity, to meet peak demands while that capacity sits idle for the remainder of the year.

In severe cases of drought, water shortages can lead to low water pressure, which adversely affects fire protection and increases the potential for water contamination. Municipal utilities have recently started taking actions to control water usage during periods of low supply. While some municipalities have passed ordinances that levy fines on customers when they irrigate on restricted days, there are other utility initiatives, mainly outside of Indiana, that modify rate

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<sup>21</sup>P.L. 90-419 (90th Congress, S 660) The Great Lakes Compact includes rules and regulations to protect the Great Lakes and the surrounding lands of several states and Canadian provinces, whose direct runoff and watersheds form a large drainage basin that feeds into the lakes. Economic development will be balanced with sustainable water use to ensure Great Lakes waters are managed responsibly.

structures so that water is priced to provide incentives for consumers who conserve water and reduce consumption.

Utilities can reduce the need to develop new sources of supplies by reducing the amount of unaccounted-for-water. Unaccounted-for-water is different from water loss, which is simply water pumped and purchased less water sold; unaccounted-for-water includes water the utility can reasonably track, such as water used for main flushing, maintenance of the treatment plant, and fire suppression. The American Water Works Association (AWWA) developed a guideline of 10% unaccounted-for-water for water utilities, but some of Indiana's utilities exceed this guideline. The Commission now requires utilities to address this issue. If unaccounted-for-water is greater than 10%, the utility must advise the Commission of the actions it is taking to address the problem.

#### *Energy and Water/Wastewater*

**Water efficiency not only reduces the amount of water consumed, it also saves energy.**

Water efficiency not only protects the supply of an important natural resource, but also conserves energy. Energy efficiency campaigns usually include information on how to save water and provide energy efficiency kits containing water saving devices such as low-flow shower heads. According to the U.S. EPA, energy costs for water and wastewater utilities can be a third of a municipality's total energy bill. Furthermore, according to the U.S. EPA, if drinking water and wastewater systems reduce energy use by just 10% through cost-effective investments, collectively they could save approximately \$400 million and 5 billion kWh annually.

The federal government and universities are developing programs to educate water and wastewater utilities on ways to conserve and improve upon their existing energy consumption. In January 2008, the U.S. EPA published the *Energy Management Guidebook for Water and Wastewater Utilities*, a step-by-step method based on a "Plan-Do-Check-Act" management system approach. This guidebook aids utilities in identifying, implementing, measuring, and improving energy efficiency and renewable opportunities. Purdue University has even created an Energy Efficiency Services Division within its Technical Assistance Program to further help water and wastewater utilities reduce energy costs.

**Some wastewater treatment plants can produce digester or methane gas for use as emergency backup power or renewable energy sources to reduce purchased energy from utilities.**

Some wastewater treatment plants can produce digester or methane gas as emergency backup power or a renewable energy source. For example, the city of West Lafayette upgraded its treatment plant and determined it could use the waste byproducts for a co-generation system using micro-turbine technologies. These additions are projected to create \$7.2 million in savings over the life of the treatment plant and represent a use of material that would otherwise become part of the waste stream.

### **Regulatory Development**

**The Commission is taking steps to correct the misconception that it has no authority over the sale of utility stock or mergers. The Commission must review and approve a utility's actions whenever it seeks to transfer its franchise or control of the utility's works and system to another entity.**

#### *Commission Initiatives*

Given the large number of utilities, several acquisitions of water and wastewater utilities occur in the state every year. Inevitably, some of these transactions take place through a stock purchase. Over the span of several years, an apparent misconception developed in the utility industry that the Commission no longer has the legal authority to review stock transactions. This misunderstanding has resulted in a number of utility ownership changes taking place without the Commission's knowledge or approval. It is believed that this misunderstanding may have developed from the Indiana Supreme Court's 1999 decision in *Ind. Bell Telephone Co., Inc. v. Ind. Util. Regulatory Comm'n*, 715 N.E.2d 351 (Ind. 1999).<sup>22</sup>

The Commission has taken steps to publicize the Commission's jurisdiction in these matters. Several letters have been sent notifying parties where recent transactions have taken place that were not presented for approval. These letters have resulted in one petition being filed with the

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<sup>22</sup>The *Indiana Bell* decision held that the Commission did not have jurisdiction over the transfer of stock between two holding companies. However, the Commission has jurisdiction if a public utility's franchise, works, or system are transferred, resulting in a change of ownership or control. *Indiana Bell*, 715 N.E.2d at 356

Commission to review the stock purchase, and more are expected. In addition to its legal authority, there is a practical aspect to the Commission's review. Because the Commission encourages the consolidation of the widely fragmented water/wastewater industry and the transfer of small, troubled utilities to more responsible owners, oversight is necessary to ensure these goals are accomplished in an orderly manner with qualified owners. The Commission must have confidence that potential owners possess the financial, managerial, and technical capacity to own and operate a water and/or wastewater utility. In some instances, this has not been the case.

**The Commission is taking proactive steps to improve the management and operations of small utilities prevalent in the water industry. For example, the Commission is developing a small utility accounting manual to assist utilities with improving their financial books and records.**

Other Commission initiatives are taking place to improve the management and operations of small utilities prevalent in the water/wastewater industry. One initiative is a small utility accounting manual to assist utilities with their financial books and records. Financial record keepers for small utilities often have no accounting or financial background. In small municipalities, this responsibility falls on the elected Clerk-Treasurer, a position for which there is no financial education or experience requirement. Similarly, the maintenance of financial records for some developer-owned utilities falls to family members who may have inadequate knowledge or training. Accurate and timely financial records are necessary to provide utility managers with the ability to make informed decisions, provide data to develop accurate rate structures, and lower fees charged by utility consultants.

To maintain oversight of the water/wastewater utilities, the Commission performs an annual comprehensive review of the utilities' annual reports. The review focuses on the managerial, technical, and financial abilities of the utilities. The Commission also believes utility management and operations could be improved through a greater use of master plans, as well as required training for utility board members and city/town council members in the case of municipally-owned utilities.

In an effort to assist the small systems with their rate application filings, the small utility rate application forms are being revised for all types of utilities. The new application is more

automated and is tied to a utility's annual report, which allows Commission staff to provide the utility with test year information already completed in the application.

### *Completed Rules*

In May 2010, administrative rules for the practice of sub-metering and sub-billing of water and wastewater service were completed. Ind. Code § 8-1-2-1.2 provides, in part, that landlords are not utilities by virtue of the provision of certain utility service to tenants. Thus, billing or service issues provided by landlords are not under the Commission's jurisdiction, unless a landlord takes actions in contravention of the Commission rules. The rule sets the time period to maintain records, determines the calculation of the tenant's bill, describes how the bill is rendered, explains how a complaint can be filed and what action the Commission can take with regard to a complaint.

### **Pricing and Economics**

**Costs in the water/wastewater industry continue to increase due to replacing infrastructure, U.S. EPA compliance, growing demand, and relocation of facilities.**

### *Industry Costs*

Costs are increasing for water and wastewater utilities and are driven by the following needs: replacement of aging infrastructure; compliance with U.S. EPA standards such as water quality and wastewater effluent; growing demand; and the relocation of facilities for local and state road projects. From 1984 to 2008, average water and wastewater treatment cost rose 310% while the consumer price index only rose 207%.<sup>24</sup>

### *Rate Increases*

As the costs for water and wastewater services continue to rise, rates are following suit. Rate cases in Indiana reflect the national trend that shows water and wastewater rates outpacing inflation.<sup>25</sup> In 2009, 13 water utilities were approved for general rate increases averaging 25.91%, and one wastewater utility was approved for a rate increase of 21.52%. The two largest

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<sup>24</sup>“Historical Water Price Trends,” Steve Maxwell, AWWA Journal, April 2010

<sup>25</sup>Water and Wastewater Financing and Pricing (2005), George Raftelis

water utilities, Indiana-American and the city of Indianapolis, and the largest wastewater utility, Hamilton Southeastern Utilities, Inc., filed rate increase requests in 2009. In June 2009, the Commission granted the city of Indianapolis a 12.27% emergency rate increase and required several compliance filings regarding contract approvals, capital projects, debt issuances and financial reporting. The evidentiary hearing in the case for the establishment of permanent rates was held in April 2010 and a final order is pending. In April 2010, the Commission approved a 19.72% rate increase for Indiana-American. Per Commission rule, the final order in Hamilton Southeastern's rate case will be issued in August 2010. Overall, the number of rate increase requests has been high, with as many as 22 pending at any one time during the past year.

#### *Mechanisms within a Rate Case to Recover Infrastructure Costs*

The Commission has several mechanisms within a rate case that allow utilities to recover costs associated with infrastructure projects. Municipal and not-for-profit utilities are allowed to include costs for some types of projects, typically referred to as extensions and replacements, in customer rates. This allows utilities to include future infrastructure projects in rates without relying entirely on debt. In addition, Post-in-Service Allowance for Funds Used During Construction (AFUDC) and Deferred Depreciation, if approved, allow investor-owned utilities to defer the capital costs and depreciation expense of a project to the utility's next rate case. This practice helps to reduce the utility's earnings erosion.

All utilities can use the Minimum Standard Filing Requirements process that allows a utility to update its rate base for capital investments incurred up until the final hearing.<sup>26</sup> This can be an incentive to invest in capital improvements, as the utility does not need to wait until a later rate case to earn a return on capital investments.

#### *Other Sources of Revenue to Finance Infrastructure*

**In 2000, Indiana was the second state in the nation to approve a capital recovery mechanism called the distribution system improvement charge.**

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<sup>26</sup>See, 170 I.A.C. 1-5

In 2000, Indiana was the second state in the nation to approve a capital recovery mechanism called the distribution system improvement charge (DSIC).<sup>27</sup> The DSIC only applies to water utilities, and the Commission believes that making the DSIC mechanism available to wastewater utilities will encourage investments in necessary infrastructure replacements and upgrades. The DSIC allows water utilities to increase rates to recover the costs of improvements to existing, as opposed to expanding, distribution systems without a rate case. As of May 2010, the Commission has approved close to \$104 million in utility distribution plant placed in service through the DSIC.

Another way to finance infrastructure investments and minimize the effect on existing customers is through system development charges (SDCs) or utility fees paid by property owners who connect their properties to the utility's system for the first time. These fees are primarily meant to recover a utility's cost to provide new customers with a source of supply, treatment, and storage facilities; SDCs can be more than \$1,400 for water connections and \$3,000 for wastewater connections. The use of SDCs supports the notion that "growth should pay for growth" and reduces the likelihood that existing customers will pay for construction of new facilities that do not benefit them.

**The Commission plans to study its main extension rules, since it may no longer be appropriate for the Commission to require utilities to share the cost of main extensions with those served.**

While SDCs and the DSIC clearly benefit utilities, the Commission's main extension rules may no longer be appropriate. Under the current rules, utilities share the cost of main extensions with developers by providing a three-year revenue allowance.<sup>28</sup> Because utility costs are passed on to ratepayers, this practice requires existing customers to pay for at least a portion of new growth, which conflicts with the notion of SDCs that "growth should pay for growth." The Commission will continue to examine this issue to determine the appropriate policy and cost methodologies regarding SDCs.

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<sup>27</sup>See, I.C. § 8-1-31

<sup>28</sup>The three-year revenue allowance is included in the Commission's main extension rules. The revenue allowance is calculated as three times the estimated annual revenues of a new customer. The utility offsets the revenue allowance amount against the customer's cost to connect to the utility system. Since utility costs are passed on to ratepayers, this practice causes existing customers to pay at least a portion of the costs for new growth.

### *Outside-City Customer Rates*

Many municipal utilities provide service to customers outside their corporate boundaries, which can create beneficial economies of scale and rate stability for the municipality.<sup>29</sup> However, some municipalities charge outside-city customers higher rates or a surcharge, with premiums ranging from modest amounts to 100% or in some cases, even higher, than rates paid by inside-city customers for the same service.

**Different rates between customers located inside and outside a municipality may raise questions about whether the non-city rate is cost-justified and non-discriminatory.**

A corporate boundary is usually not like a natural boundary such as a river or mountain, where crossing to the other side may increase the cost of providing service. With corporate boundaries, the imposition of higher rates or a surcharge may be a device to stimulate support for annexation, represent revenue enhancement, or subsidize in-city customers. It may be difficult to support different dollar amounts for inside-city and outside-city water rates due to the fact that rates approved by the Commission must be cost-justified and non-discriminatory.

When municipal utilities opt out of the Commission's jurisdiction, citizen-customers (i.e., city residents) of that municipality have a voice in how the utility is operated when voting for local leaders. However, non-citizen-customers cannot participate in the local municipal elections and, therefore, have no such voice. One possible remedy might be to provide the Commission with limited jurisdiction over municipal water rates charged to outside-city customers where a surcharge is assessed, even when the municipality has opted out of the Commission's jurisdiction.<sup>30</sup> Alternatively, municipalities could be allowed to assess a surcharge within a

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<sup>29</sup>This can also constrain the proliferation of small developer-owned systems that sometimes become troubled.

<sup>30</sup>On February 11, 2010, the Lagrange Circuit Court issued an order in Cause No. 44C01-0912-MI-040, a case involving rates charged to outside-city customers of a municipal wastewater utility. Prior to 2009, the town of Wolcottville charged both inside-city and outside-city customers the same wastewater rate of \$20.95. However, the town passed an ordinance in 2009 that maintained the \$20.95 rate for inside-city customers but increased the rate for outside-city customers to \$46.89. The court found the town abused its discretion by placing the entire burden of the rate increase upon its outside-city customers when that rate was not based on costs associated with furnishing service to outside-city customers, or the number of outside-city versus inside-city customers as required by I.C. § 36-9-23-24(e). Therefore, the court concluded the rates were not just and equitable and declared the 2009 ordinance invalid. While this case dealt with wastewater rates, the same reasoning could apply to municipal water utility rates.

statutorily specified level (i.e., a “safe harbor” provision) and not be subject to Commission oversight.

#### *Fire Protection Surcharge*

Prior to the implementation of I.C. § 8-1-2-103(d), many public utilities billed municipalities directly for the cost of fire protection, which, in turn, recovered the costs through taxes. With the passage of I.C. § 8-1-2-103(d), many municipalities have passed ordinances to transfer those fire protection costs to customers through surcharges that appear on customer bills on a revenue-neutral basis to the utility. As municipalities face reduced tax revenues and increasing costs, this trend is likely to continue resulting in higher bills for water utility consumers.

### **III. WATER/WASTEWATER GROWTH & INNOVATION**

#### **Legislative Initiatives**

##### *Federal*

At the federal level, three bills address infrastructure funding. If enacted, S. 1005 would amend the Federal Water Pollution Control Act and the Safe Drinking Water Act to improve water and wastewater infrastructure in the United States and would make improvements to the existing SRF. One of the improvements would require states to give priority funding to projects that “improve the sustainability” of water systems. Furthermore, utility applicants that implement asset management programs and engage in long-term financial planning would be given higher funding priority. If enacted, S. 3262, the Sustainable Water Infrastructure Investment Act of 2010 would remove state volume caps on PABs for water and wastewater projects. A similar bill was passed in March 2010 by the House of Representatives as part of the Small Business and Infrastructure Tax Act, H.R. 4849. H.R. 2521 would create a national infrastructure bank, funded by the federal government, to encourage investment in public projects such as water or wastewater systems.

Last year, the House passed a bill that would create a new regulatory program for the chemical security of drinking water and wastewater utilities. This bill, H.R. 2868, would put the use of chemicals, such as chlorine, under the U.S. EPA and, because states usually enforce the

rules, the IDEM. One concern with this bill is when a utility is classified as high-risk for chemical security, state officials who might not be familiar with a utility have the final determination in what chemical the utility can use.

*State*

**The Commission recommends the following: 1) preventing investor-owned water/wastewater utilities with less than 300 customers from withdrawing from Commission jurisdiction; 2) expanding the availability of the small utility filing process to utilities with fewer than 10,000 customers; and 3) expanding the DSIC to wastewater utilities.**

The Commission offers several recommendations to address specific issues within the industry. One area of concern is the ability of investor-owned water and wastewater utilities with less than 300 customers to withdraw<sup>31</sup> from Commission jurisdiction. Without proper oversight, these customers may pay rates that generate revenues which are greater than the utility's cost. These excess revenues may then be withdrawn by the utility's shareholders providing unjust enrichment. The ability for small investor-owned utilities to withdraw is also problematic because these entities are those most likely to become troubled, and as a class, may be most in need of oversight.

The Commission offers a second proposal for consideration that involves small utility filings.<sup>32</sup> Utilities serving a designated number and type of customer, as determined by the IURC, should be able to take advantage of the small utility filing process. Currently, the statute defines a small utility as one with 5,000 customers or less. Only utilities that primarily serve retail customers and do not extensively serve another utility can use the small utility filing process. By providing the Commission with the requisite flexibility to increase the customer limit and expand the type of customers a utility can serve, more small utilities can take advantage of the small utility rate application process, thus keeping costs to a minimum.

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<sup>31</sup>See, I.C. § 8-1-2.7-1.3

<sup>32</sup>See, I.C. § 8-1-2-61.5

Finally, the Commission believes that wastewater utilities should be able to utilize the DSIC<sup>33</sup> in the same manner as water utilities. Currently, water utilities use a DSIC in an expedited process to recover distribution system investments incurred between rate cases. The DSIC is a tracking mechanism similar to trackers used by electric and gas utilities to directly pass fuel costs onto customers. Similar to the water distribution system, investments in the collection system of wastewater utilities are critical due to aging infrastructure and increasingly stringent regulations. Aging collection system infrastructure is one of the main causes of inflows and infiltration that may lead to environmental contamination and IDEM violations. A DSIC would provide a financial incentive for wastewater utilities to invest in critical collection system infrastructure by reducing regulatory lag and providing more immediate cash flow without incurring the costs associated with a rate case.

## **Technology**

### *Replacing Aging Infrastructure or Failing Pipes*

Replacing aging or failing water/wastewater pipes using the traditional method of opening the ground and replacing the damaged pipe is expensive. Trenchless methods include Cured-in-Place-Pipe (CIPP) technology, which has existed since the early 1970's, and sliplining, which has been used even longer. In CIPP, a felt bag is inserted into a pipe and after curing, bonds to the existing pipe. Sliplining is completed by installing a smaller pipe into the existing pipe.

These trenchless methods have been predominately focused on wastewater applications. However, within the last few years, technical issues have been resolved and installation costs have decreased to the point where CIPP and sliplining are now offered as a technology for waterworks applications as well. The result is a trenchless way to address aging or failing pipelines that can minimize or avoid many costs associated with traditional open-cut applications, including traffic control, utility conflicts (i.e., communications, gas, or electric) and surface restoration. While this process can still be quite expensive, it can still produce significant cost savings, especially in urban settings.

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<sup>33</sup>See, I.C. § 8-1-31

## *Wastewater Treatment*

Wastewater treatment plants are expensive to build, and the location must meet proper siting requirements, while simultaneously being close to an acceptable discharge point. In traditional wastewater treatment plants, effluent is treated via biological processes that require large tank and piping systems. While the technology itself dates back to 1989, the Membrane Bio-Reactor (MBR) process has recently become less expensive and is emerging as a more cost-effective technology. The MBR has the ability to produce high quality effluent that can be discharged to surface waterways or be reclaimed for irrigation purposes. It utilizes the same biological processes as traditional treatment configurations, but is able to operate with a greatly reduced physical footprint due to consolidating several physical elements of a traditional wastewater treatment facility. The advantages of MBRs over conventional wastewater treatment include this small footprint and the ease with which they may be retrofitted within older wastewater treatment facilities. Although the technology is expensive, costs can be offset because expansion or relocation of wastewater facilities is avoided, and/or much larger investments in land and site work are eliminated. In many older systems, tanks can be reused to house the membranes, avoiding many of the traditional structural costs associated with new construction.

## IV. WATER/WASTEWATER APPENDICES

### Appendix A – Jurisdictional Water Utility Revenues

Year Ending December 31, 2008

Rank	Utility Name	Operating Revenues	% of Total Revenues
1	Indiana-American Water Company, Inc.	\$156,057,318	32.18%
2	Indianapolis Water	121,895,524	25.14%
3	Fort Wayne Municipal Water Utility	31,592,716	6.51%
4	South Bend Municipal Water	14,608,556	3.01%
5	Evansville Municipal Water Works Dept.	14,518,567	2.99%
6	Bloomington Municipal Water	10,563,605	2.18%
7	Hammond Municipal Water Works	8,538,305	1.76%
8	Mishawaka Municipal Utilities - Water	7,868,192	1.62%
9	Lafayette Municipal Water Works	7,548,548	1.56%
10	Elkhart Municipal Water Works	7,381,277	1.52%
11	Anderson Municipal Water Works	7,313,143	1.51%
12	Michigan City Municipal Water Works	6,573,810	1.36%
13	Schererville Municipal Water Works	5,238,682	1.08%
14	Utility Center, Inc.	5,002,211	1.03%
15	Columbus Municipal Water Utility	4,814,438	0.99%
16	Marion Municipal Water Works	4,465,637	0.92%
17	Stucker Fork Conservancy District	3,296,283	0.68%
18	Brown County Water Utility, Inc.	2,928,692	0.60%
19	Ramsey Water Company, Inc.	2,923,647	0.60%
20	Chandler Municipal Water Works	2,844,848	0.59%
21	Jackson County Water Utility, Inc.	2,765,703	0.57%
22	New Castle Municipal Water Works	2,385,374	0.49%
23	Silver Creek Water Corporation	2,258,433	0.47%
24	Auburn Municipal Water Utility	2,147,915	0.44%
25	Eastern Heights Utilities, Inc.	2,068,419	0.43%
26	North Lawrence Water Authority	1,963,138	0.40%

27	Edwardsville Water Corporation	1,944,055	0.40%
28	Salem Water Works	1,770,090	0.36%
29	Morgan County Rural Water Corporation	1,767,546	0.36%
30	Martinsville Municipal Water Utility	1,690,839	0.35%
31	Mishawaka-Clay Municipal Utilities - Water	1,641,994	0.34%
32	German Township Water District, Inc.	1,531,000	0.32%
33	Columbia City Municipal Water Utility	1,514,189	0.31%
34	Princeton Municipal Water	1,477,931	0.30%
35	East Lawrence Water Authority	1,398,978	0.29%
36	Peru Municipal Water Dept.	1,364,334	0.28%
37	Boonville Municipal Water Works	1,362,722	0.28%
38	South Harrison Water Corporation	1,340,034	0.28%
39	Watson Rural Water Co., Inc.	1,273,265	0.26%
40	Southwestern Bartholomew Water Corporation	1,251,866	0.26%
41	South Lawrence Utilities, Inc.	1,227,688	0.25%
42	Pike-Gibson Water, Inc.	1,185,219	0.24%
43	Ellettsville Municipal Water Utility	1,164,142	0.24%
44	Corydon Municipal Water Works	1,094,419	0.23%
45	Gibson Water, Inc.	1,050,970	0.22%
46	Twin Lakes Utilities, Inc.	927,924	0.19%
47	Aurora Municipal Water Utility	885,739	0.18%
48	Southern Monroe Water Corporation	881,509	0.18%
49	Floyds Knobs Water Company, Inc.	805,680	0.17%
50	Prince's Lake Municipal Water Dept.	775,117	0.16%
51	Charlestown Municipal Water Dept.	746,865	0.15%
52	North Dearborn Water Corporation	718,350	0.15%
53	Marysville Otisco Nabb Water Corporation	708,655	0.15%
54	Reelsville Water Authority	685,083	0.14%
55	St. Henry Water Corporation	626,946	0.13%
56	Petersburg Municipal Water Works	602,065	0.12%
57	LMS Townships Conservancy District	597,117	0.12%
58	Valley Rural Utility Company	591,352	0.12%
59	Van Buren Water, Inc.	582,116	0.12%

60	Lawrenceburg Municipal Utilities - Water	540,694	0.11%
61	Washington Township Water Corp. of Monroe County	527,385	0.11%
62	Fortville Municipal Water Works	514,898	0.11%
63	B & B Water Project, Inc.	481,265	0.10%
64	Indiana Water Service, Inc.	443,446	0.09%
65	Cataract Lake Water Corporation	442,773	0.09%
66	Clinton Township Water Company	424,933	0.09%
67	Town of Cedar Lake Utilities	362,147	0.07%
68	Riverside Water Company, Inc.	342,696	0.07%
69	Tri-County Conservancy District	338,507	0.07%
70	St. Anthony Water Utilities, Inc.	317,338	0.07%
71	Knightstown Municipal Water Utility	287,365	0.06%
72	Everton Water Corporation	280,102	0.06%
73	Eaton Municipal Water Utility	268,489	0.06%
74	Ogden Dunes Municipal Water	235,179	0.05%
75	Painted Hills Utilities Corporation	225,847	0.05%
76	Consumers Indiana Water Company	224,807	0.05%
77	Kingsford Heights Municipal Water Utility	204,492	0.04%
78	Mapleturn Utilities, Inc.	183,584	0.04%
79	Pioneer Water, LLC	181,340	0.04%
80	South 43 Water Association, Inc.	177,598	0.04%
81	Fairview Park Municipal Water	156,826	0.03%
82	Kingsbury Utility Corporation	127,028	0.03%
83	Oak Park Conservancy District	121,072	0.02%
84	Darlington Waterworks Company	116,552	0.02%
85	Water Service Company of Indiana, Inc.	92,548	0.02%
86	Fillmore Municipal Water	91,425	0.02%
87	Rhorer Harrel & Schacht Roads Water Corp	88,576	0.02%
88	Waldron Conservancy District	86,389	0.02%
89	Wedgewood Park Water Co., Inc.	64,909	0.01%
90	Apple Valley Utilities, Inc.	62,025	0.01%
91	Pleasantview Utilities, Inc.	51,236	0.01%
92	American Suburban Utilities, Inc.	37,655	0.01%

93	J.B. Waterworks, Inc.	30,893	0.01%
94	Sugar Creek Utility Company, Inc.	20,347	0.00%
95	River's Edge Utility, Inc.	17,696	0.00%
96	Wells Homeowners Association, Inc.	13,255	0.00%
97	Shady Side Drive Water Corporation	10,433	0.00%
98	Hessen Utilities, Inc.	7,754	0.00%
99	Pence Water Works	6,728	0.00%
100	Country Acres Property Owners Association	3,978	0.00%
	Total	\$484,960,990	100.00%

Source: Data taken from 2008 Annual Reports filed with the Commission

## Appendix B – Jurisdictional Wastewater Utility Revenues

Year Ending December 31, 2008

<b>Rank</b>	<b>Utility Name</b>	<b>Operating Revenues</b>	<b>% of Total Revenues</b>
1	Hamilton Southeastern Utilities, Inc.	\$8,688,488	36.60%
2	Utility Center, Inc.	4,672,663	19.68%
3	American Suburban Utilities, Inc.	2,372,950	9.99%
4	Twin Lakes Utilities, Inc.	1,543,045	6.50%
5	Eastern Richland Sewer Corporation	1,028,363	4.33%
6	Valley Rural Utility Company	884,305	3.72%
7	L.M.H. Utilities Corporation	625,289	2.63%
8	Driftwood Utilities, Inc.	507,684	2.14%
9	Wymberley Sanitary Works, Inc.	477,847	2.01%
10	Indiana-American Water Company, Inc.	343,808	1.45%
11	Kingsbury Utility Corporation	334,329	1.41%
12	Mapleturn Utilities, Inc.	292,454	1.23%
13	Consumers Indiana Water Company	272,429	1.15%
14	Apple Valley Utilities, Inc.	208,157	0.88%
15	Doe Creek Sewer Utility, Inc.	185,331	0.78%
16	Northern Richland Sewer Corporation	132,825	0.56%
17	Eastern Hendricks County Utility, Inc.	131,264	0.55%
18	Water Service Company of Indiana, Inc.	127,362	0.54%
19	Sani Tech, Inc.	95,726	0.40%
20	Old State Utility Corporation	74,467	0.31%
21	Wildwood Shores Utility Corp., Inc.	69,900	0.29%
22	Howard County Utilities, Inc.	67,005	0.28%
23	Centurian Corporation	64,656	0.27%
24	Galena Wastewater Treatment Plant	64,360	0.27%
25	Southeastern Utilities, Inc.	63,480	0.27%
26	Sugar Creek Utility Company, Inc.	61,042	0.26%
27	Pleasantview Utilities, Inc.	49,704	0.21%

28	South County Utilities, Inc.	45,306	0.19%
29	Heir Industries, Inc.	40,566	0.17%
30	Howard County Utilities, Inc.	39,405	0.17%
31	East Shore Corp.	28,000	0.12%
32	Chimneywood Sewage Works, Inc.	25,448	0.11%
33	Hardin Monroe, Inc.	25,200	0.11%
34	Hillview Estates Subdivision, Inc.	25,187	0.11%
35	JLB Development, Inc.	15,203	0.06%
36	Country Acres Property Owners Association	14,742	0.06%
37	River's Edge Utility, Inc.	12,564	0.05%
38	Brushy Hollow Utilities, Inc.	12,080	0.05%
39	Anderson Lakes Estates Homeowners Assoc., Inc.	6,903	0.03%
40	Harbortown Sanitary Sewage Corporation	5,400	0.02%
41	Hessen Utilities, Inc.	5,308	0.02%
42	Webster Development, LLC	1,355	0.01%
43	Aldrich Environmental, LLC	0	0.00%
44	Sanitrol, Inc.	Not Operational	0.00%
	Total	\$23,741,600	100.00%

Source: Data taken from 2008 Annual Reports filed with the Commission

# 2010 COMMUNICATIONS REPORT

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# I. COMMUNICATIONS OVERVIEW

## Industry Characteristics and Profile

**Commission involvement remains necessary in areas where competition alone may not provide solutions.**

The Indiana Utility Regulatory Commission (Commission) handles Indiana-specific issues related to video and telecommunications services, and executes its authority as the sole video franchise authority in Indiana. Commission involvement remains necessary in areas of the communications industry where competition alone may not provide solutions. For example, the Commission resolves carrier-to-carrier disputes, manages policies regarding telephone numbering resources (pursuant to federal law), and works to implement streamlined certification processes that facilitate competition by reducing barriers to entry and eliminating regulatory lag. The Commission also protects consumers from unauthorized changes to their service, ensures that all areas of the state continue to have a provider of last resort for local exchange telecommunications service, and ensures continued access to basic communications services in high-cost areas of the state. As more fully discussed in this report, the Commission has adapted to both changes in its authority and the marketplace.

The communications industry in Indiana continues to transition from the historical model of a regulated market where monopoly carriers provided single segments of communications services to captive customers. In today's market, communications service providers (CSPs) offer multiple services, utilizing different technologies in order to remain competitive with companies that were once in separate and distinct industries. For example, telephone companies provide video service, cable companies provide telephone service, and both provide high-speed access to the Internet.

Consumer behavior is also changing, as customers opt to purchase multiple communications services from one entity in a bundle or package. In response to this preference, most companies offer their services in bundles or packages at a considerable discount over stand-alone pricing. Advances in technologies, coupled with capital investments in communications infrastructure, have made it possible for CSPs to offer multiple products such as voice calling, data, and video

services. Widespread adoption of “triple play” (telephone service, Internet access, and video service) or even “quadruple play” (triple play, plus mobile wireless service) has also resulted in multiple providers offering packages and bundles of services to consumers, leading to increased competition and customer choice. In fact, in 2009, the intrastate operating revenues for Indiana’s telecommunications carriers totaled \$2.86 billion.<sup>1</sup>

New standards for Certificates of Territorial Authority (CTA) went into effect on July 1, 2009. Prior to this date, the IURC only certificated telecommunications providers. HEA 1279 requires all communications service providers that offer service to Indiana customers to obtain a CTA without regard to the medium or technology used to provide the services. This includes providers of information service, video, broadband and Internet Protocol-enabled services (I.C. 8-1-32.5-3(a)). In order to implement this new section of the statute, the IURC modified its policies to require that all CSPs be similarly certified by the Commission, thereby allowing competitors to receive similar “light regulatory” treatment.<sup>2</sup>

Prior to the July 1, 2009 requirement, there were 624 communications companies that had CTAs and were, therefore, grandfathered in as CSPs under HEA 1279. Since May 20, 2009, 73 new applications have been filed. Of these new applications, 65 have been granted; 7 are pending; and 1 was denied. Commission staff members continue to follow up with companies that have not yet complied with this statutory requirement.

### **Existing Legal and Policy Foundations**

**IURC authority has changed and evolved but has not been eliminated.**

The regulatory landscape in Indiana changed for CSPs and their customers when the final phase of HEA 1279 became effective in July 2009. Deregulation of basic telecommunications service (BTS) led to the elimination of many regulations that were no longer necessary. However, the statute also added mandates to implement new programs and certify new types of communications providers. The new regulatory framework seeks parity for all types of CSPs,

<sup>1</sup> 2009 Annual IURC Fee Billing Report

<sup>2</sup> Pursuant to HEA 1279, P.L. 27-2006

using competition rather than rate or service quality regulation, to promote a high level of service quality at an affordable price.

170 I.A.C. 7 of the Indiana Administrative Code details the IURC's regulations and procedures for telecommunications carriers. The Commission and its staff reviewed the IURC's telephone rules to determine which rules should be eliminated, modified or preserved in order to align the Commission's administrative rules with current statutory provisions. Commission staff also sought input from industry representatives and the Office of Utility Consumer Counselor prior to approval of the Proposed Rule on March 3, 2010. In the Proposed Rule, 47% of the telephone rules were eliminated due to HEA 1279. The revised rules fit into the following categories:

- *Slamming and Cramming Rules* – I.C. § 8-1-2.6-13(d)(4) retained the Commission's jurisdiction to enforce anti-slamming and cramming rules; therefore, these rules are largely unchanged with the exception of updates to comply with federal regulations.
- *Obligations of Eligible Telecommunications Carriers (ETCs) and Communications Service Providers (CSPs)* – The proposed rule greatly reduces the previous service quality section and eliminates performance metrics and automatic customer bill credits for noncompliance (i.e., maximum time to respond to out-of-service complaints, maximum waiting times for calls to repair centers, etc.). The rule also sets forth the remaining Indiana-specific obligations for ETCs and CSPs.
- *Customer Rights and Responsibilities* – The proposed rules significantly reduced the previous Customer Rights and Responsibilities section, (e.g., standards for evaluating creditworthiness of customers, deposit requirements and disconnection notice requirements) but retain billing standards for utility service necessary to enforce anti-slamming and cramming rules and procedures for customers to report problems and complaints to the IURC.
- *Carrier-to-Carrier Disconnections* – The Commission retains its jurisdiction to mediate the disconnection of one carrier by another carrier pursuant to Section 251 of the

Telecommunications Act of 1996 (TA-96) (I.C. § 8-1-2.6-2). This is important to protect end-user customers from losing their service with no advance notice.

- *Carrier-to-Carrier Interconnection Disputes* – The Commission retains its jurisdiction and responsibility to arbitrate and resolve disputes between telecommunications carriers pursuant to Section 252 of the Telecommunications Act (I.C. § 8-1-2.6-1.5(b)).

HEA 1279 also contained legislative mandates concerning video franchising and low-income assistance. With the passage of HEA 1279, the IURC became the sole video franchising authority in Indiana effective July 1, 2006, with the exception of those that had agreements with providers that chose to remain under local franchise agreements until expiration of the then-current agreement. The IURC has worked diligently to implement the video sections of the statute over the last four years. Data summarizing the growth in deployment and activity in Indiana’s video industry is detailed in the Four-Year Study of Video Availability Report (Appendix D).<sup>3</sup>

HEA 1279 also mandated the development and implementation of the Indiana Lifeline Assistance Program (ILAP) which will help low-income Hoosiers benefit more from the funds that all Indiana telecommunications customers pay through the federal universal service fee on their monthly bills. Having a state program allows Indiana to receive matching dollars from the federal government, which means low-income Hoosiers will receive an additional discount. This program is discussed in greater detail later in this report.

## II. COMMUNICATIONS LANDSCAPE

### Infrastructure

**Investments in communications infrastructure are making both urban and rural communities more economically competitive.**

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<sup>3</sup> Required in Section 64 of HEA 1279 (P.L. 27-2006).

### *Company Funded Infrastructure Investment*

Beyond its role as the foundation for voice, data, video, and access to the Internet, communications infrastructure is critical to industries such as banking and financial services, healthcare, education, government, and the energy industry and other utilities, through so-called “smart grids.” Consequently, investments in communications infrastructure are helping to satisfy customer needs. They are also making both urban and rural communities more economically competitive since they help rural communities attract new businesses and jobs, while retaining current businesses that might have otherwise relocated due to a lack of adequate Internet service. Examples of recent infrastructure upgrades include:

1) Rochester Telephone Company (RTC), located in north central Indiana, is nearing the end of a fiber-to-the-home (FTTH) build-out project that began in 2003.<sup>4</sup> RTC currently serves about 90% of its subscriber base with fiber and offers triple play service bundles to those customers. RTC has already invested in excess of \$9 million and expects to invest an additional \$2.5 million through the end of 2010. Rochester estimates an additional \$600,000 in annual expenditures for the next eight years to fully convert its customers, all of whom are located in Fulton County, to fiber connectivity.

2) Mulberry Cooperative Telephone Co., Inc., located in central Indiana, invested in both FTTH and fiber-to-the-node (FTTN) technologies, as well as in major hardware, switching, and software upgrades over the last few years, including more than \$1 million in 2009 alone. Mulberry serves customers in western Clinton County and eastern Tippecanoe County.

These examples show that Indiana companies are investing in their infrastructure to provide customers with access to the services they need and want.

### **Industry Development**

**The new regulatory framework in Indiana seeks parity for all types of communications service providers, using competition rather than economic or service quality regulation.**

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<sup>4</sup> RTC received federal universal service support but no federal stimulus funding.

### *New Standards for Certificates of Territorial Authority*

As referenced earlier, in 2009, many entities, including providers of WiFi, Internet services, and VoIP that were not accustomed to interacting with the Commission were required to obtain CTAs for the first time.<sup>5</sup> The new CTA framework provides a uniform application and certification process for all types of carriers, regardless of whether they are a reseller of long-distance services or a facilities-based provider of local exchange service. The Commission continues to keep records on the types of services offered by CSPs because federal law and other areas of Indiana law have differing obligations and benefits, depending upon the type of service provided. For example, local exchange providers, as well as wireless carriers, are required to provide access to 911 and dual-party relay service to hearing and speech impaired individuals, while long-distance providers do not have this obligation.<sup>6</sup>

### *Telephone Penetration in Indiana/Federal and State Lifeline Programs*

Lifeline/Link-up is a federally-funded program that reimburses ETCs for discounts provided to low-income households on basic telephone service. All ETCs are required to offer Lifeline/Link-up. Many states, including Indiana, have trouble raising awareness to eligible low-income households regarding the availability of this program. The IURC has taken several steps over the years to boost participation in the Lifeline program, including working with social service agencies and communications providers to increase awareness. Unfortunately, these efforts have only produced temporary results.

**The Indiana General Assembly directed the IURC to establish a state Lifeline Program.**

The Indiana General Assembly recognized the need to address telephone affordability and directed the IURC to implement rules for the establishment of a state Lifeline Assistance Program (ILAP). Lifeline customers in states that implement a State Lifeline Program receive an additional discount from the federal Lifeline Fund. When implemented, the ILAP will reimburse ETCs for providing discounted telephone service to eligible low-income customers.

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<sup>5</sup> See, I.C. § 8-1-32.5

<sup>6</sup> See, I.C. § 36-8-16 and I.C. § 8-1-2.8

Customers are eligible for the discount if they participate in any of seven social service programs or have a household income at or below 150% of the federal poverty guidelines. The program was to be functional no later than July 1, 2009.<sup>7</sup> The IURC approved an Order establishing the funding mechanism in November 2007 and rules for the program in May 2008 as required by the statute; however, the State Budget Agency withheld approval. Therefore, the program could not be implemented in 2009. The IURC approved a new funding mechanism on June 30, 2010<sup>8</sup> and hopes that the approved mechanism and the new administrative rule will become effective after state approval later this year.

**Only 9% of eligible Indiana residents participated in the federal Lifeline program in 2009.**

The IURC continues to recognize the ILAP and the Federal Lifeline Program as important tools for increasing telephone penetration rates in Indiana. The FCC's telephone subscribership report estimates that 93.1% of Indiana residents had a telephone in their household in 2009.<sup>9</sup> Indiana lags in penetration rates when compared to other states. (See Appendix A)

Lifeline/Linkup could be a tool for increasing penetration rates. However, an estimate prepared by the Universal Service Administrative Company for Indiana, showed that only 9% of eligible Lifeline customers in Indiana participated in the federal Lifeline program in 2009. This means 511,298 eligible households in Indiana are not participating in the program which translates into approximately \$43 million federal dollars lost to Indiana's economy annually. In addition, Indiana telephone customers contribute more into the Federal Universal Service Fund, which funds the Lifeline/Link-up Program, than Indiana companies receive.<sup>10</sup> Implementation of the ILAP program mandated by I.C. 8-1-36 will further this goal by providing an Indiana specific program with additional emphasis on outreach.

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<sup>7</sup> See, I.C. § 8-1-36

<sup>8</sup> Cause No. 43082

<sup>9</sup> Telephone Subscribership in the United States, Federal Communications Commission, (rel. February 2010).

<sup>10</sup> In 2008, Indiana received \$32.9 million less than it contributed to the federal USF according the Universal Service Monitoring Report, (rel. December 2009).

**Without universal service support, residents of some rural areas of the state would pay significantly more for telephone services than those living in other areas.**

Through HEA 1279, the Legislature retained the Commission's authority to "fulfill its obligations under TA-96 and I.C. 20-20-16 concerning universal service and access to telecommunications service and equipment including the designation of eligible telecommunications carriers..."<sup>12</sup> The Federal Universal Service Fund supports telecommunications companies that provide service in high cost areas and to low income consumers, schools, libraries and rural health care services, all of which have a significant impact on Indiana's current and future economy. The Commission is diligent in fulfilling those responsibilities and closely monitors proposed changes to the federal universal service law that could affect Indiana companies and consumers.

Due to Federal Universal Service changes that had a detrimental impact on Indiana's rural companies, the IURC implemented a state universal service fund for Indiana (IUSF) in 2007. The purpose of the IUSF is to provide cost recovery so that companies in high-cost areas<sup>13</sup> may continue to offer services at rates that are "just, reasonable and affordable." Without universal service support, residents in some rural areas of the state would pay significantly more for telephone services than those living in other areas. This could result in a reduction in telephone penetration in high cost rural areas. Telecommunications companies that serve these areas could also decide they cannot afford to modernize their networks or provide services of the same quality as is available in urban areas. Indiana is one of 16 states that have a state universal service fund.<sup>14</sup>

The IUSF is funded by a percentage surcharge upon total intrastate retail telecommunications services. Indiana telecommunications customers saw a reduction of this surcharge from 0.54% to

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<sup>12</sup> See, I.C. § 8-1-2.6-13(d)(5)

<sup>13</sup> High-cost service areas are designated by the federal government due to the high fixed costs of building and maintaining a telecom network in rural areas with low population densities or rugged terrain; 47 USC 254(b)(3) requires the availability of comparable service at a comparable price.

<sup>14</sup> Making the High Cost Decision: How to Assess Your State's Needs, National Regulatory Research Institute, 2010.

0.40% on their intrastate telephone bills on March 1, 2010.<sup>15</sup> The order establishing the IUSF required the Commission to set the initial surcharge and allowed for modification of the surcharge by the administrator upon approval by the Commission. Modifications are allowed up to twice per calendar year as necessary to maintain sufficient funds required for disbursements.

The Commission uses a third-party administrator to manage the IUSF. The administrator, Solix, administers state universal funds for 14 of the 16 states throughout the country that offer such programs.<sup>16</sup> Solix serves Indiana by collecting funds from contributing carriers and disbursing the funds to small rural carriers that meet certain criteria and demonstrate a need for the support.<sup>17</sup> Solix works very closely with the Commission and provides quarterly and annual status reports on the IUSF operations.

#### *Area Code Relief*

**When assignable telephone numbers are exhausted in a particular area code, the IURC must implement area code relief.**

The IURC continues to monitor the state's area code exhaust projections. Three-digit area codes and seven-digit telephone numbers are finite resources that are in heavy demand. When assignable telephone numbers are exhausted in a particular area code, the IURC must implement area code relief consisting of either a geographic split of the existing area code into two or more areas, or an overlay of a new area code in the same geographic area as the existing area code. Neither option is popular with consumers because they involve either changes of phone numbers or ten-digit dialing to place a local call. The increase in telecommunications providers, growth in wireless customers, and Internet-based phone systems, place pressure on numbering resources.

Forecasting reports from the North American Numbering Plan Administrator (NANPA) indicate that area code 812, serving southern Indiana, has the shortest remaining life of the Indiana area codes with a current exhaust projection of 2013. Although exhaust projections for

<sup>15</sup>Cause No. 42144-S3, Docket Entry, December 29, 2009

<sup>16</sup>[www.solixinc.com/internet/current-programs.aspx](http://www.solixinc.com/internet/current-programs.aspx)

<sup>17</sup> In order to qualify for support from the IUSF, companies must meet certain standards, maintain service quality and demonstrate need as enumerated in the Final Order in Cause No. 42144. In this Cause, the Commission approved a settlement agreement between small rural carriers, large ILECs, wireless carriers and competitive local exchange carriers.

812 have been extended several times, a petition for area code relief may be filed by NANPA in the near future. Once the petition is received, the IURC will determine the appropriate form of area code relief. The current status of numbering resources for Indiana’s six area codes is reflected in the following table:

**Table 3**  
**Area Code Life Projections**

Area Code	Year & Quarter of Projected Number Exhaust Date
812	2013 3Q
317	2017 4Q
765	2018 2Q
219	2031 3Q
260	2034 4Q
574	2036 1Q

Source: North American Number Plan Administration, 2010-1 NRUF and NPA Exhaust Analysis, Released April 2010.

*Mergers*

**Since 2008, three mergers and one spin-off were announced that directly affect Indiana providers and consumers.**

Several mergers and spin-offs have taken place during the past few years among U.S. telecommunications providers. Carriers are joining forces in order to enhance revenues and achieve economies of scale to better position themselves in the market, which now includes strong, new competitors from the cable TV and wireless companies. Since 2008, four mergers were announced that directly affect Indiana providers and consumers.

The merger transactions involve: CenturyTel, Inc.’s (CenturyTel) merger with Embarq Corporation (Embarq); the transfer of control of the licenses, authorizations, and spectrum leasing arrangements held by Centennial Communications Corp. to AT&T, Inc; CenturyLink’s proposed all-stock merger with Qwest; and Frontier Communications Corp.’s (Frontier) acquisition of Verizon Communications, Inc.’s (Verizon) wireline properties in 14 states. All four transactions have focused on delivery of services to predominantly rural areas. See Appendix B for details of the transactions.

## Pricing and Economics

### *Effects of Competition and Technological Change on Universal Service and Pricing*

This section of the report focuses primarily on BTS, which the Indiana General Assembly has defined as “stand-alone telephone exchange service (as defined in 47 U.S.C. 153(47))” provided to residential customers over the customer’s primary line. It must be the sole service purchased by the customer and cannot be part of any promotion, package, bundle, or contract; it also cannot include a “functionally equivalent service” that is provided through “Internet Protocol enabled retail services.”<sup>18</sup>

The Commission’s jurisdiction over BTS expired on June 30, 2009, which marked the end of the legislative “rate transition period.”<sup>19</sup> From March 26, 2006, through June 30, 2009, a provider offering BTS could only increase its monthly flat rates for BTS by a maximum of \$1.00 per year and \$3.00 total, calculated in reference to the rate in effect on March 26, 2006.<sup>20</sup> Providers electing to implement such rate increases did not need prior approval from the Commission; however, the statute required that broadband be offered to at least 50% of the households located in the local exchange area,<sup>21</sup> at average speeds of at least 384 Kbps upstream and at least 1.5 Mbps downstream,<sup>22</sup> not later than eighteen calendar months after the provider’s first rate increase in the local exchange area. Specifically, providers were required to demonstrate compliance in the context of docketed proceedings before the IURC<sup>23</sup> in order to maintain the rate increase.

**The Commission does not have statutory authority to either prohibit local rate increases or to cap the size of any increases that companies might elect to make.**

Verizon and Embarq each raised their respective BTS rates once during the rate transition period. Embarq successfully demonstrated compliance with the statutory broadband build out

<sup>18</sup> See, I.C. § 8-1-2.6-0.1

<sup>19</sup> See, I.C. § 8-1-2.6-1.3(b)

<sup>20</sup> See, I.C. § 8-1-2.6-1.3(c)

<sup>21</sup> See, I.C. § 8-1-2.6-1.3(e)

<sup>22</sup> See, I.C. § 8-1-2.6-1.3(a), also, I.C. § 8-1-2.6-1.3(e)

<sup>23</sup> See, I.C. § 8-1-2.6-1.3(e)

requirements in at least 50% of the local exchange areas subject to the rate increase.<sup>24</sup> Verizon met the 50% deployment requirement in all affected exchanges except the Corydon exchange. As a result, the Commission ordered Verizon to refund \$15 plus interest at an annual rate of two-tenths of one percent (0.20%) to all affected customers in Corydon.

AT&T Indiana raised its BTS rates to \$13.00 in August 2009 in each of its four rate groups after the expiration of the rate transition period; the increases were all more than \$1.00.<sup>25</sup> AT&T also raised its non-BTS rates three times during the transition period, ending up with a non-BTS rate of \$13.00 for all of its rate groups. The Commission is unaware of any other ILECs that raised their BTS rates during the rate transition period or since last year's report. However, it should be emphasized that as of July 1, 2009, ILECs are no longer required to file BTS tariffs with the Commission. The Commission does not have statutory authority to either prohibit local rate increases or to cap the size of any increases that companies might elect to make.

### **III. COMMUNICATIONS GROWTH & INNOVATION**

#### **Future and Pending Legislation**

##### *State*

During the 2010 legislative session, House Enrolled Act 1086<sup>27</sup> (HEA 1086) passed and included a significant addition to the wireless 911 section of the statute.<sup>28</sup> Formerly, this statute required all wireless carriers to contribute to the Wireless 911 Board and treated all wireless carriers the same. However, TracFone, a prominent prepaid wireless provider, stated that they could not collect the 911 fee when their phones and services are sold by third party retailers. This issue also arose in a complaint before the IURC<sup>29</sup>, which was later dismissed because the IURC was not the appointed authority to hear disputes regarding 911 fees, among other reasons. HEA 1086 provides that retail sellers of prepaid wireless service shall collect a fee at the point of sale in the amount of 50% of the current wireless 911 fee assessments. Currently, the monthly

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<sup>24</sup> Cause Nos. 43772 (Verizon) and 43763 (Embarq)

<sup>25</sup> Because the transition period was over at that time, AT&T was not bound by the statutory requirements; therefore, the increases of more than \$1.00 were not legislatively prohibited. Likewise, AT&T did not have to demonstrate compliance with the specific statutory requirements regarding the 50% broadband build out.

<sup>27</sup> P.L. 113-2010

<sup>28</sup> See, I.C. § 36-8-16.6

<sup>29</sup> Complaint of the Indiana Enhanced 9-1-1 Advisory Board against TracFone Wireless, Inc., Cause No. 43524

wireless user fee for traditional bill-for-service wireless providers is \$.50, so the initial pre-paid wireless 911 user fee is \$.25 per month. HEA 1086 also requires the seller to remit the funds to the Indiana Department of Revenue for distribution to the Wireless 911 Board for deposit and county distribution. This legislation clarifies that prepaid wireless providers must also contribute to the Enhanced Emergency Telephone System Fund even though they do not have traditional billing or service distribution methods.

### *Federal*

On March 16, 2010, the FCC released the National Broadband Plan (the Plan). The Plan addresses the nation's digital divide between rural and urban areas; low-income and at-risk populations; and the lack of affordable access, connectivity, and features for commercial and anchor institutions. It is considered to be a roadmap and contains numerous goals and recommendations for the FCC, Congress and other federal and state agencies.

Action taken on the Plan will affect state regulatory proceedings, though to what extent is not yet known. The possible effects of the Plan will emerge through an extended series of rulemakings and Congressional hearings. As of this summer, the FCC has issued a Notice of Inquiry (NOI) and a Notice of Proposed Rulemaking (NPRM) on Universal Service Reform; a NPRM on Pole Attachments; a NOI regarding Classifications of Service; and a Referral to the Federal-State Joint Board on Universal Service for recommendations on expanding Universal Service Programs currently used to assist low-income consumers (Lifeline and Linkup) in obtaining and maintaining telephone service, to include broadband service.

In its NPRM on Universal Service Reform, the FCC made several proposals that could have an adverse impact on Indiana rural local exchange carriers (RLECs) and mid-size ILECs. Based on recommendations in its National Broadband Plan, the FCC proposed to cap and ultimately eliminate existing federal high-cost (universal service) funding for traditional voice service and shift support to capital expenditures for broadband networks that will carry both voice and other applications that ride on the Internet. The FCC has also proposed to phase out and then eliminate access charge payments (payments made by long distance providers and others primarily to ILECs for originating, terminating, switching, and/or transporting certain types of long-distance traffic).

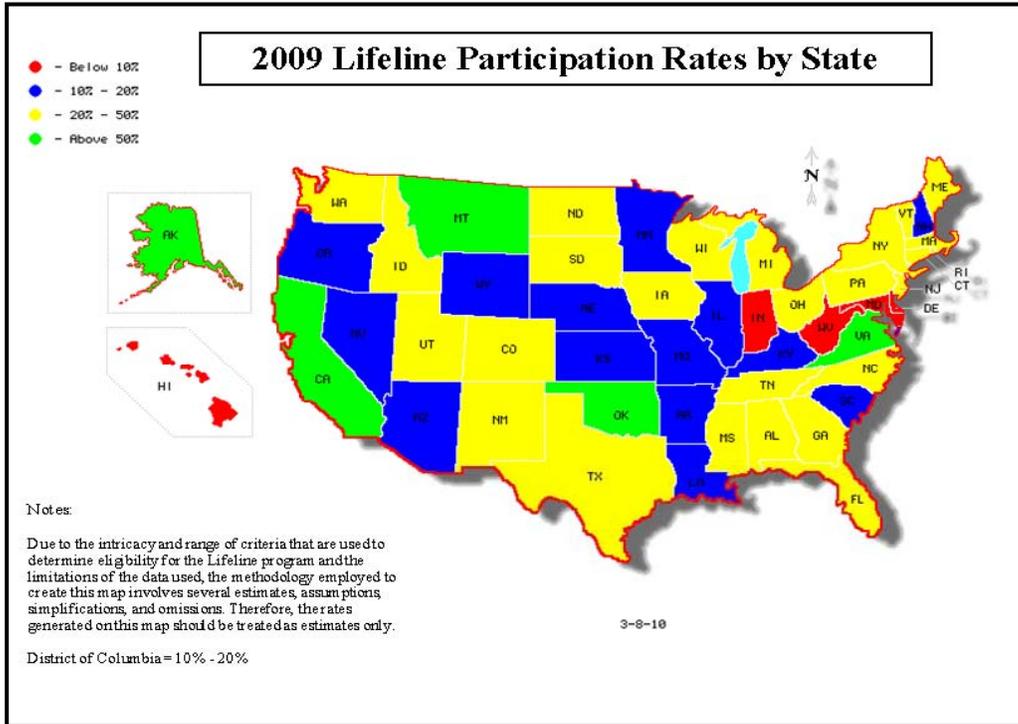
This is important to Indiana because, on average, an Indiana rural company receives more than 50% of its operating revenues from access charges and universal service support. It is important to note that many Indiana rural telephone companies are already offering both voice and broadband today, even though federal support is only designed for voice service. Because the small and mid-size companies are so dependent on access charges and high-cost support, parties are concerned that if the FCC eliminates or sharply reduces these revenue streams some Indiana companies may consider relinquishing their Provider of Last Resort (POLR) status and discontinuing both voice and broadband service in some of their service territories. If a company relinquishes its POLR status or discontinues service, the Commission is charged with finding a successor provider or replacement so that consumers in the affected area have access to communications services.<sup>30</sup> By affecting the viability of the existing providers, FCC action could result in a reduction in the universe of providers available for designation in rural areas by the Commission. Fewer providers would make the Commission's charge of finding a successor provider much more difficult. The IURC filed comments outlining its concerns with the FCC and will continue to monitor these proceedings and assess the potential impact of FCC decisions on Indiana companies and consumers. Additional rulemakings and other actions are expected to occur through the end of 2011. For a complete list, see Appendix C.

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<sup>30</sup>This is allowed under I.C. § 8-1-32.4.

# IV. COMMUNICATIONS APPENDICES

## Appendix A – 2009 Lifeline Participation Rates by State



Source: Universal Service Administrative Company

## Appendix B – Details on Communications Mergers

### *CenturyTel/Embarq*

CenturyTel's merger with Embarq was completed on July 1, 2009, after receiving approval from the FCC and the U.S. Department of Justice (DOJ). Executives from both CenturyTel and Embarq stated that the newly merged entity will be a stronger, more competitive company, particularly in rural areas.<sup>31</sup> The resulting company will be the fourth largest local exchange company in the U.S., serving close to 7.3 million access lines, 2.1 million broadband customers, and approximately 470,000 video subscribers, spread out over 33 states.<sup>32</sup> As of December 31, 2009, the combined company, doing business as CenturyLink, served approximately 185,600 Indiana local access lines, predominantly in northern and southeastern Indiana.

### *Centennial Communications Corp./AT&T Inc.*

Centennial Communications Corp.'s acquisition by AT&T Inc. was completed on November 6, 2009, after receiving approval from the FCC and the DOJ.<sup>33</sup> AT&T's acquisition of Centennial increased AT&T's cell phone holdings in Indiana. Centennial had a major presence in the Fort Wayne area, including the U.S. headquarters and a large call center. AT&T plans to implement a 3G upgrade in at least 75 of the Indiana cell sites it acquired from Centennial in 2010.<sup>34</sup>

### *CenturyLink/Qwest*

On April 22, 2010, CenturyLink announced a proposed all-stock merger with Qwest. CenturyLink would also assume \$11.8 billion of Qwest's debt. Qwest, formerly known as U.S. West, is a Regional Bell Operating Company whose ILEC territory is in the western United States. The combined company will have 360 employees and approximately 185,600 access lines in Indiana.<sup>35</sup> The companies hope to complete the merger by the end of the 2<sup>nd</sup> quarter of 2011.

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<sup>31</sup><http://www.fiercetelecom.com/story/centurytel-acquire-embarq/2008-10-27>

<sup>32</sup><http://www.centurytelembarqmerger.com/aboutmerger/index.html> (viewed on April 15, 2010)

<sup>33</sup>AT&T was required to divest itself of seven of Centennial's wireless operations in Louisiana and Mississippi, but none in Indiana.

<sup>34</sup>"Former Centennial Sites to Get 3G Upgrade," by Doug LeDuc, Greater Fort Wayne Business Weekly, April 1, 2010.

<sup>35</sup>Qwest currently has no access lines in Indiana.

### *Verizon/Frontier*

Verizon's spin-off and merger of its wireline operations in 14 states (including Indiana) to Frontier was completed on June 30, 2010 after receiving approval from the FCC, the DOJ, and nine state commissions having jurisdiction over such transactions. Upon completion of the transaction, Frontier became the parent company of the Verizon spin-off, acquiring all of Verizon's local wireline telephone and FiOS operations in Indiana. The combined company will serve approximately 718,000 access lines in Indiana. As a result, Indiana will be the second largest state served by Frontier based on the number of access lines; Frontier will be the second largest provider in Indiana; and Fort Wayne will be the second largest city served by the new Frontier.

# Appendix C – FCC Broadband Action Items Agenda

## Proposed 2010 Key Broadband Action Agenda Items\*

	Q2 2010 (CY)	Q3 2010 (CY)	Q4 2010 (CY)
Promote World-Leading Mobile Broadband Infrastructure and Innovation	Mobile Roaming Order and FNPRM (WTB)	AWS Bands Analysis (WTB, OET)	AWS Potential Order (WTB, OET)
	D Block Order/NPRM (WTB, PSHSB) [Also in Public Safety]		Secondary Markets Internal Review (WTB)
	Launch Strategic Spectrum Plan and Triennial Assessment (WTB, OET, OSP)	Spectrum Sharing/Wireless Backhaul NPRM/NOI (WTB, OET)	Spectrum Dashboard 2.0 (WTB, OET, PSHSB, MB, IB)
	2.3 GHz WCS/SDARS Order (OET, WTB, IB)	Oppor. Use of Spectrum NPRM (OET, WTB, IB, MB, PSHSB)	Recommendation re: Contiguous Unlicensed Spectrum Proceeding (OET, WTB)
		TV White Spaces Opinion & Order (OET, MB, WTB)	Experimental Licensing NPRM (OET)
Accelerate Universal Broadband Access and Adoption	USF Reform NPRM and NOI (WCB, WTB)	Mobility Fund NPRM (WTB, WCB)	
	Lifeline/Low-income Joint Board Referral Order (WCB, WTB)	Hearing Aid Compat. Second Report & Order/FNPRM (WTB, OET, CGB)	Spectrum on Tribal Lands NPRM (WTB, CGB)
	E-Rate FY2011 NPRM (WCB)	E-Rate FY2011 Order (WCB)	
	USF Merger Commitments Order (WCB, WTB)	Rural Health Care Reform NPRM (WCB)	USF Transformation NPRM (WCB, WTB)
	Lifeline Pilot Roundtable (WCB, WTB)	Lifeline Flexibility NPRM (WCB, WTB)	Intercarrier Compensation NPRM (WCB, WTB)
	FCC/FDA Workshop and PN on Converged Devices (OET)	Establish Accessibility and Innovation Forum (CGB, WCB, WTB)	USF Contributions NPRM (WCB, WTB)
	Launch FCC Office of Native American Affairs (CGB)	Real-Time Text NOI (CGB, WCB, WTB, OET)	Real-Time Text NPRM (CGB, WCB, WTB, OET)
	FCC-Native Nations Broadband Task Force (CGB)		Internet Video and Device Accessibility NOI (CGB, WCB, WTB, MB)
Foster Competition and Maximize Consumer Benefits Across the Broadband Ecosystem	Mobile Wireless Competition Report (WTB, OSP)	Interconnection Clarification Order (WCB)	
	Pole Attachments Order and FNPRM (WCB)	Rights-of-Way Task Force (CGB, WCB)	Small Business Broadband & Wholesale Comp. NOI (WCB)
	Small Business Broadband & Wholesale Comp. PN (WCB)	Special Access Workshop (WCB, WTB, OSP)	
		Special Access Workshop (WCB, WTB, OSP)	Special Access NPRM (WCB, WTB, OSP)
	CableCARD NPRM (MB, OET)		Smart Video Devices NPRM (MB, OET)
	Smart Video Devices NOI (MB, OET)		
	Launch Tech. Adv. Grp. on Speed & Perf. (CGB, OET, WCB)	Transparency & Disclosure NPRM (CGB, WCB, WTB, OET)	
Advance Robust and Secure Public Safety Communications Networks		Public Safety Roaming & Priority Access NPRM (WTB, PSHSB)	NG 911 NOI (PSHSB, OET, WCB, WTB)
		D Block Order/NPRM (WTB, PSHSB) [Also in Mobile]	Back-Up Power NOI (PSHSB, OET, WTB)
		700 MHz Waiver Petitions (PSHSB, WTB, OET)	Serv. Outage & Homeland Security NPRM (PSHSB, OET, WCB, WTB, IB)
	ERIC Public Safety Interoperability Order (PSHSB)	700 MHz Public Safety Order/FNPRM (PSHSB, WTB, OET)	
	Cybersecurity Certification NOI (PSHSB, WTB, OET, WCB)	Location Accuracy FNPRM (PSHSB, OET, WTB)	
	Survivability NOI (PSHSB, OET, WTB, WCB)		
	Serv. Outage & Homeland Security Workshop (PSHSB, OET, WCB, WTB, IB)		

■ Wireless Telecommunications Bureau (WTB)  
 ■ Wireline Competition Bureau (WCB)  
 ■ Office of Engineering and Technology (OET)  
 ■ Media Bureau (MB)  
 ■ Consumer & Governmental Affairs Bureau (CGB)  
 ■ Public Safety & Homeland Security Bureau (PSHSB)

\* This document reflects only proposed FCC actions, not those of other government agencies, and is not exhaustive of all 2010 FCC actions. The location and timing of actions in this document represents a series of targets that may be adjusted to respond to changing conditions as appropriate; items that span quarters are expected to occur late in the earlier quarter, or early in the later quarter. Does not include initiatives discussed in Agenda from Q1 2010 and earlier (E-rate Community Use Order, Rural Health Care Pilot Program Extension Order, Spectrum Dashboard Beta, and Tower Siting Declaratory Ruling).

**Appendix D – IURC Report on Video Deployment in Indiana 2006-2009**

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## I. INTRODUCTION

### HEA 1279

Before July 1, 2006, video services in Indiana were provided by firms that had negotiated local franchise agreements (LFAs) with local governmental units (units). These LFAs covered defined and discrete geographic areas that typically had high population densities (e.g., cities and towns). Indiana customers predominately only had one land-based video service provider (VSP) available to them, meaning that limited head-to-head and/or direct competition in the video service market existed.

The Video Section of HEA 1279,<sup>1</sup> which became effective on July 1, 2006, made the Indiana Utility Regulatory Commission (Commission) the sole issuer of new video service franchises. The statute permitted video service providers to convert existing local franchises into state-issued franchises within a limited time period or keep the local franchises in place until they expire. Some video service providers continue to provide service under locally-issued franchises and will do so until those franchises expire. Conditions of local franchises vary because the agreements were negotiated by different communities, with different video providers, at different times. In contrast, conditions for obtaining a state-issued franchise are standardized in a manner consistent with the requirements outlined in state law. The obligations for a state-issued franchise include reporting requirements on: areas served; changes to programming content; provision of Public, Educational and Governmental (PEG) channels; and payment of franchise fees to the local governmental units.

The state video franchising statute was created in part to increase the availability of video services throughout the state and increase competition among video providers as well as to provide consumers with choices in video service. The Federal Communications Commission (FCC) estimated that cable rates had risen 7.5 percent annually between 1998 and 2004.<sup>2</sup> In an

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<sup>1</sup>See, I.C. § 8-1-34.

<sup>2</sup>Federal Communications Commission, *Report on Cable Industry Prices*, MM Docket No. 92-266, released February 4, 2005, Attachment 4. The commission's authority to regulate cable service tier prices, which began in 1992, ended on March 31, 1999, as provided in the Telecommunications Act of 1996. Local franchising authorities (e.g., municipalities) regulate the price of the basic tier of cable service, which includes only broadcast stations and public, educational, and government access channels. Federal Communications Commission, *Fact sheet – Cable television*, June 2000, 3, 5. <http://www.fcc.gov/mb/facts/csgen.html>

effort to mitigate increases in rates and encourage competition, Indiana legislators passed state franchising legislation in 2006. The statute represented the second state video franchise law in the country and provided the first comprehensive approach to video reform.

In 2006, when the law was enacted, all 92 counties in Indiana had at least one video provider that covered at least a portion of the county; however, only seven counties had county-wide video coverage.<sup>3</sup> This coverage, however, does not include satellite providers, which serve approximately 30% of the video service subscribers in the state. Because I.C. § 8-1-34(14) defines video service as “the transmission to subscribers of video programming and other programming service through facilities located at least in part in a public right-of-way”, other competitive alternatives that do not meet that definition, including satellite, are not included in this analysis.

### **Statutory Requirements for the Four-Year Report**

Section 64 of HEA 1279<sup>4</sup> required the Commission to conduct an analysis of the deployment of video service in Indiana’s Metropolitan Statistical Areas (MSAs).<sup>5</sup> It specifically required the Commission to include the results of its analysis in its 2010 Report to the Regulatory Flexibility Committee. The statute lists specific data that the Commission was to collect for each MSA in Indiana, for each year during the four-year period from July 1, 2006 to July 1, 2010. The Commission collected the required data listed below and has included it as Appendix B:

- The median per capita income;
- Whether the MSA is a part of, or includes an underserved area;
- Identification of each provider offering video service and whether it provides service under a local or state-issued franchise;
- The type of technology used by each provider;
- Any infrastructure build-out initiated or completed during the data collection period; and
- Compliance with I.C. § 8-1-34-28 (Information regarding redlining complaints).

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<sup>3</sup>Jay, Henry, Howard, Lake, Marion, Porter and Vermillion counties are the only counties in Indiana with county-wide video service coverage.

<sup>4</sup>See, I.C. § 8-1-1-2 Compilers Notes

<sup>5</sup>Metropolitan Statistical Areas do not cover the entire state.

## **Data Collection**

The Commission collected data as required by statute in order to provide relevant information to the General Assembly regarding the growth of competition from year to year in Indiana's video market and the shift from local franchises to state franchises.

### *Sources of Data*

The Commission developed multiple mediums to gather the data needed to monitor changes in Indiana's video market and the individual providers that make up that market. Information is gathered through applications for and notices of changes to state issued video franchise authority, quarterly reports from holders of state-issued franchises, the Annual IURC Communications Survey, FCC data on cable providers, and additional surveys to obtain specific information needed for reporting to the Regulatory Flexibility Committee.

### State-Issued Franchise Application

In the application form for a state-issued franchise, created by the Commission pursuant to I.C. § 8-1-34, companies are required to provide detailed information regarding the designated service area in which they are seeking authority. Additionally, the Commission requires quarterly reports from the companies providing data at census block level indicating where the company is actually offering service. This detailed information allows the Commission to track the areas in Indiana where more than one video provider is offering service. It also enables the Commission to look for evidence of redlining because the data is available at a very granular level.

### Annual Communications Survey

The Commission also collects data annually from video service providers in its Annual Communications Survey. The Survey gathers data at the zip code level regarding the number of subscribers purchasing analog versus digital packages, the technology used to provide the service and a description and price for the company's basic service offering. This data may be used to show the movement from analog to digital as well as pricing changes associated with that shift.

## FCC Cable Providers List

The Commission also uses data gleaned from FCC cable provider lists in order to obtain information regarding cable companies providing service under existing local franchises. Staff has included in each Report to the Regulatory Flexibility Committee since the passage of HEA 1279, county level information regarding the areas served by those locally franchised companies that were not required, under HEA 1279, to make themselves known to the Commission until July 1, 2009.<sup>6</sup>

## IURC MSA Level Video Survey

Additionally, in February 2010 the Commission sent a Survey to all video providers that it could identify to gather specific information at the MSA level to ensure the data provided to the General Assembly to satisfy the Reporting requirements in Section 64 of HEA 1279 was accurate and complete.

### *Storage and Analysis of Collected Data*

The data collected from these various sources was entered into IURC databases that allowed the Commission to analyze the data and identify trends. The Commission created a Geographical Information System (GIS) to enable the creation of maps and the ability to distinguish between areas where companies provide service in different parts of the same county or zip code and areas where companies are actually engaged in head-to-head competition.

## **II. TRANSITION OF THE MARKET BY MSA 2006 – 2009**

### **What is an MSA?**

A Metropolitan Statistical Area or MSA is a core area containing a substantial population nucleus, together with adjacent counties having a high degree of economic and social integration with that core area. The 2000 standards provide that an MSA must have at least one urbanized area of 50,000 or more inhabitants.<sup>7</sup>

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<sup>6</sup>Effective July 1, 2009 video providers doing business in Indiana were required to obtain a CTA as a Communications Service Provider. *See*, I.C. § 8-1-32.5

<sup>7</sup> [www.census.gov/population/www/metroareas/metroarea.html](http://www.census.gov/population/www/metroareas/metroarea.html)

A MSA's geographic delineation is referred to as its "definition." MSAs are defined by the U.S. Office of Management and Budget (OMB) and are the result of the application of published standards to Census Bureau data. The standards for defining the areas are reviewed and revised once every ten years. Between censuses, the definitions are updated annually to reflect the most recent Census Bureau population estimates. Areas based on the 2000 standards and Census 2000 data were defined in June of 2003. The current definitions are as of November 2008.<sup>8</sup> A map showing the boundaries of Indiana's MSAs is included on the following page as Map 1.

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<sup>8</sup> Ibid



As the map shows, there are many counties in the state that are not part of an MSA due to their distance from a metropolitan area that meets the definitions explained above. For that reason, the analysis done at the MSA level fails to show a complete picture of video competition in Indiana.

### **Analysis of Data Collected to Comply with Section 64 of HEA 1279**

Data regarding video service deployment over the last four years in the state's various MSAs is summarized in a table attached at the end of this report. It is important to note that MSAs are not uniform in size and, in many instances, cover large geographic areas (i.e., multiple counties), which makes meaningful analysis of the data difficult. Specific difficulties are discussed in greater detail later in this report. Nonetheless, the Commission offers the following analysis regarding information found in the MSA-level data.

#### *State vs. Local Franchises*

Analysis of the data collected by the Commission for the period from 2006 to 2009 shows there has been a steady migration of video service providers in Indiana's MSAs away from local franchise oversight to state-issued franchises. Increases in state-issued franchises can be attributed to the entrance of new providers in the market. Additionally, incumbent video providers had the option in HEA 1279 to convert local franchises into state-issued franchises. However, there does not appear to be any correlation between particular MSAs and the conversion of local franchises to state-issued franchises. Instead, conversion of franchise type is dependent on incumbent video providers' individualized decisions to convert their franchises. As large incumbent cable providers, like Comcast, Insight, and Charter Communications, opted to terminate their local franchise agreements, large portions of the state (inside and outside MSAs) instantly became serviced by state-issued franchises. Other large incumbent providers, like Mediacom and Brighthouse, chose not to terminate existing local agreements but instead converted parts of their service areas to state-issued franchises as the local franchise agreements expired.

### *Video Service Technologies*

Since the passage of HEA 1279, there are three major types of technologies used in the state's MSAs to provide video service. Incumbent video providers use either coaxial cabling to provide analog video service or a combination of fiber optic cable and coaxial cable to provide both analog and digital programming. Incumbent video providers also have modified their networks to convert from coaxial only to the hybrid fiber-coaxial technology. New entrants, like AT&T, provide video service using a combination of newly installed fiber optic cabling and copper cable that is already deployed in their network to provide digital programming content.

### *Per Capita Income*

Section 64 requires the Commission to report on the per capita income of each MSA; however, there does not appear to be any correlation between the per capita income in an MSA and the number of providers offering service. The same observation is true for infrastructure deployments by providers. Instead, data indicates that MSAs with higher population densities generally seem to draw the early deployment of video service facilities by new entrants and a greater number of video providers generally. This is to be expected given the greater number of potential customers and lower per customer capital expenditures present in more densely populated MSAs.

### *Infrastructure Build-outs*

As reflected in the attached table summarizing the statutorily required data, new video service entrants have deployed significant infrastructure in MSAs across the state. Incumbent video providers have also undertaken infrastructure improvements to their existing systems. Most of the infrastructure build-outs undertaken from 2006 to 2009 in Indiana MSAs by video service providers with local franchises occurred without a requirement to do so under the controlling local franchise.

### *Redlining Complaints*

Unlike local franchises that required video service providers to eventually offer service throughout the entirety of the area (e.g., city, town or unincorporated county), holders of state-issued franchises have no obligation to serve all areas where they hold a franchise. However, I.C.

§ 8-1-34-28 prohibits video providers with state-issued franchises from discriminating, based on the economic characteristics of a particular area, in the offering of service. This is known as redlining. To date the Commission has received no redlining complaints regarding carriers authorized to provide service in the state's MSAs.

### **Growth in the Number of Providers and Move to State-issued Franchises**

In 2006, the IURC approved state-issued video service franchises for five companies that were either new service providers or existing service providers expanding into new areas. In 2007, four more companies obtained state-issued franchises; in 2008 there were two, and in 2009 there was one. In all, 12 companies received approval for state-issued video franchises in areas where they had not previously provided service.

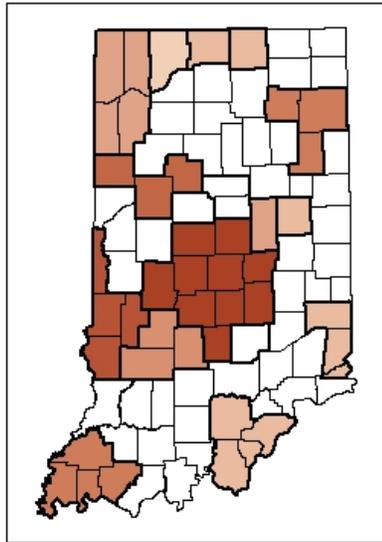
In 2006, five existing cable companies terminated their local franchises and acquired state-issued franchises. In 2007, four more existing cable providers obtained a state-issued franchise in some or all of their service territories, either terminating the previous local franchise or upon the expiration of those local franchises. In 2008, there were four; and in 2009, there were two more existing providers that sought state-issued franchises upon the expiration of some or all of their local franchises. In all, since the effective date of the state franchise statute, 15 existing companies sought and obtained state-issued video franchises.

Appendix A identifies the companies that continue to hold state-issued franchises in all or part of their service areas. Some companies have been acquired and some have merged; whereas, others have not yet begun to provide service or have discontinued service.

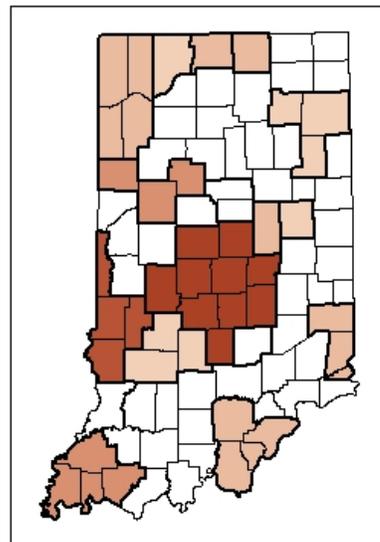
Maps 2 and 3 show the number of video service providers in each MSA that hold local franchises versus state franchises, respectively.

Map 2

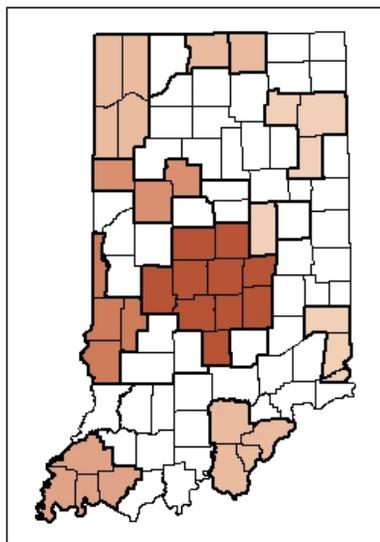
Number of VSPs with Local Franchises By MSA



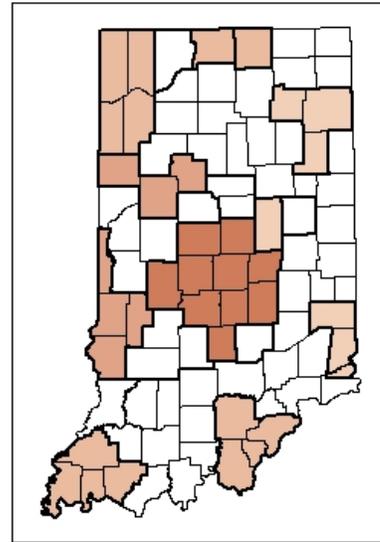
2006



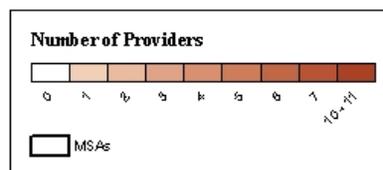
2007



2008

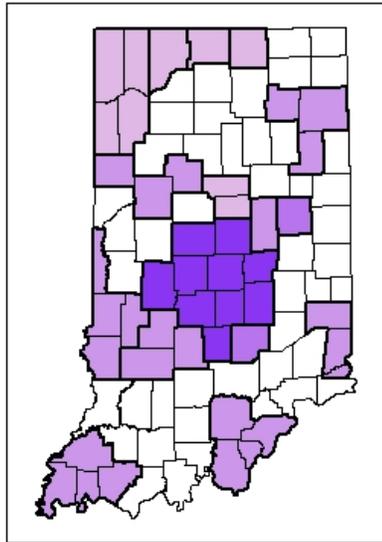


2009

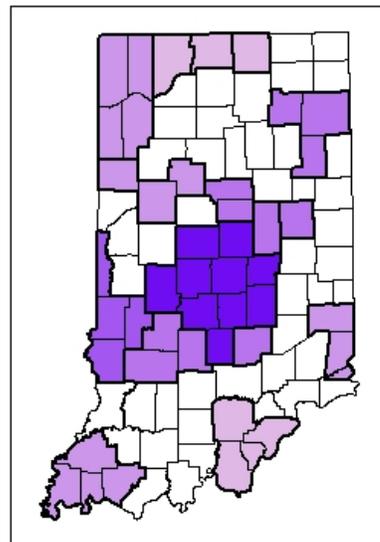


Map 3

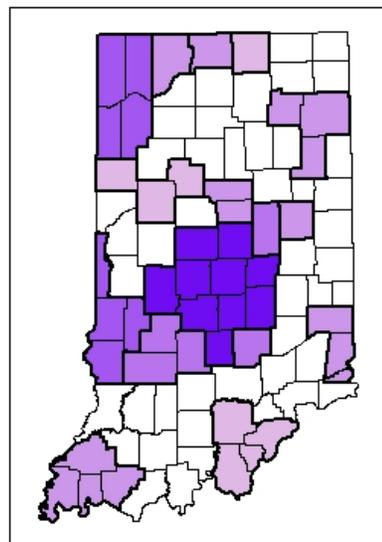
Number of VSPs with State-Issued Franchises By MSA



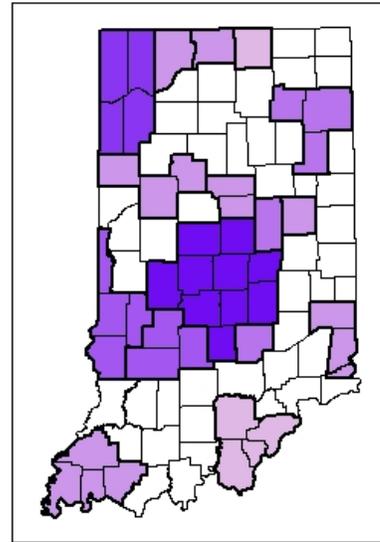
2006



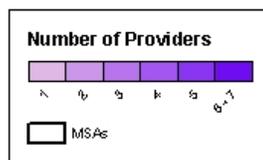
2007



2008



2009



## **Limitations with Using MSA Level Data**

Analysis of video competition expansion at the MSA level has limited value for many reasons. First of all, MSAs are very large, non-uniform geographic areas, in most cases encompassing multiple counties. Reporting at this level can obscure not only the scope of service provision by different providers, but also the growth in video service competition within the MSA. Second, reporting at this level ignores any competitive activity in the more rural areas of the state due to the fact that MSAs are made up of areas surrounding major metropolitan locations. These limitations are further explained by taking a closer look at the following areas: scope, growth, and urban vs. rural issues.

### *Scope*

By simply reporting that a video provider is providing service in an MSA, it is impossible to identify the scope of the service offering. If the report shows that two providers are offering service in a given MSA, the two companies appear to be offering service to a similar area. However, the fact might be that one of the providers is offering service in the entire MSA while the other is offering service in only one small portion of one county within the MSA.

### *Growth*

Reporting the data at this level obscures any expansion that a provider may implement over time. Once the provider is shown as offering service in any part of the MSA, only withdrawal from the MSA will show any change in the area served within the MSA. This is problematic if a company that is offering service in a small portion of an MSA also provides video service in an area that is not included in an MSA due to its rural characteristics. Hence, MSA-level data would not provide an accurate picture of the area served by that provider.

### *Urban vs. Rural*

The definition of an MSA specifically excludes a large portion of the state from the analysis required under Section 64 of HEA 1279. Though some areas that are considered rural may be included in an MSA due to the county's proximity to a metropolitan area, many rural areas of Indiana are not accounted for in the analysis. However, it is true that the areas of the state that fall within an MSA have a much higher population density than those that do not. Because of

this, it is likely that competitors will be drawn to enter the market in those areas, which is why the Commission has undertaken additional analysis using data collected through the various video reporting requirements to show more comprehensive information at a more granular level than MSA.

### **III. BROADER ANALYSIS AT A MORE GRANULAR LEVEL**

HEA 1279 provided the means for increased competition and, as a result, new competitors have emerged across Indiana. There may have been an expectation that competition in the video market would explode with the passage of state franchising legislation. The reality is, however, that new entrants have approached the deployment of video service from a business perspective. New video service deployment is happening where there is a business case for it. While the spread of competition may be slower than some expected, there is competition, and while the number of new competitors is small, there are new competitors in the market. The Phoenix Center addressed the issue of competition and build-out in a policy paper issued in 2006. In describing the level of facilities-based competition that should be expected in local communications markets the paper makes the point that:

“...scale economies and sunk costs limit the number of firms that can profitably serve a market- and local communications networks are notoriously riddled with scale economies and sunk costs. Any policymaker interested in local communications markets should, therefore, start from the assumption that there will, at best, be only a “few” facilities-based firms. The notion that the local market can sustain five to seven local terrestrial networks all offering highly substitutable services is both naïve and unrealistic.”<sup>9</sup>

According to this analysis, it is unreasonable to expect multiple competitors to enter the same markets and expect to make a profit. Therefore, the number of providers may be less than expected.

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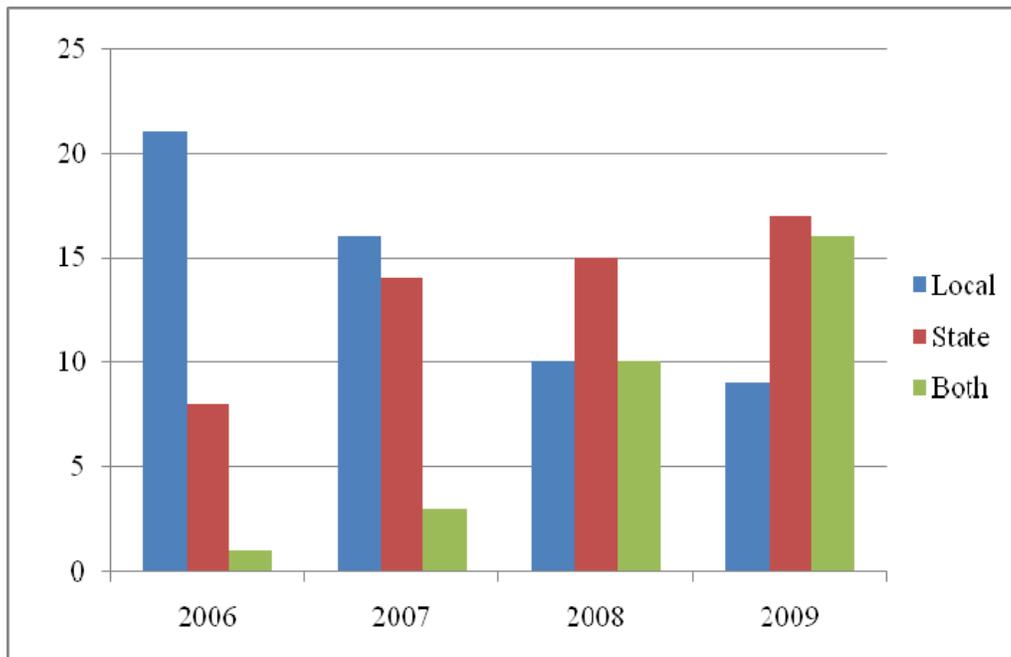
<sup>9</sup> <http://www.phoenix-center.org/FCLJCompetitionAfterUnbundling.pdf>

## Moving from Local to State-issued Franchises

### *State vs. Local Franchises*

Increasingly, video service is being offered by providers under state-issued franchises. As of December 31, 2009, 27 of the 38 video service providers (VSPs) providing service in Indiana held state-issued video service franchises, while the other nine continued to provide service under local franchises. According to information provided to the Commission by video service providers, video service was available from providers with state-issued franchises in about 52% of Indiana's census blocks, which contain approximately 79% of the state's population.<sup>10</sup>

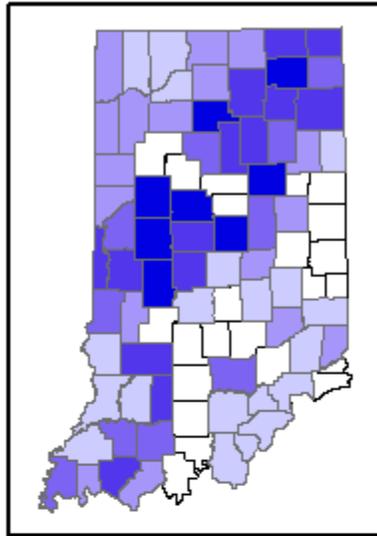
**Table 1**  
**Number of Franchises by Year**



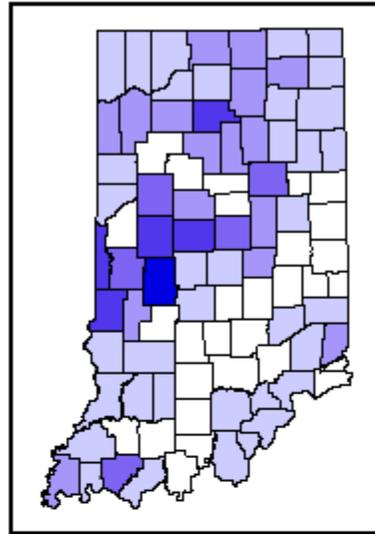
<sup>10</sup>According to TIGER 2000 census block data from the Census Bureau, Indiana has a total of 201,321 census blocks.

Map 4

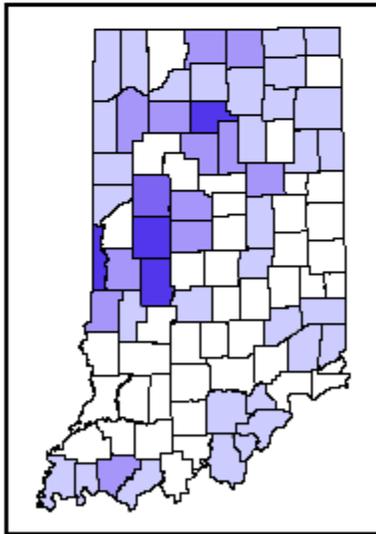
**Number of VSPs with Local Franchises By County**



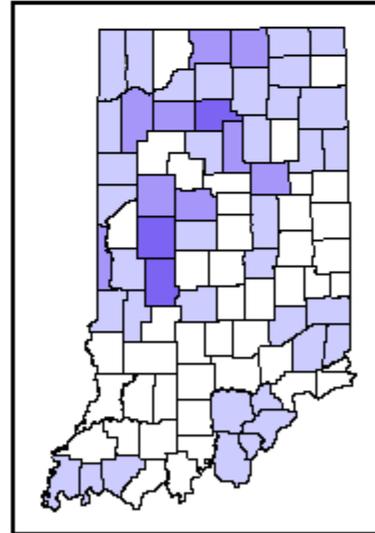
2006



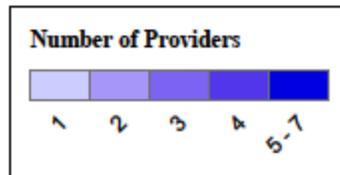
2007



2008

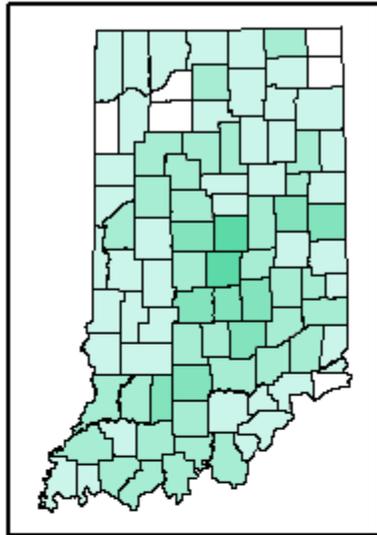


2009

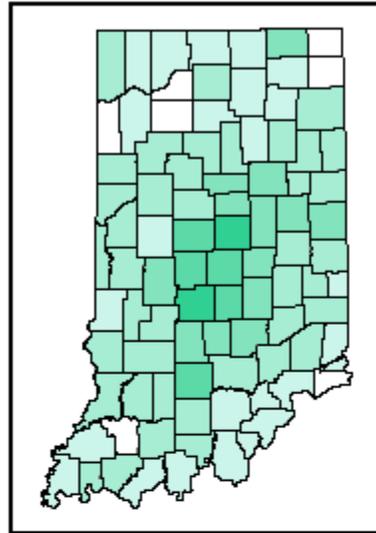


Map 5

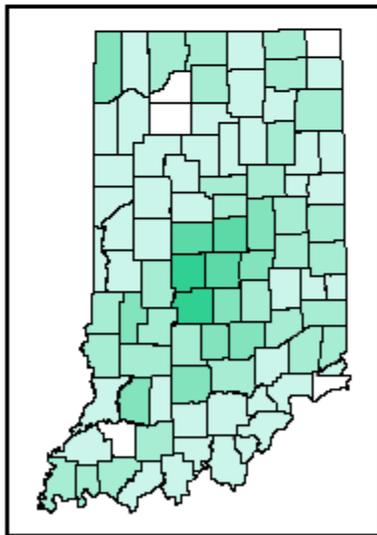
**Number of VSPs with State-Issued Franchises By County**



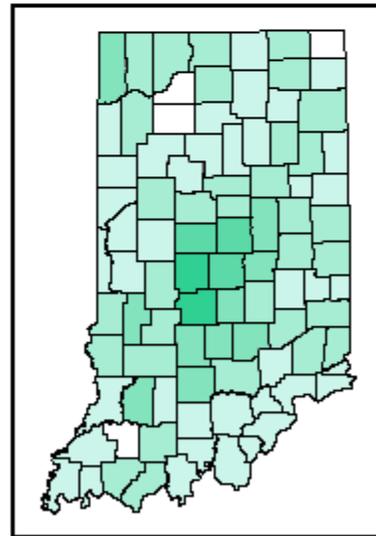
2006



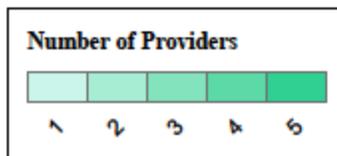
2007



2008



2009



## *Affects of State Franchise Law on Business Practices*

### PEG Issues

Public, Educational and Governmental (PEG) programming is an area that changed dramatically when companies terminated their local franchises and obtained state-issued franchises. The IURC has received many inquiries regarding companies' obligations with regard to PEG channels. Some of the concerns raised dealt with financial support payments and the provision of facilities that were included in the local franchise but ceased after the companies switched to the state-issued franchise. An example of this was when Comcast notified producers in South Bend, Hammond, Merrillville, Mishawaka, Plymouth, Goshen, and Portage that it would be closing production studios and playback facilities for public access TV.<sup>11</sup> A few other communities have also approached Commission staff about the provision of PEG channels by new entrants, specifically that new entrants were not fulfilling the PEG obligations required of them in the statute. When contacted, Commission staff has consistently explained that governmental units have the option of filing a formal petition with the IURC to request resolution of the issue. To date, no governmental unit has filed a formal complaint with the Commission regarding the provision of PEG channels.

### Consumer Complaints

Prior to the passage of HEA 1279, most local governmental units, in their role as the franchise authority, took complaints from cable customers and worked with the companies to reach a resolution. However, post-HEA 1279, those entities no longer have the authority to resolve complaints with cable companies under state-issued franchises; and the IURC, as the new franchise authority, encouraged the units to forward those complaints to the Commission's Consumer Affairs Division. Though HEA 1279 did not give the Commission authority over video service quality issues or specific authority to take and resolve customer complaints, the FCC delegates enforcement of the customer service standards set out in the Federal Cable Act<sup>12</sup> to franchise authorities. Through GAO 2007-2, effective March 19, 2008, the IURC, as the Indiana franchising authority, began enforcing the FCC customer service standards.

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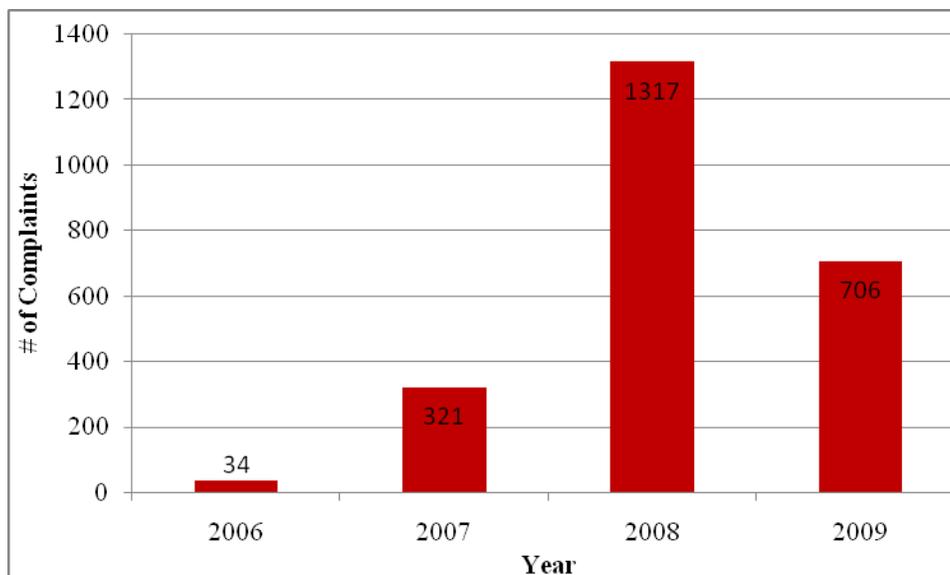
<sup>11</sup> [http://www.ourchannelsindiana.org/index.php?option=com\\_content&task=view&id=68&Itemid=1](http://www.ourchannelsindiana.org/index.php?option=com_content&task=view&id=68&Itemid=1)

<sup>12</sup> 47 C.F.R § 76.309; Federal Communications Commission customer service standards

Enforcing the FCC standards allows the Commission to accept and resolve video customer service complaints from Indiana consumers. Consequently, the IURC's Consumer Affairs Division began to immediately record customer video service complaints.. Complaints that fit under the FCC standards are thoroughly investigated and resolved under the regular Consumer Affairs Division complaint process. Complaints that don't fit under the FCC standards are forwarded to the video provider for resolution under that company's process. Regardless of the type, video complaints are recorded and tallied to allow the Commission to accurately gauge the level of problems consumers are experiencing in Indiana's video market. Table 3 shows the numbers of complaints each year since the inception of state franchising.

For example, in 2006 the Commission received a very low number of complaints. This was likely due to the fact that the year reflected only six months worth of data and the fact that most of the companies that obtained a state franchise in 2006 did not do so until the fourth quarter. However, in 2007, there was an increase in the number of complaints that came in to the Commission. This was likely due to the fact that the IURC began reaching out to local units, encouraging them to cease taking complaints and begin directing the customers to call the IURC. The high number of complaints in 2008 can be at least partially attributed to the service quality issues that surrounded the transition of 320,000 Indiana Insight customers to Comcast as part of the dissolution of a joint venture between the two companies. More than a third of the total 2008 complaints received by the IURC were from Comcast customers between January and mid-April of that year.

**Table 2**  
**Total Video Complaints Received**  
**By the IURC Consumer Affairs Division**



Franchise Fees

Though there was much misinformation about franchise fees following the passage of HEA 1279, franchise fees continue to go directly to the local units. The state is in no way involved with the process. The only involvement by the IURC that can occur under the statute is when there is disagreement between the local unit and the video provider regarding the amount of revenues upon which the franchise fee is calculated. HEA 1279 provided the IURC with the authority to resolve disputes between video providers and local governmental units regarding the calculation of franchise fees. The City of Indianapolis and the City of Westfield filed complaints with the Commission requesting assistance in determining the amount the video providers in question should pay in franchise fees to the cities. The case involving the City of Indianapolis vs. Bright House Networks was withdrawn after the parties reached agreement. The complaint of the City of Westfield vs. AT&T, Bright House Networks, Comcast, and First Mile is still pending in Cause Number 43877.

## Build-out Requirements vs. Redlining

As previously discussed, video service offered under local franchises typically included obligations for the provider that entered into the agreement. The requirements often included providing service throughout the entirety of the local unit (e.g., city, town, or unincorporated portions of a county), which is also known as a build-out requirement. State-issued video service franchises have no such build-out requirements. Instead, video providers under state-issued franchises are prohibited from discriminating in the offering of their service based on the economic makeup of an area, which is known as redlining. In particular, IC 8-1-34-28 prohibits a video provider under a state-issued franchise from denying access to any group of potential residential subscribers based on the income level of the residents in the local area in which the group resides. The Commission has an important role to play in resolving any such allegation of redlining. First, the Commission collects detailed data at a census block level on a quarterly basis related to where exactly a video provider with a state-issued franchise offers service. This data is housed by the GIS database. The electronic storage of this data facilitates access by parties interested in examining state-issued franchise service providers' respective service areas, which may be helpful to parties who suspect that redlining has occurred. The electronic format of the video providers' service areas, along with available census information on income, greatly facilitates analysis of potential redlining in the service territories.

In addition, the Commission also has a formal role to play in determining the validity of redlining allegations. Specifically, the Commission would be the recipient of any petition that alleges redlining by a video provider with a state-issued franchise. After holding a hearing on the matter, the Commission is empowered to determine that either no violation of the redlining statute has occurred or, if a violation has occurred, the date by which video service must be offered to those to whom access had been previously denied.

## **New Entrants vs. Existing Companies with State Franchises**

### *Existing Video Providers*

Before the passage of HEA 1279, video service was provided by incumbent cable companies that obtained local franchises from each city, town or unincorporated portions of counties in the state. Since the passage of HEA 1279, some cable companies have expanded the area they serve

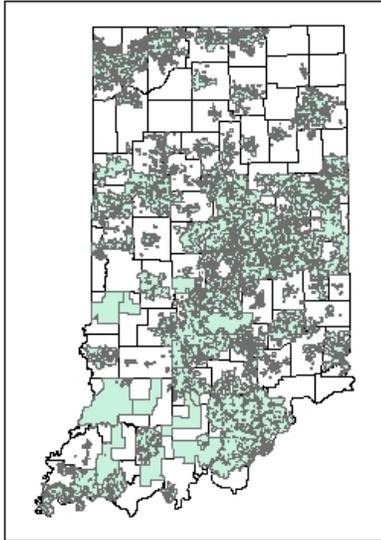
by a very small amount; however, the service territories of the incumbent providers have largely remained the same from 2006 through 2009 as they were prior to passage of the legislation.

The Commission has census block level data on the incumbent cable service territories that have been converted to state-issued franchises. The service territories served at the end of 2009 by incumbent video providers under state-issued franchises is displayed in Map 6. While this map does not indicate the areas served by incumbent providers under LFAs, it does show the extent to which the state has been and continues to be served by incumbent video providers. In addition, some incumbent video providers have ceased operation since the passage of HEA 1279. This conclusion is drawn from the fact that from year to year some companies' names have dropped off the FCC's list of registered communities and the providers that serve them. Because the Commission does not have direct jurisdiction over local franchise providers, the information surrounding local providers who have ceased operation is limited.

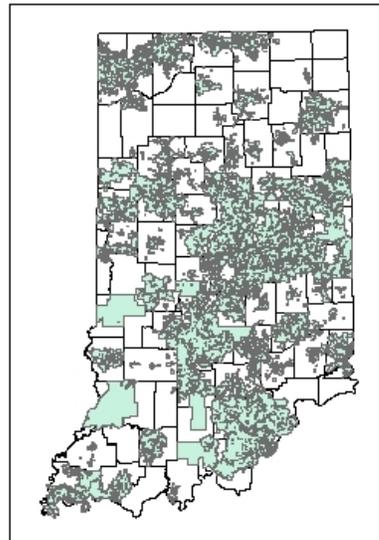
Nonetheless, there are anecdotal indications that many of these individual cable systems that ceased operation had a relatively small number of customers and faced increased fees to carry channels, like ESPN™, that may have contributed to their inability to continue providing video service. There have also been consolidations of incumbent cable companies which reduced the total number of companies providing service in some areas. For example, many cable systems formerly owned by Charter Communications were acquired by Avenue Broadband in late 2007 and many cable systems formerly owned by Insight were acquired by Comcast in early 2008.

**Map 6**

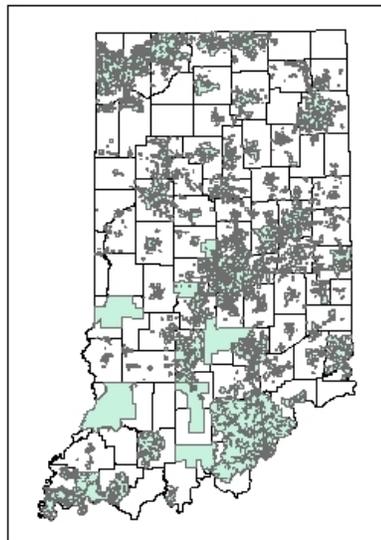
**Incumbent VSPs with State-Issued Franchises (2006-2009)**



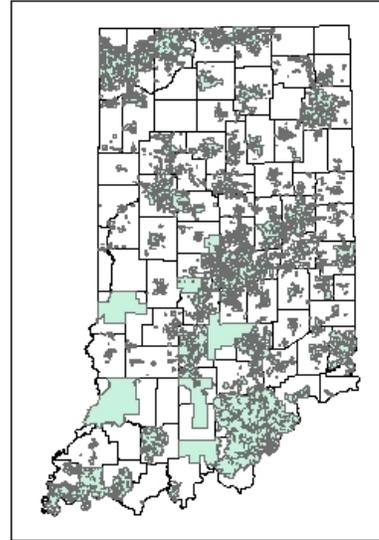
**2006**



**2007**



**2008**



**2009**

Note: These maps do not indicate the service areas of any VSPs providing service under a local franchise.

*New Entrants*

According to information provided to the Commission by video service providers, 9 of the 12 new entrants with state-issued franchises were actively competing for customers in Indiana as of December 31, 2009. These entities were offering service in 35,861 census blocks in which they had not offered video service prior to the passage of HEA 1279. This is more than a tenfold increase in the number of census blocks that had competition since the end of 2006.

**Table 3**

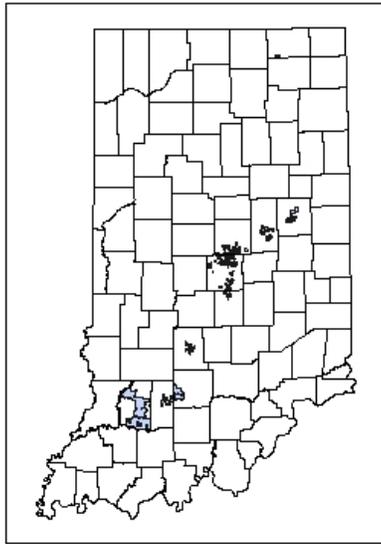
*New Video Providers Actively Competing in Indiana*

	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b># New Providers</b>	3	6	7	9
<b># Census Blocks</b>	3,064	18,911	31,962	35,861

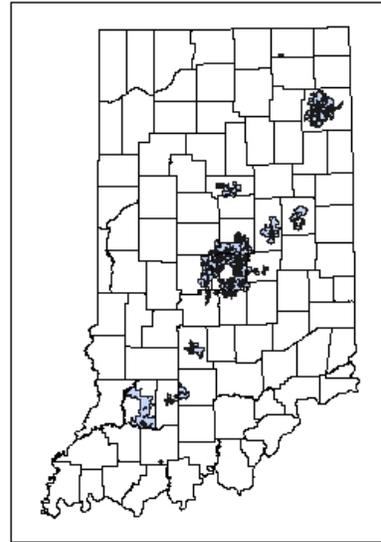
New entrants in the video service market since the passage of HEA 1279 can be broadly classified in one of two categories: 1) large telephone providers, such as AT&T and Verizon; and 2) smaller telephone providers such as Smithville Telecom, Endeavor Communications, and ACME Communications. A complete list of new entrants in the video service market and the date each began offering service is included in Table 2. Over the last four years, both the number of new entrants and the territory they serve has expanded as illustrated by Map 7.

## Map 7

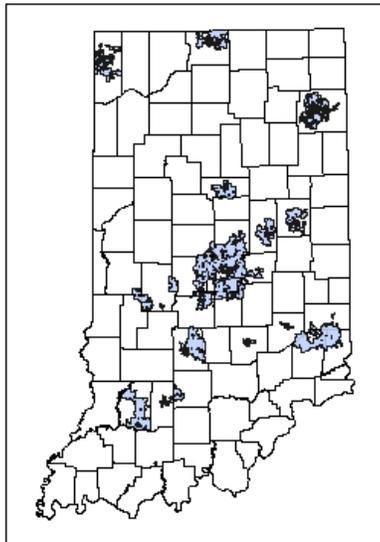
### New Entrant VSPs with State-Issued Franchises By Census Block



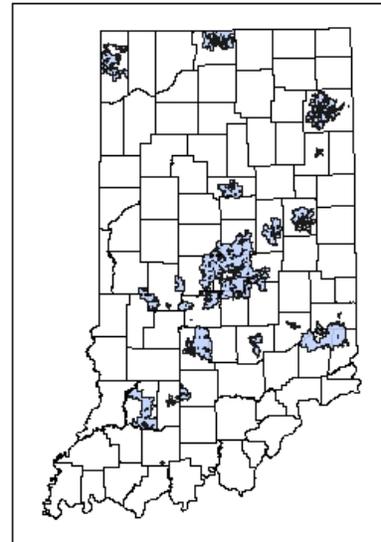
**2006**



**2007**



**2008**



**2009**

Note: Data for each map is for the end of the year indicated. However, due to the confidentiality of more recent AT&T data, the 2009 map reflects AT&T's service territory as of June 30, 2009. Also, these maps do not indicate the service areas of any VSPs providing service under a local franchise.

## IV. DISCUSSION OF ADDITIONAL MARKET COMPONENTS

### Infrastructure Investments

While specific information related to the growth of video competition and the movement from local to state franchises provides an overview of the effects of state franchising legislation in Indiana, the level of investment by providers and potential providers of video service is also important to consider. Below are examples of investments companies have made to compete in Indiana's video market:

- From 2006 to 2008, AT&T deployed its AT&T U-verse™ services, including U-verse TV, U-verse High Speed Internet and U-verse Voice, in parts of several communities that included: Anderson, Bloomington, Columbus, Indianapolis, Muncie, Kokomo, South Bend, and areas across Lake County.<sup>13</sup> In 2009, AT&T continued the rollout of its U-verse™ service to more Indiana customers. Communities that received U-verse™ in 2009 included: Alexandria, Bedford, Charlestown, Chesterfield, Clarksville, Crawfordsville, Daleville, Jeffersonville, New Albany, Oolitic and Sellersburg.
- Verizon invested in fiber optic technology during the period from 2007 to 2010 to support its FiOS offerings in Allen County, which is in the Fort Wayne MSA.
- Comcast has undertaken a digital network enhancement that “converts analog channels to digital to create capacity for more advanced products and services.” The company has invested more than \$500 million, in Indiana, in network facilities and equipment since 2007. Comcast's regional headquarters is in Fishers, Indiana, and it has a customer base of more than 700,000 households statewide.<sup>14</sup>
- In 2009, Smithville Telecom, LLC, d/b/a Smithville TV, began a five-to-seven year multi-project fiber overbuild effort in Monroe County. As individual projects are completed, the company will begin offering IPTV to its customers over the fiber installed in that project. Smithville Telecom has a state-issued franchise in Monroe County, which is in the Bloomington MSA.
- Between 2008 and 2010, Central Indiana Communications, Inc., d/b/a HTV, invested in DSL and FTTH infrastructure in Hancock, Hamilton, Marion, Shelby, and Madison counties. These investments, which included both new construction and overbuilding existing copper facilities, are being used to provide Internet Protocol Television (IPTV) services in the Indianapolis and Anderson MSAs. HTV has a local franchise in Hancock County and a state-issued franchise in Hamilton, Marion, Shelby, and Madison counties.

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<sup>13</sup>[www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26697](http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26697)

<sup>14</sup>Letter to IURC Commissioner Larry Landis from Scott Tenney, Sr. VP, Comcast Indpls. Region, July 29, 2010

- In 2006 and 2007, Indiana Fones, Inc., which merged into Central Indiana Communications, Inc., effective January 1, 2008, invested in DSL and FTTH infrastructure in Hamilton and Hancock counties. During this time period, Indiana Fones constructed facilities in new developments and overbuilt existing copper facilities with FTTH infrastructure deployments.
- Between 2007 and 2010, Clay County Rural Telephone Cooperative, Inc., d/b/a Endeavor Communications, invested in FTTH infrastructure in Hendricks, Putnam, Clay, and Morgan counties. These investments are being used to provide video services in the Indianapolis-Carmel and Terre Haute MSAs. Endeavor has a local franchise in portions of Morgan and Putnam counties and a state-issued franchise in Hendricks and Clay counties, as well as in other portions of Putnam and Morgan counties.
- Similarly, Miles Communications Corp., d/b/a Enhanced Telecommunications Corp. (Enhanced) invested in Fiber-to-the-Premises (FTTP) infrastructure and equipment in Franklin County between 2006 and 2010. This investment has allowed Enhanced to provide video services in the Cincinnati MSA. Enhanced has a local franchise in Franklin County.
- Rochester Telephone Company (RTC), located in north central Indiana, is nearing the end of a FTTH build-out project that began in 2003.<sup>15</sup> RTC serves about 90% of its subscriber base with fiber and offers triple play service bundles to those customers. RTC has invested in excess of \$9 million and expects to invest an additional \$2.5 million through the end of 2010. Rochester estimates an additional \$600,000 in annual expenditures for the next eight years to fully convert its customers, all of whom are located in Fulton County, to fiber connectivity.
- From 2000 to 2010, Washington County Rural Telephone Cooperative, Inc. (Washington), invested in DSL infrastructure build-outs in Clark, Floyd, Scott, and Washington counties, which are in the Louisville MSA. Washington included the following note on its video survey response: “Infrastructure build-outs were initiated in the outer-most areas of the telephone exchange service territory, expanding inward towards the wire center (town of Pekin) of the entire telephone exchange. This order of implementation was necessary to reinforce the facilities for telephone, broadband and video services from the most needed to the least needed areas.”
- From 2006 to 2010, Indiana Datapipe began investing in fiber and IPTV infrastructure in Tippecanoe County, located in the Lafayette MSA. Although the infrastructure build out is not complete, the company stated, in response to the Commission’s 2006 – 2010 “Survey of Video Services in Indiana,” that it expects “this network will eventually be used to deliver video services using IPTV (Internet Protocol Television).”

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<sup>15</sup>RTC received federal universal service support but no federal stimulus funding.

- Mulberry Cooperative Telephone Co., Inc., located in central Indiana, invested in both FTTH and fiber-to-the-node (FTTN) technologies, as well as major hardware, switching, and software upgrades over the last few years. Mulberry invested more than \$1 million in 2009 alone, and Mulberry serves 1,600 DSL/Internet customers and 1,075 video customers in western Clinton County and eastern Tippecanoe County.

Additionally, several CSPs have made investments and deployed technologies that could be used to provide both broadband and video services. In some cases, the desire to provide video services may have been an incentive for companies to invest in infrastructure that could be used to provide both. Furthermore, adding video to the set of services traveling over a particular optical fiber would create an additional revenue stream that might make the investment more profitable.

## IV. APPENDICES

### Appendix A – Companies with State-Issued Certificates of Franchise Authority

As of 12/31/09

Company Name	1st Franchise Granted	New or Existing Provider	Date in-service/ Notes on Some Existing Systems
AT&T Indiana <sup>16</sup>	8/30/2006	New	12/28/06
Daviess-Martin County Rural Telephone Corporation	9/13/2006	New	10/1/06
Comcast <sup>17</sup>	11/30/2006	Existing	
LIG TV	11/30/2006	New in requested service area	Discontinued Service 1/3/2008
Time Warner Cable <sup>18</sup>	12/06/2006	Existing	
Insight Communications Midwest, LLC	12/06/2006	Existing	
Perry-Spencer Communications	12/13/2006	New in requested service area	12/1/07
FirstMile Technologies	12/20/2006	Existing	
Verizon North Inc.	12/23/2006	New	7/17/07
Wow! Internet, Cable and Phone <sup>19</sup>	1/24/2007	Existing	
Adams Wells TV	2/07/2007	New	6/1/2009
Bright House Networks, LLC	2/28/2007	Existing	
Endeavor Communications <sup>20</sup>	3/14/2007	New	3/14/07
ACME Communications	6/06/2007	New	Not yet providing service
Citizen's Telephone Corporation	7/25/2007	Existing	
Avenue Broadband	10/24/2007	Existing	Purchased Charter Properties
New Paris Telephone Co.	10/30/2007	New	1/28/2008
Cequel III Communications	1/4/2008	Existing	
Smithville Telecom, LLC	7/9/2008	New	11/16/2009
Cinergy MetroNet Inc.	9/10/2008	Existing	
Enhanced Telecommunications Corp.	9/17/2008	New in requested service area	10/15/2008
Central Indiana Communications	10/1/2008	Existing	
Mediacom Indiana, LLC	10/8/2008	Existing	
Windjammer Communications	12/4/2008	Existing	Purchased Some Time Warner Properties
Indiana Datapipe, LLC	8/26/2009	New	Not yet providing service
TV Cable of Rensselaer	9/3/2009	Existing	
Mulberry Co-op Telephone Co. Inc.	9/23/2009	Existing	

<sup>16</sup>AT&T Indiana has two state-issued franchises.

<sup>17</sup>Consists of 14 affiliated Comcast companies with separate franchises.

<sup>18</sup>Consists of three affiliated Time Warner Cable companies with separate franchises, latest of which was issued 11/12/2009.

<sup>19</sup>Consists of two affiliated Wow! Internet, Cable and Phone companies with separate franchises.

<sup>20</sup>An affiliated Endeavor Communications company was also granted franchise on 6/1/2009.

## **Appendix B – Analysis of Deployment of Video Service in Indiana<sup>21</sup>**

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<sup>21</sup>See the following spreadsheets for data related to the analysis of deployment of video service in Indiana.

**Analysis of Deployment of Video Service in Indiana  
CY 2006  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2006)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2006</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
<b>Indiana</b>	<b>\$32,842</b>							
<b>Anderson, IN</b>	<b>\$29,225</b>	Not Available						
AT&T Indiana			State	Yes	IPTV-FTTN	Yes	N/A	None
Bright House Networks, LLC			Local	Yes	Hybrid-Fiber Coax	No	No	N/A
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Longview Cable and Data, LLC <sup>2</sup>								
<b>Bloomington, IN</b>	<b>\$27,225</b>	Not Available						
AT&T Indiana			State	Yes	IPTV-FTTN	Yes	N/A	None
Cequel III Communications II, LLC, d/b/a Suddenlink			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Chicago-Naperville-Joliet, IL-IN-WI</b>	<b>\$41,654</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
TV Cable of Rensselaer, Inc.			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Wow! Internet, Cable and Phone			Local	Yes	Co-axial Cable	No	N/A	N/A
<b>Cincinnati-Middletown, OH-KY-IN</b>	<b>\$36,299</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	N/A

**Analysis of Deployment of Video Service in Indiana  
CY 2006  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2006)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2006</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Miles Communications Corp.			Local	Yes	FTTP	Yes	No	N/A
Sunman Cablevision Company			Local	Yes	Co-axial Cable	Yes	No	N/A
Time Warner Cable			Local	Yes	Hybrid-Fiber Coax	No	No	N/A
<b>Columbus, IN</b>	<b>\$35,326</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Charter Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Elkhart-Goshen, IN</b>	<b>\$32,382</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
New Paris Telephone's Quality Cablevision, Inc.			Local	Yes	Co-axial Cable	No	N/A	N/A
<b>Evansville, IN-KY</b>	<b>\$33,849</b>	Not Available						
Cequel III Communications II, LLC			Local	Yes	Hybrid-Fiber Coax	No	No	N/A
Charter Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Perry-Spencer Communications, Inc.			Local	Yes	ADSL 2+	No	N/A	N/A
Sigecom, LLC			Local	Yes	Hybrid-Fiber Coax	Yes	No	N/A
Time Warner NY Cable, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A

**Analysis of Deployment of Video Service in Indiana  
CY 2006  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2006)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2006</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
<b>Fort Wayne, IN</b>	<b>\$32,018</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Craigville Telephone Company			State	No	FTTH	Yes	N/A	None
Longview Cable and Data LLC <sup>2</sup>								
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Verizon North, Inc.			State	No	FTTH	Yes	N/A	None
Warren Cable <sup>2</sup>								
<b>Indianapolis-Carmel, IN</b>	<b>\$37,345</b>	Not Available						
AT&T Indiana			State	Yes	IPTV-FTTN	Yes	N/A	None
Bright House Networks, LLC			Local	Yes	Hybrid Fiber Coax	No	N/A	N/A
Cequel III Communications II, LLC d/b/a Suddenlink			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Charter Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Cinergy MetroNet, Inc.			Local	Yes	FTTH	Yes	No	N/A
Clay County Rural Telephone Coop.			Local	Yes	FTTH	No	No	N/A
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
E.com			State	Yes	Hybrid Fiber Coax	No	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
Glass Antenna Systems, Inc <sup>2</sup>								

**Analysis of Deployment of Video Service in Indiana  
CY 2006  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2006)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2006</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Indiana Fones, Inc.			Local	Yes	IPTV via FTTH and DSL	Yes	No	N/A
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Longview Cable and Data, LLC <sup>2</sup>								
Rapid Communications, LLC <sup>2</sup>								
<b>Kokomo, IN</b>	<b>\$31,218</b>	Not Available						
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Lafayette, IN</b>	<b>\$27,774</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Indiana Datapipe, LLC			Local	No	Fiber/IPTV	Yes	No	N/A
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Mulberry Cooperative Telephone Company			Local	Yes	FTTN/ADSL2+/C	Yes	No	N/A
Longview Cable and Data, LLC <sup>2</sup>								
Rapid Communications Corp. <sup>2</sup>								
Tri-County Communications Corp.			Local	Yes	Analog 450 MHz	No	N/A	N/A
<b>Louisville-Jefferson County, KY-IN</b>	<b>\$35,871</b>	Not Available						
Century Cablevision Holdings, LLC, Debtor-in-Possession/Time Warner Cable <sup>2</sup>								
Charter Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Washington County Rural Telephone Cooperative, Inc. d/b/a TeleMedia Solutions			Local	Yes	DSL	Yes	No	N/A

**Analysis of Deployment of Video Service in Indiana  
CY 2006  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2006)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2006</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
<b>Michigan City-La Porte, IN</b>	<b>\$27,924</b>	Not Available						
Acme Communications, Inc.				No	FTTH	Yes	N/A	N/A
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
<b>Muncie, IN</b>	<b>\$26,782</b>	Not Available						
AT&T Indiana			State	Yes	IPTV-FTTN	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Longview Cable and Data, LLC <sup>2</sup>								
<b>South Bend-Mishawaka, IN-MI</b>	<b>\$33,218</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
TW Fanch-One Company			Local	Yes	Coaxial Cable	No	N/A	N/A

**Analysis of Deployment of Video Service in Indiana  
CY 2006  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2006)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2006</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
<b>Terre Haute, IN</b>	<b>\$26,208</b>	Not Available						
Cequel III Communications II, LLC d/b/a Suddenlink			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Charter Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Longview Cable and Data, LLC <sup>2</sup>								
Rapid Communications, LLC <sup>2</sup>								
Time Warner Cable			Local	Yes	Hybrid-Fiber Coax	Yes	No	N/A

<sup>1</sup>The data compiled by the Indiana Office of Technology defines an underserved area as a census block, where broadband service at advertised speeds of at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream to end users, is not available to at least one household. This data had not yet been compiled in 2006.

<sup>2</sup>This entity was identified in FCC records as providing video service. The entity does not hold a state-issued video franchise, and staff was unable to collect data regarding a local franchise.

**Analysis of Deployment of Video Service in Indiana  
CY 2007  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2007)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2007</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
<b>Indiana</b>	<b>\$33,702</b>							
<b>Anderson, IN</b>	<b>\$29,929</b>	Not Available						
AT&T			State	Yes	IPTV	Yes	N/A	None
Bright House Networks, LLC			Local	Yes	Hybrid-Fiber Coax	No	No	N/A
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Bloomington, IN</b>	<b>\$28,595</b>	Not Available						
AT&T			State	Yes	IPTV	Yes	N/A	None
Cequel III Communications II, LLC, d/b/a Suddenlink			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Chicago-Naperville-Joliet, IL-IN-WI</b>	<b>\$44,346</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
TV Cable of Rensselaer, Inc.			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
WOW! Internet, Cable and Phone			Both	Yes	Hybrid-Fiber Coax	No	N/A	None

**Analysis of Deployment of Video Service in Indiana  
CY 2007  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2007)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2007</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
<b>Cincinnati-Middletown, OH-KY-IN</b>	<b>\$37,782</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Miles Communications Corp.			Local	Yes	FTTP	Yes	No	N/A
Sunman Telecommunications Corp.			Local	Yes	Coaxial Cable	Yes	No	N/A
Time Warner Entertainment Company, LP			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
<b>Columbus, IN</b>	<b>\$36,957</b>	Not Available						
Avenue Broadband Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Elkhart-Goshen, IN</b>	<b>\$33,369</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
New Paris Telephone's Quality Cablevision, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
<b>Evansville, IN-KY</b>	<b>\$34,832</b>	Not Available						
Avenue Broadband Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Cequel III Communications			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
P.C. One Cable <sup>2</sup>								
Perry-Spencer Communications, Inc.			Local	Yes	ADSL 2+	No	N/A	N/A

**Analysis of Deployment of Video Service in Indiana  
CY 2007  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2007)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2007</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Sigecom, LLC			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Telecommunications Management, LLC dba NewWave			Local	Yes	Coaxial Cable	No	N/A	N/A
Time Warner Entertainment, LP			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Time Warner NY Cable, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
TW Fanch-One Company <sup>2</sup>								
WOW! Internet, Cable and Phone			State	Yes	Hybrid-Fiber Coax	N/A	N/A	None
<b>Fort Wayne, IN</b>	<b>\$33,173</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Craigville Telephone Company			State	No	FTTH	No	N/A	None
Insight Communications Midwest			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Verizon North, Inc.			State	Yes	FTTH	Yes	N/A	None
<b>Indianapolis-Carmel, IN</b>	<b>\$38,455</b>	Not Available						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Avenue Broadband Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Bright House Networks, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Cinergy MetroNet, Inc.			Local	Yes	FTTH	Yes	No	N/A
Clay County Rural Telephone Coop.			Both	Yes	FTTH	Yes	No	None
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
E.com			State	Yes	Hybrid Fiber Coax	Yes	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A

**Analysis of Deployment of Video Service in Indiana  
CY 2007  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2007)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2007</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Galaxy American Communications <sup>2</sup>								
Glass Antenna Systems, Inc d/b/a Globalcom, Inc. <sup>2</sup>								
Indiana Fones, Inc.			Local	Yes	IPTV via FTTH and DSL	Yes	No	N/A
Insight Communications Midwest			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Longview Cable and Data, LLC <sup>2</sup>								
<b>Kokomo, IN</b>	<b>\$32,581</b>	Not Available						
AT&T			State	Yes	IPTV-FTTN	Initiated	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Lafayette, IN</b>	<b>\$28,979</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
Indiana Datapipe, LLC			State	No	Fiber/IPTV	Yes	No	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Mulberry Cooperative Telephone Company			Local	Yes	FTTN/ADSL2+/C	Yes	No	N/A
Tri-County Communications Corp.			Local	Yes	Analog 450 MHz	No	N/A	N/A
<b>Louisville-Jefferson County, KY-IN</b>	<b>\$37,473</b>	Not Available						
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Time Warner Cable <sup>2</sup>								

**Analysis of Deployment of Video Service in Indiana  
CY 2007  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2007)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2007</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Washington County Rural Telephone Cooperative, Inc. d/b/a TeleMedia Solutions			Local	Yes	DSL	Yes	No	N/A
<b>Michigan City-La Porte, IN</b>	<b>\$28,945</b>	Not Available						
Acme			State	No	FTTH	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
<b>Muncie, IN</b>	<b>\$27,611</b>	Not Available						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Longview Cable and Data, LLC								
<b>South Bend-Mishawaka, IN-MI</b>	<b>\$34,638</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
TW Fanch-One Company			Local	Yes	Coaxial Cable	No	N/A	N/A
<b>Terre Haute, IN</b>	<b>\$27,404</b>	Not Available						
Avenue Broadband Communications			Both	Yes	Coaxial Cable	No	No	None
Cequel III Communications II, LLC d/b/a Suddenlink			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A

**Analysis of Deployment of Video Service in Indiana  
CY 2007  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2007)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered in 2007</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Glass Antenna Systems <sup>2</sup>								
P.C. One Cable <sup>2</sup>								
Time Warner Entertainment Company, LP			Local	Yes	Hybrid-Fiber Coax	Yes	No	N/A

<sup>1</sup>The data compiled by the Indiana Office of Technology defines an underserved area as a census block, where broadband service at advertised speeds of at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream to end users, is not available to at least one household. This data had not yet been compiled in 2007.

<sup>2</sup>This entity was identified in FCC records as providing video service. The entity does not hold a state-issued video franchise, and staff was unable to collect data regarding a local franchise.

**Analysis of Deployment of Video Service in Indiana  
CY 2008  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2008)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
<b>Indiana</b>	<b>\$34,543</b>							
<b>Anderson, IN</b>	<b>\$30,674</b>	Not Available						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Bright House Networks, LLC			Local	Yes	Hybrid-Fiber Coax	No	No	N/A
Central Indiana Communications, Inc.			State	Yes	IPTV via FTTH and DSL	Yes	No	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
<b>Bloomington, IN</b>	<b>\$30,231</b>	Not Available						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Cequel III Communications II, LLC, d/b/a Suddenlink			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
Smithville Telecom, LLC			State	Yes	IPTV-FTTN	Yes	N/A	None
<b>Chicago-Naperville-Joliet, IL-IN-WI</b>	<b>\$45,377</b>	Not Available						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Both	Yes	Hybrid-Fiber Coax	No	N/A	None
TV Cable of Rensselaer, Inc.			Both	Yes	Hybrid-Fiber Coax	No	N/A	None
Wow! Internet, Cable and Phone			Both	Yes	Coaxial	No	N/A	None
<b>Cincinnati-Middletown, OH-KY-IN</b>	<b>\$39,066</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Miles Communications Corp.			Local	Yes	FTTP	Yes	No	N/A

**Analysis of Deployment of Video Service in Indiana  
CY 2008  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2008)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Sunman Telecommunications Corp.			Both	Yes	Co-axial Cable	Yes	No	None
Time Warner Entertainment Company, LP			Local	Yes	Hybrid-Fiber Coax	No	No	N/A
<b>Columbus, IN</b>	<b>\$38,068</b>	Not Available						
AT&T			State	No	IPTV-FTTN	Yes	N/A	None
Avenue Broadband Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Elkhart-Goshen, IN</b>	<b>\$32,263</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
New Paris Telephone's Quality Cablevision, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
<b>Evansville,IN-KY</b>	<b>\$36,329</b>	Not Available						
Avenue Broadband Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Cequel III Communications			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Perry-Spencer Communications, Inc.			Local	Yes	ADSL 2+	No	N/A	N/A
Sigecom, LLC			State	Yes	Hybrid-Fiber Coax	N/A	N/A	None
Telecommunications Management, LLC d/b/a NewWave			Local	Yes	Co-axial Cable	No	N/A	N/A
Time Warner NY Cable, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
<b>Fort Wayne, IN</b>	<b>\$34,176</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None

**Analysis of Deployment of Video Service in Indiana  
CY 2008  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2008)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Craigville Telephone Company			State	No	FTTH	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	Yes	N/A	N/A
Verizon North, Inc.			State	Yes	FTTH	Yes	N/A	None
<b>Indianapolis-Carmel, IN</b>	<b>\$39,297</b>	Not Available						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Avenue Broadband Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Bright House Networks, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Central Indiana Communications, Inc.			Both	Yes	IPTV via FTTH and DSL	Yes	No	None
Cinergy MetroNet, Inc.			Both	Local Only	FTTH	Yes	No	None
Clay County Rural Telephone Coop.			Both	Yes	FTTH	Yes	No	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
E.com			State	Yes	Hybrid Fiber Coax	No	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
<b>Kokomo, IN</b>	<b>\$32,752</b>	Not Available						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
<b>Lafayette, IN</b>	<b>\$30,921</b>	Not Available						
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
Indiana Datapipe, LLC			State	No	Fiber/IPTV	Yes	No	None
Mulberry Cooperative Telephone Company			Local	Yes	FTTN/ADSL2+/C	Yes	No	N/A

**Analysis of Deployment of Video Service in Indiana  
CY 2008  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2008)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Tri-County Communications Corp.			Local	Yes	Analog 450 MHz	No	N/A	N/A
<b>Louisville-Jefferson County, KY-IN</b>	<b>\$37,995</b>	Not Available						
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Windjammer Communications, LLC			Local	Yes	Coaxial Cable	No	N/A	N/A
Washington County Rural Telephone Cooperative, Inc. d/b/a TeleMedia Solutions			Local	Yes	DSL	Yes	No	N/A
<b>Michigan City-La Porte, IN</b>	<b>\$30,689</b>	Not Available						
Acme Communications, Inc.			State	No	FTTH	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Both	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Muncie, IN</b>	<b>\$29,349</b>	Not Available						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>South Bend-Mishawaka, IN-MI</b>	<b>\$34,986</b>	Not Available						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Windjammer Communications, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
<b>Terre Haute, IN</b>	<b>\$29,652</b>	Not Available						

**Analysis of Deployment of Video Service in Indiana  
CY 2008  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2008)</b>	<b>Per Capita Income</b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Avenue Broadband Communications			Both	Yes	Coaxial Cable	No	N/A	None
Cequel III Communications II, LLC d/b/a Suddenlink			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Clay County Rural Telephone Coop.			State	Yes	FTTH	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
Glass Antenna Systems <sup>2</sup>								
Time Warner Entertainment Company, LP			Local	Yes	Hybrid-Fiber Coax	Yes	No	N/A

<sup>1</sup>The data compiled by the Indiana Office of Technology defines an underserved area as a census block, where broadband service at advertised speeds of at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream to end users, is not available to at least one household. This data had not yet been compiled in 2008.

<sup>2</sup>This entity was identified in FCC records as providing video service. The entity does not hold a state-issued video franchise, and staff was unable to collect data regarding a local franchise.

**Analysis of Deployment of Video Service in Indiana  
CY 2009  
(Pursuant to HEA 1279 Section 64)**

<b>Providers Offering Video Service in Indiana MSAs (2009)</b>	<b>Per Capita Income<sup>3</sup></b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
<b>Indiana</b>								
<b>Anderson, IN</b>	Not Available	No						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Central Indiana Communications, Inc.			State	Yes	IPTV via FTTH and DSL	Yes	No	None
Bright House Networks, LLC			Local	Yes	Hybrid-Fiber Coax	No	No	N/A
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Longview Communications <sup>2</sup>								
<b>Bloomington, IN</b>	Not Available	Yes						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Cequel III Communications II, LLC, d/b/a Suddenlink			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
Smithville Telecom, LLC			State	Yes	IPTV-FTTH	Yes	N/A	None
<b>Chicago-Naperville-Joliet, IL-IN-WI</b>	Not Available	No						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
TV Cable of Rensselaer, Inc.			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Wow! Internet, Cable and Phone			Both	Yes	Coaxial	No	N/A	None

**Analysis of Deployment of Video Service in Indiana  
CY 2009  
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<b>Providers Offering Video Service in Indiana MSAs (2009)</b>	<b>Per Capita Income<sup>3</sup></b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
<b>Cincinnati-Middletown, OH-KY-IN</b>	Not Available	Yes						
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Miles Communications Corp.			Local	Yes	FTTP	Yes	No	N/A
Sunman Telecommunications Corp.			Both	Yes	Coaxial Cable	Yes	No	None
Time Warner Entertainment Company, LP			Local	Yes	Hybrid-Fiber Coax	No	No	N/A
<b>Columbus, IN</b>	Not Available	Yes						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Avenue Broadband Communications			Both	Yes	Coaxial Cable	No	No	None
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Elkhart-Goshen, IN</b>	Not Available	Yes						
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
New Paris Telephone's Quality Cablevision, Inc.			Both	Yes	Coaxial Cable	No	N/A	None
<b>Evansville, IN-KY</b>	Not Available	Yes						
Avenue Broadband Communications			Both	Yes	Coaxial Cable	No	No	None
Cequel III Communications			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None

**Analysis of Deployment of Video Service in Indiana  
CY 2009  
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<b>Providers Offering Video Service in Indiana MSAs (2009)</b>	<b>Per Capita Income<sup>3</sup></b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
Perry-Spencer Communications, Inc.			Local	Yes	ADSL 2+	No	N/A	N/A
Sigecom, LLC			State	Yes	Hybrid-Fiber Coax	N/A	N/A	None
Telecommunications Management, LLC dba NewWave			Local	Yes	Coaxial Cable	No	N/A	N/A
Time Warner NY Cable, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
<b>Fort Wayne, IN</b>	Not Available	Yes						
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Craigville Telephone Company			State	Yes	FTTH	Yes	N/A	None
Mediacom Indiana, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Verizon North, Inc.			State	Yes	FTTH	Yes	N/A	None
<b>Indianapolis-Carmel, IN</b>	Not Available	Yes						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Avenue Broadband Communications			Both	Yes	Coaxial Cable	No	No	None
Bright House Networks, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Central Indiana Communications, Inc.			Both	Yes	IPTV via FTTH and DSL	Yes	No	None
Cinergy MetroNet, Inc.			Both	Local Only	FTTH	Yes	No	None
Clay County Rural Telephone Coop.			Both	Yes	FTTH	Yes	No	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
E.com			State	Yes	Hybrid Fiber Coax	Yes	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
Longview Communications <sup>2</sup>								

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<b>Kokomo, IN</b>	Not Available	No						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>Lafayette, IN</b>	Not Available	Yes						
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
Indiana Datapipe, LLC			State	No	Fiber/IPTV	Yes	No	None
Mulberry Cooperative Telephone Company			Both	Yes	FTTN/ADSL2+/C	Yes	No	None
Tri-County Communications Corp.			Local	Yes	Analog 450 MHz	No	N/A	N/A
<b>Louisville-Jefferson County, KY-IN</b>	Not Available	Yes						
Insight Communications Midwest, LLC			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Windjammer Communications, LLC			State	Yes	Coaxial Cable	No	N/A	None
Washington County Rural Telephone Cooperative, Inc. d/b/a TeleMedia Solutions			Local	Yes	DSL	Yes	No	N/A
<b>Michigan City-La Porte, IN</b>	Not Available	No						
Acme Communications, Inc.			State	No	FTTH	Yes	N/A	N/A
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A

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CY 2009  
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<b>Providers Offering Video Service in Indiana MSAs (2009)</b>	<b>Per Capita Income<sup>3</sup></b>	<b>MSA Includes an Underserved Area<sup>1</sup></b>	<b>Franchise Type</b>	<b>Video Service Offered</b>	<b>Technology Used</b>	<b>Infrastructure Buildout Initiated or Completed</b>	<b>Buildout Required by LFA?</b>	<b>Redlining Complaints</b>
<b>Muncie, IN</b>	Not Available	Yes						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	No	N/A	None
<b>South Bend-Mishawaka, IN-MI</b>		Yes						
AT&T			State	Yes	IPTV-FTTN	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Mediacom Indiana, LLC			Local	Yes	Hybrid-Fiber Coax	No	N/A	N/A
Windjammer Communications, LLC			State	Yes	Coaxial Cable	No	N/A	None
<b>Terre Haute, IN</b>	Not Available	Yes						
Avenue Broadband Communications			Both	Yes	Coaxial Cable	No	No	None
Cequel III Communications II, LLC d/b/a Suddenlink			State	Yes	Hybrid-Fiber Coax	No	N/A	None
Clay County Rural Telephone Coop.			State	Yes	FTTH	Yes	N/A	None
Comcast			State	Yes	Hybrid-Fiber Coax	Yes	N/A	None
Full Choice Communications, Inc.			Local	Yes	Coaxial Cable	No	N/A	N/A
Glass Antenna Systems <sup>2</sup>								
Time Warner Entertainment Company, LP			Local	Yes	Hybrid-Fiber Coax	Yes	No	N/A

<sup>1</sup>The data compiled by the Indiana Office of Technology defines an underserved area as a census block, where broadband service at advertised speeds of at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream to end users, is not available to at least one household.

<sup>2</sup>This entity was identified in FCC records as providing video service. The entity does not hold a state-issued video franchise, and staff was unable to collect data regarding a local franchise.

<sup>3</sup>2009 Income Data not yet available from Bureau of Economic Analysis-U.S. Department of Commerce.

## ACRONYMS

### A

ADSL – Asynchronous Digital Subscriber Line  
AEP – American Electric Power  
AFUDC – Allowance for Funds Used During Construction  
AGA – American Gas Association  
AOS – Alternative Operator Service  
ARP – Alternative Regulatory Plan  
AWWA – American Water Works Association

### B

Bcf – Billion cubic feet  
BPL – Broadband over Power Lines  
BTS – Basic Telecommunications Service  
Btu – British thermal unit

### C

CAIR – Clean Air Interstate Rule  
CalWaRN – California Water/Wastewater Agency Response Network  
CAMR – Clean Air Mercury Rule  
CCT – Clean Coal Technology  
CETCs - Competitive Eligible Telecommunications Carriers  
CGA – Common Ground Alliance  
CLEC – Competitive Local Exchange Carrier  
CPCN – Certificate of Public Convenience and Necessity  
CT – Combustion Turbine  
CTA – Certificate of Territorial Authority  
CWA – Communications Workers of America

## **D**

DIMP – Distribution Integrity Management Program

DNR – Indiana Department of Natural Resources

DSA – Designated Service Area

DSIC – Distribution System Improvement Charge

DSL – Digital Subscriber Line

DVR – Digital Video Recorder

## **E**

EEFC – Energy Efficiency Funding Component

EIA – Energy Information Administration

EPA – U.S. Environmental Protection Agency

EPAct – Energy Policy Act of 2005

ERO – Electric Reliability Organization

ETC – Eligible Telecommunications Carrier

## **F**

FAC – Fuel Adjustment Clause

FCC – Federal Communications Commission

FERC- Federal Energy Regulatory Commission

FT – Firm Transportation

FTR – Financial Transmission Rights

FTTH – Fiber-to-the-Home

## **H**

HEA – House Enrolled Act

## **I**

ICTA – Indiana Cable Telecommunications Association

IDEM – Indiana Department of Environmental Management

IEDC – Indiana Economic Development Corporation

IGCC – Integrated Gasification Combined Cycle  
ILAP – Indiana Lifeline Assistance Program  
ILEC – Incumbent Local Exchange Carrier  
I&M – Indiana Michigan Power Company, subsidiary of AEP  
IMP – Integrity Management Program  
IMPA – Indiana Municipal Power Agency  
INWARN – Indiana Water/Wastewater Agency Response Network  
IOU – Investor-owned utility, financed by the sale of securities  
IPTV – Internet Protocol Television  
IPL – Indianapolis Power and Light  
ISDH – Indiana State Department of Health  
ISO – Independent System Operator  
ISP – Internet Service Provider  
IT – Interruptible Transportation  
ITU – International Telecommunication Union  
IUPPS – Indiana Underground Plant Protection Service  
IURC – Indiana Utility Regulatory Commission  
IUSF – Indiana Universal Service Fund

## **L**

LDC – Local Distribution Company  
LFA – Local Franchise Authority  
LMG – Landfill Methane Gas  
LMOP – Landfill Methane Outreach Program  
LNG – Liquefied Natural Gas

## **M**

Mcf – Million cubic feet  
MGT – Midwestern Gas Transmission

Midwest ISO – Midwest Independent Transmission System Operator

MMBtu – One million British Thermal Units. Generally accepted as a rough equivalent of an Mcf.

MMcf – One million cubic feet

MMTCE – Million metric tons of carbon equivalent

MS4 – Municipal Separate Storm Sewer System

MSW – Municipal Solid Waste

MTEP – Midwest ISO Transmission Expansion Plan

MVPD – Multichannel Video Programming Distributor

MW – Megawatts

MWH – Megawatt Hour

## **N**

NANPA – North American Numbering Plan Administrator

NAPSR – National Association of Pipeline Safety Representatives

NARUC – National Association of Regulatory Utility Commissioners

NCTA – National Cable and Telecommunications Association

NERC – North American Electric Reliability Council

NIPSCO – Northern Indiana Public Service Company

NO<sub>x</sub> – Nitrogen Oxides

NOAA – National Oceanic and Atmospheric Administration

NOPR – Notice of Proposed Rulemaking

NPDES – National Pollutant Discharge Elimination System

NPMS – National Pipeline Mapping System

NRRI – National Regulatory Research Institute

NTA – Normal Temperature Adjustment

## **O**

OECD – Organization for Economic Cooperation and Development

OMS – Organization of Midwest ISO States

OPS – Office of Pipeline Safety

OQ – Operator Qualification

OUCC – Office of Utility Consumer Counselor

## **P**

PHMSA - Pipeline Hazardous Materials Safety Administration

PIPES – Pipeline Integrity, Protection, Enforcement, and Safety

PJM – The PJM Interconnection

POLR – Provider of Last Resort

PPA – Purchase Power Agreement

PPTT – Purchased Power and Transmission Tracker

PSA – Pipeline Safety Adjustment

PSAPs – Public Safety Answering Points

PSI – PSI Energy

PSTN – Public Switched Telephone Network

PUHCA – Public Utility Holding Company Act of 1935

PUHCA 2005 – Public Utility Holding Company Act of 2005

PURPA – Public Utility Regulatory Policies Act of 1978

## **R**

RFP – Request for proposals

RLECs – Rural Incumbent Local Exchange Carriers

RSD – Regional Sewer District

RSG – Revenue Sufficiency Guarantee

RTO – Regional Transmission Organization

## **S**

SDC – System Development Charge

SIGECO – Southern Indiana Gas & Electric Company

SNG – Synthetic Natural Gas

SO<sub>2</sub> - Sulfur Dioxide

SOHO – Small Office Home Office

SRC – Sales Reconciliation Component

SUFG – State Utility Forecasting Group

## **T**

TA-96 –Telecommunications Act of 1996

## **U**

UGS – Underground storage

UNEs – Unbundled Network Elements

USAC – Universal Service Administrative Company

USF – Universal Service Fund

## **V**

VoIP – Voice over Internet Protocol

## **W**

Wi-Fi – Wireless Fidelity

Wi-Max – Worldwide Interoperability for Microwave Access

## GLOSSARY

### A

**Access Charges:** Charges designed to compensate local exchange carriers for the maintenance and operation of the local exchange network after the break up AT&T in 1984 in the Modified Final Judgment. Access charges take two forms: 1) an end user access charge, also known as Subscriber Line Charge that appears on the customer's bill as a separate line item; 2) carrier access charges paid by interexchange carriers to local exchange carriers when they connect to their local networks. Such charges are determined by tariffs subject to state or federal approval depending upon the intrastate or interstate nature of the call.

**Alternative Fuels:** Any non-traditional energy source.

**Alternate Ratemaking for Pipelines:** In a series of orders in February 1996, the Federal Energy Regulatory Commission opened the door to non-cost-based rates for pipeline services, including transmission and storage, provided that a pipeline could show: 1) it did not have market power or that the power was mitigated; and (2) cost-based recourse rates were available for customers who might be disadvantaged under the new system. Pipelines are also required to show the quality of service was maintained and that market-based, incentive or negotiated rates did not shift costs to captive customers.

**American Gas Association (AGA):** Trade group representing natural gas distributors and pipelines. The AGA also operates a laboratory for appliance certification.

**Aquifer:** Water bearing permeable rock formation that is capable of storing natural gas.

**Area Code Overlay:** A method used to relieve area code exhaust. A new three-digit area code is associated with the same geographic boundaries of an existing area code. Because the same seven-digit telephone numbers could then be assigned out of each area code, local calls are required to be dialed with 10-digits.

**Area Code Split:** A method used to relieve area code exhaust. The geographic area that uses the area code is split in two and a different area code is assigned to part of the geographic area while the other area keeps the existing area code.

**Asynchronous Digital Subscriber Line (ADSL):** A DSL designed to deliver more bandwidth downstream (from the central office to the customer's site) than upstream. Downstream rates range from 1.5 to 9 million bits per second. See also Digital Subscriber Line.

### B

**Base Gas:** Gas required in a storage pool to maintain sufficient pressure to keep the working gas recoverable. Also called "cushion" gas.

**Basic Telecommunications Service (BTS):** A term used in House Enrolled Act 1279 to distinguish between telecommunication services regulated until June 30, 2009 and services that were unregulated on or before March 27, 2006. BTS is defined as standalone telephone exchange service that is provided to a

residential customer through the customer's primary line; is the sole service purchased by the customer; is not a part of a package, promotion, or contract; and, not otherwise offered at a discounted price.

**British Thermal Unit (Btu):** The quantity of heat required to raise one pound of water (about one pint) one degree Fahrenheit at or near its point of maximum density. A common unit of measurement for gas prices. 1,034 Btus = 1 cubic foot.

**Broadband:** Advanced communications systems capable of providing high-speed transmission of services such as data, voice, and video over the Internet and other networks. Transmission is provided by a wide range of technologies, including digital subscriber line and fiber optic cable, coaxial cable, wireless technology, and satellite. Broadband platforms make possible the convergence of voice, video and data services onto a single network.

**Bundled Resale of Local Exchange:** Competitive local exchange carriers can compete by reselling the services of the incumbent local exchange carrier (ILEC) in this form. They purchase the services of the ILEC at wholesale rates hoping to resell them to retail customers at a profit. Each of Indiana's three large ILECs offer wholesale discounts to competitive carriers.

**Bundled Service:** Gas utility that operates as both the supplier and distributor of natural gas.

## C

**Capacity:** The size of a plant (not its output). Electric utilities measure size in kilowatts or megawatts and gas utilities measure size in cubic feet of delivery capability.

**Carbon Capture:** The process of capturing carbon dioxide produced in the combustion of fuel to facilitate its disposal.

**Carbon Sequestration:** The storage of carbon dioxide in geological formations to prevent its release into the atmosphere.

**Certificate of Public Convenience and Necessity (CPCN):** A special permit commonly issued by a state commission that authorizes a utility to engage in business, construct facilities or perform some other service. Also a permit issued by the Federal Energy Regulatory Commission to engage in the transportation or sale for resale of natural gas in interstate commerce, or to construct or acquire and operate any facilities necessary.

**City Gate:** The physical location where gas is delivered by a pipeline to a local distribution company.

**Coal Gasification:** The controlled process of placing coal, steam, and oxygen under pressure to produce a low Btu gas.

**Coal Bed Methane:** Any gas produced from a coal seam.

**Commodity Charge:** The charge that covers the pipeline's variable costs in a Straight Fixed Variable rate design. Also referred to as a "usage charge."

**Communications Service Provider:** A term used in House Enrolled Act 1279 that means a person or entity offering communications services to customers in Indiana, without regard to the technology or medium used by the person or entity to provide the communications service.

**Condemnation Action:** A legal proceeding whereby a municipality exercises its power of eminent domain and condemns utility property that results in the transfer of utility property to the municipality.

**Conditional Congestion Area:** As designated by the U.S. Department of Energy, as areas where electric utilities have planned generation, and while some transmission congestion is present, significant congestion would result if transmission is not built in conjunction with the new generation resources.

**Cooperative:** A business entity similar to a corporation, except that ownership is vested in members rather than stockholders and benefits are in the form of products or services rather than profits.

**Cost-of-Service Rates:** Rates based on prudently incurred costs of doing business, plus a reasonable rate of return on investment in plant and equipment, and throughput projections. This is the rate development methodology commonly used by state or federal regulators.

**Cramming:** A practice in which customers are billed for unexpected and unauthorized telephone charges or services. Refers to the fact that the charges are crammed into the telephone bill in an inconspicuous place so the charges go unnoticed by the customer.

**Customer Charge:** A fixed amount to be paid periodically by a customer without regard to demand or energy actually used. The customer charge recovers the cost of meters and other administrative costs of billing.

## D

**Decoupling:** Alternative rate design theory that separates the recovery of a utility's fixed costs from the volume of natural gas sold.

**Dekatherm (Dth):** A unit of heating value equal to 10 therms or one million Btus (1MMBtu). Roughly, 1 Mcf = 1, MMBtu = 1 Dth

**Demand Response:** Reducing the use of electricity to meet local or regional power system needs rather than increasing the output of electricity.

**Digital Subscriber Line (DSL):** A generic term for digital lines provided by incumbent or competitive local exchange carriers that allows the customer to use the same subscriber line for voice and data simultaneously without subscribing to a second line for Internet access.

**Distribution:** The component of a gas, electric or water system that delivers gas, electricity, or water from the transmission component of the system to the end-user. Usually the commodity has been altered from a high pressure or voltage level at the transmission level to a level that is usable by the consumer. Distribution is also used to describe the facilities used in this process.

**Distribution System Improvement Charge:** A mechanism available to water utilities to pass the costs of infrastructure replacement onto their customers between rate cases on a more expedited basis.

## E

**Effluent:** The water that is discharged after being treated at a sewage plant.

**Eligible Telecommunications Carrier (ETC):** A common carrier eligible to receive universal service support. An ETC is required to offer services that are supported by the federal universal support mechanisms either using their own facilities or a combination of its own facilities and resale of another carrier's services. State commissions are responsible for the designation of ETCs.

**End Use:** The final use to which gas or electricity is put by the ultimate consumer.

**Energy Information Administration:** Statistical information collection and analysis branch of the Department of Energy.

**Energy Independence & Security Act of 2007:** A comprehensive energy law that focuses on improved efficiency standards, and the research and development of energy technologies and infrastructure.

**Energy Policy Act of 1992:** This act authorized the Federal Energy Regulatory Commission to order wholesale wheeling of electricity while explicitly restraining its power to order retail wheeling. The Act also created a new legal category of electricity generating and sales companies, referred to as "Exempt Wholesale Generators," that are free from the Public Utility Holding Company Act of 1935 restrictions.

**Energy Policy Act of 2005:** Major provisions regarding the electricity industry included the creation of the Public Utility Holding Company Act of 2005, clean coal, nuclear, wind, and alternative energy initiatives, establishment of an Electric Reliability Organization, incentive rates for transmission investment, transmission siting, smart metering, net metering, utility interconnection with distributed generation, increased efficiency of fossil-fuel power plants, and the increased diversity of fuel sources to generate electricity.

**Environmental Protection Agency:** A federal agency created in 1970 to execute federal research, monitoring, standard setting and enforcement actions related to protecting the environment.

## F

**Facilities-based Interexchange:** A carrier that offers facilities-based interexchange deploys their own tandems and/or trunks as opposed to purchasing blocks of time from other interexchange carriers and reselling the services to retail customers.

**Facilities-based Local Exchange:** A carrier that offers facilities-based local exchange may construct and deploy its own networks or it may rely on unbundled network elements from incumbent local exchange carriers or a combination of the two.

**Federal Energy Regulatory Commission (FERC):** The U.S. federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, and oil pipeline rates. The FERC also authorizes liquefied natural gas terminals, interstate natural gas pipelines and non-federal hydropower projects.

**FiOS:** Verizon's broadband initiative featuring fiber to the premise that is being deployed in several areas throughout the U.S.

**Firm Service:** The highest quality sales or transmission service that is offered to customers under a filed rate schedule that anticipates no planned interruption.

**Fixed Costs:** All costs included in the cost of service that do not fluctuate with the volume of the commodity passing through the system (e.g., labor, maintenance, and taxes).

## G

**Gigabit:** A unit of measurement for the amount of data that is transferred in a second between two telecommunication points. One gigabit per second (Gbps) equals one billion bps.

**Gasification:** 1) The conversion of carbonaceous material into gas or the extraction of gas from another fuel. 2) The process during which liquefied natural gas is returned to its vapor or gaseous state through an increase in temperature and a decrease in pressure.

**Gathering System:** Pipelines and other equipment installed to collect, process, and deliver natural gas from the field, where it is produced, to the trunk or main transmission lines of pipeline systems.

**Generation:** The process of producing electricity. Also refers to the assets used to produce electricity for transmission and distribution.

## H

**Heartland:** Heartland Gas Pipeline, LLC

**Hedging:** A method by which a purchaser or producer of natural gas or electricity uses a derivative position to protect against adverse price movements in the cash market by "locking in" a price for future delivery.

**Holding Company:** A corporate structure where one company holds the stock (ownership) of one or more other companies but does not directly engage in the operation of any of its business.

## I

**Indiana Lifeline Assistance Program (ILAP):** A state program required by House Enrolled Act 1279 for the purpose of offering reduced charges for basic telecommunications services to eligible customers (customers with income that falls within 150 percent of the Federal Poverty Guidelines or participates in certain assistance programs, such as Medicaid, food stamps, etc).

**Independence Hub:** A large natural gas production platform in the Gulf of Mexico.

**Independent System Operator (ISO):** An independent organization or institution that controls the electric transmission system in a particular region.

**Indiana Utility Regulatory Commission:** An independent fact-finding body that hears evidence in cases filed before it and makes decisions based on the evidence presented in those cases. An advocate of neither the public nor the utilities, the Commission is required by state statute to make decisions that balance the interests of all parties to ensure the utilities provide adequate and reliable service at reasonable prices.

**Integrated Gasification Combined Cycle (IGCC) Facility:** A power plant using synthetic gas as a source of clean fuel. Syngas is produced from coal (or other fuels) in a gasification unit. Steam generated by waste heat boilers of the gasification process is utilized to help power steam turbines.

**Integrity Management:** Specifies how pipeline operators must identify, prioritize, assess, evaluate, repair and validate - through comprehensive analyses - the integrity of gas pipelines that, in the event of a leak or failure, could affect High Consequence Areas.

**Internet Protocol Television (IPTV):** A system where a digital television service is delivered by using Internet Protocol over a network infrastructure that may include delivery by a broadband connection.

**Interruptible Transportation Service:** Conditional gas service interrupted at the option of the pipeline. Also, referred to as “best efforts.” Tariffs for interruptible service are cheaper than firm service. Electric providers may offer a similar service.

**Interstate Gas:** Gas transported through interstate pipelines to be sold and consumed in states other than the one in which it was produced. Also, refers to gas produced in the federal domain of the Outer Continental Shelf.

**Intrastate Gas:** Gas sold and consumed in the state in which it was produced and not transported in interstate pipelines.

**Investor-owned Utility:** A utility financed by the sale of securities.

## **J**

**Joint Board:** Also known as the Federal-State Joint Board, instituted by the Federal Communications Commission to recommend changes of any of its regulations in order to implement section 214(e) of the Telecommunications Act of 1996, including the definition of services that are supported by the Federal universal service support mechanisms.

## **K**

**Kilobit:** A unit of measurement for the amount of data that is transferred in a second between two telecommunication points. One kilobit per second (Kbps) equals 1000 bit per second (bps).

**Kilowatt (kW):** A basic unit of measurement; 1kW = 1,000 watts.

**Kilowatt-Hour (kWh):** One kilowatt of power supplied to or taken from an electric circuit steadily for one hour.

## L

**Landfill Gas:** Gas produced by aerobic and anaerobic decomposition of a landfill generally composed of approximately 55% methane and 45% carbon dioxide, sometimes refined with membrane methods to eliminate the carbon dioxide.

**Liquefied Natural Gas (LNG):** Natural gas converted to a liquid state by pressure and severe cooling, and then returned to a gaseous state to be used as a fuel. It is stored by many distributors for peak season use.

## M

**Mandatory Number Pooling:** Requires carriers to share a pool of numbers with the same exchange. Without number pooling each competitive local exchange carrier is assigned an entire exchange or 10,000 block of phone numbers, which may not all be needed. With number pooling, exchanges can be broken down into blocks of 1,000, as known as “thousand block number pooling.”

**Megabit:** A unit of measurement for the amount of data that is transferred in a second between two telecommunication points. One megabit per second (Mbps) equals one million bps.

**Megawatt (MW):** One thousand kilowatts or one million watts.

**Megawatt-Hour (MWh):** One megawatt of power supplied to or taken from an electric circuit steadily for one hour.

**Merchant Plant:** A power plant that is funded by investors and sells electricity in the competitive wholesale market.

**Methane:** The main component of natural gas.

**Midwest ISO:** The Midwest ISO was formed by transmission owners in 1996, and is based in Carmel, Indiana. The Midwest ISO’s main responsibility is to ensure the safe and reliable transfer of electricity in the Midwest and ensure fair access to the transmission system.

**Multi-Association Group Order (MAG Order):** A Federal Communications Commission Report and Order adopted October, 2001 which prescribed access charge reform measures that affected small, rural incumbent local exchange carriers.

**Municipalization:** When a municipally-owned utility acquires an investor-owned utility serving a city or town.

**Municipal Utility:** A utility that is owned and operated by a municipal government. These utilities are organized as nonprofit local government agencies and pay no taxes or dividends; they raise capital through the issuance of tax-free bonds.

## N

**National Interest Electric Transmission Corridor:** As established in the Energy Policy Act of 2005, any geographic area experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers.

**Normal Temperature Adjustment (NTA):** A decoupling mechanism that reduces the risk of the gas utility not recovering margin due to warmer-than-normal (vice versa) during the heating season.

**Not-for-profit Utility:** A utility that does not distribute its surplus funds to owners or shareholders but uses them to pursue its goals.

**NPDES Permits:** Permits that allow utilities to discharge wastewater effluent into waterways.

## O

**Order 436:** A Federal Energy Regulatory Commission rule promulgated in October 1985, establishing a voluntary, open-access system of natural gas transportation.

**Order 500:** An interim natural gas rule on open-access transportation, replacing Order 436. Order 500 embodied all the elements of Order 436 with three additions: forcing producers to credit transportation volumes against accruing take-or-pay (cross-crediting); allowing pipelines to direct bill customers for part of past take-or-pay charges; and allowing pipelines to fashion gas inventory charges (or supply reservation fees) to take care of future take-or-pay.

**Order 636:** Commonly known as the “Restructuring Rule,” Order 636 provides for pipeline companies to change from being merchants of natural gas to being transporters of natural gas and allows open-access transportation services regardless of who owns the gas.

**Order 712:** Revised regulations governing interstate natural gas pipelines to reflect changes in the market for short-term transportation services on pipelines and to improve the efficiency of the capacity release program.

**Organization of Midwest ISO States (OMS):** A group of state utility commissions in the Midwest ISO footprint that acts as an adviser on some Midwest ISO functions.

## P

**Peak Shaving:** Supply of fuel gas for distribution systems from an auxiliary source of limited supply and higher cost (e.g., propane, liquefied natural gas) during periods of maximum demand when the primary source is not adequate. Electricity providers may also use peak shaving to reduce demand at peak periods. Service interruptions and customer-owned generation are methods electricity providers use for peak shaving.

**PJM Interconnection:** The PJM Interconnection is the regional transmission organization (RTO) responsible for the operation and control of the bulk power system throughout all or portions of Delaware,

Indiana, Illinois, Kentucky, Maryland, Michigan, New Jersey, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. PJM became the first fully functioning RTO in 1997.

**Point-to-Point Transmission:** The reservation and/or transmission of electricity on either a firm basis and/or a non-firm basis from point(s) of receipt to points(s) of delivery, under a tariff, including any ancillary services that are provided by the transmission provider.

**Private Activity Bonds:** Municipal bonds that are issued to finance facilities for investor-owned or not-for-profit water utilities.

**Privatization:** When an investor-owned utility acquires a municipally-owned utility.

**Public Utility Holding Company Act of 1935 (PUHCA):** A federal law to facilitate the regulation of electric utilities, by either limiting their operations to a single state, and thus subjecting them to effective state regulation, or forcing divestitures so that each became a single integrated system servicing a limited geographic area. Another purpose of the PUHCA was to keep utility holding companies engaged in regulated businesses from engaging in unregulated businesses. The PUHCA required Securities and Exchange Commission approval prior to a holding company engaging in a non-utility business and that such businesses be kept separate from the regulated business. The PUHCA was repealed by the Energy Policy Act of 2005, and replaced by what is known as the Public Utility Holding Company Act of 2005.

**Public Utility Regulatory Policies Act (PURPA):** A federal law passed in 1978 as part of the National Energy Act. It was meant to promote greater use of renewable energy. Implementation of the act was left to the states. The PURPA was amended in 2005 by the Energy Policy Act of 2005 sections 1251 through 1254.

**Pulverized Coal:** Coal that is ground into dust using a powdered coal mill and used as the fuel in a power plant to generate electricity.

**Purchasing Cooperative:** A type of cooperative arrangement, often among businesses, to agree to aggregate demand to get lower prices from selected suppliers.

## Q

**Quadruple Play:** A service bundle that includes high-speed data, telephony, television and wireless communications services.

## R

**Rate Base:** The investment value established by a regulatory authority upon which a utility is permitted to earn a specified rate of return.

**Rate Design:** The method of classifying fixed and variable costs between demand and commodity components.

**Rate of Return:** The percentage that a company earns on its investment.

**Raw Natural Gas:** Natural gas brought from underground up to the wellhead. Natural gas found at the wellhead is not as pure as processed or pipeline quality natural gas used by consumers. Raw natural gas comes from three types of wells: oil wells, gas wells, and condensate wells.

**Reclaimed Water:** Wastewater that has been treated to remove solids and certain impurities, and used for irrigation or recharging aquifers.

**Reliability:** A term used in both the electric and gas industry to describe the utility's ability to provide uninterrupted service of gas or electricity. Reliability of service can be compromised at any level of service: generation or production, transmission or distribution.

**Renewable Portfolio Standard:** A requirement that a specified portion of a utility's electricity be supplied by energy sources defined as renewable.

## S

**Service Territory:** Under the current regulatory environment, an electric utility is granted a franchise to provide energy to a specified geographical territory, designated as a service territory.

**Slamming:** The practice of switching a telephone customer's long distance or local service provider without obtaining permission from the customer.

**Smart Grid:** An electricity delivery system that encompasses devices and technologies designed to improve the efficiency of energy use and the transfer of energy across it.

**Small Utility Filing:** A process where a utility, which serves under 5,000 customers, primarily residential, and does not serve extensively another utility, can increase its rates without a formal public hearing.

**Spot Market:** A market characterized by short-term, typically interruptible, or best efforts contracts for specified volumes. The bulk of natural gas spot market trades on a monthly basis, while power marketers sell spot supplies on an hourly basis.

**Storage:** Facilities used to store natural gas that is transferred from its original location. Usually consists of natural geological reservoirs like depleted oil or gas fields, waterbearing sands sealed on top by impermeable cap rock, underground salt domes, bedded salt formations, or in rare cases, abandoned mines.

**Straight-Fixed Variable Rate Design:** Rate design methodology that allocates all fixed costs to the demand component and allocates all variable costs to the commodity, or volumetric, component. Also called "Fixed Variable."

**Supply Side Management:** The systematic development of a gas supply plan or an electric resource plan.

**Synthetic Natural Gas:** Energy-rich vapors manufactured from coal.

**System Development Charge:** A one-time charge assessed by water and wastewater utilities to new customers to finance development of utility systems necessary to serve those new customers. The purpose is to impose a portion of the cost of capital improvements upon those developments that create the need for, or increase demand for capital improvements.

**Sub-metering/Sub-billing:** The practice where a consumer of utility service, usually an apartment complex or a mobile home park, passes along the cost of water or electric service to the tenants of the complex or park through a separate utility bill.

## T

**Take-and-Pay:** Clause that requires a minimum quantity of natural gas to be physically taken and paid for, usually in association with oil, or wells, that will be damaged by failure to produce.

**Tariff:** Compilation of all effective rate schedules for a company, along with general terms and conditions of service.

**Therm:** Unit of heating value equivalent to 100,000 Btus.

**Transmission:** The process of transferring energy (either gas or electricity) or water from the production or generation source to the point of distribution. Also refers to the facilities used for this process.

**Triple Play:** A service bundle that includes telephone, high-speed Internet access and television.

## U

**Unaccounted for Gas:** The difference between the total gas available from all sources and the total gas accounted for as sales, net interchange, and company use. This difference includes leakage or other actual losses, discrepancies due to meter inaccuracies, variations of temperature and/or pressure, and other variants, particularly billing lag.

**Unbundled Network Elements:** The Telecommunications Act of 1996 required that independent local exchange carriers unbundled their network elements to make them available to competitive local exchange carriers on the basis of incremental costs.

**Universal Service:** A policy to keep local rates low and encourage every household to have a telephone.

**Unserved Energy:** Electricity demand that the utility is unable to supply. In the electric utility planning process, unserved energy helps identify when and what type of new resources may be needed in the future.

## V

**Volatility:** The market's price and movement within that range. The direction of the price move, whether up or down, is not relevant. Historic volatility indicates how much prices have changed in the past and is derived by using daily settlement prices for futures. Implied volatility measures how much the market thinks prices will change in the future, obtained from daily settlement prices for options.

**Voltage:** The rate at which energy is drawn from a source that produces a flow of electricity in a circuit; expressed in volts.

**Voice over Internet Protocol (VoIP):** Technology used to transmit voice conversations over a data network using the Internet Protocol. Such data network may be the Internet or a corporate Intranet.

## **W**

**Weatherization:** Any change made to a home or building that is designed to conserve energy.

**Well:** A well that produces at surface conditions the contents of a gas reservoir.

**Wellhead:** The assembly of fittings, valves, and controls located at the surface and connected to the flow lines, tubing, and casing of the well as to control the flow from the reservoir.

**Wireless Fidelity (Wi-Fi):** Wi-Fi was originally a brand licensed by the Wi-Fi Alliance to describe the embedded technology of wireless local area networks (WLAN) based on the IEEE 802.11 standard. As of 2007, common use of the term Wi-Fi has broadened to describe the generic wireless interface of mobile computing devices, such as laptops in local area networks.

**Withdrawal:** Those uses of water that involve the physical removal of water from the ground or surface source.

**Worldwide Interoperability for Microwave Access (Wi-Max):** Wi-Max is a telecommunications technology aimed at providing wireless data over long distances in a variety of ways, from point-to-point links to full mobile cellular type access. Wi-MAX allows a user, for example, to browse the Internet on a laptop computer without physically connecting the laptop to a wall jack.