COMMENTS OF INDIANA INDUSTRIAL ENERGY CONSUMERS, INC., ON PROPOSED REGULATIONS UNDER CLEAN AIR ACT SECTION 111(d)

Docket No. EPA-HQ-OAR-2013-0602

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COMMENTS OF INDIANA INDUSTRIAL ENERGY CONSUMERS, INC., ON PROPOSED REGULATIONS UNDER CLEAN AIR ACT SECTION 111(d)

Indiana Industrial Energy Consumers, Inc. ("INDIEC") submits these comments concerning the June 2014 Notice of Proposed Rulemaking ("NPRM") issued by the Environmental Protection Agency ("EPA"), addressing proposed carbon emission guidelines for existing electric utility generating units pursuant to Clean Air Act Section 111(d). The members of INDIEC are large volume electric consumers in a manufacturing-intensive State that relies predominantly on coal-fired generating units. The affected industrial operations are active in highly competitive markets and are directly impacted by rising energy prices. INDIEC members have demonstrated a longstanding commitment to efficient use of expensive energy resources. INDIEC, accordingly, supports measures that promote the affordability, reliability, stability and flexibility as well as the sustainability of electric energy.

INDIEC is a trade association with a membership consisting of 26 of the largest industrial employers in Indiana. A list of INDIEC members is attached hereto as Exhibit A. With a primary focus on energy issues, INDIEC accordingly provides unique insight into the impact of rising industrial energy prices in Indiana.

I. Executive Summary

Due to the importance of energy to industrial operations and the importance of industry to the economy, the preservation of affordable and reliable energy is a key driver of economic conditions in Indiana and the United States. In recent years, industrial employers in Indiana have been facing serious challenges from rising energy prices, which are already projected to increase steeply in the coming decade separate and apart from the proposed new regulations. The stated goal of promoting emission reductions in a manner consistent with a vibrant and growing economy requires measures that do not threaten reliability or penalize productivity and economic

growth. The methodology for establishing state goals and measuring performance, accordingly, must distinguish between productive use of energy resources as opposed to inefficiency. Aggressive goals that do not accommodate gains in productivity will impair the viability of industrial operations, jeopardize employment and shrink the economy.

With respect to energy efficiency, federal policy should not force states to funnel all efforts through regulatory programs or impose a new bureaucracy of reporting requirements on industrial consumers. Under Indiana law, industrial consumers are permitted to opt out of regulatory programs, in recognition of their independently strong incentive to optimize the efficient utilization of expensive energy resources. The members of INDIEC fully support energy efficiency, both as a matter of policy and competitive necessity. For many years, they have achieved progressive efficiency improvements independent of regulatory programs, resulting in substantial productivity gains at steady consumption levels. Efficiency goals should not be premised on assumptions that a large pool of inefficiencies remain unaddressed in industrial operations, or that further gains will translate into reduced emissions rather than economic growth. Measuring industrial efficiency through sector-wide consumption and productivity data is both feasible and more efficient than establishing a federally mandated regimen of individual reporting and validation requirements.

In the context of industrial energy resources, private generation projects should be recognized as an effective compliance measure. Private generation is typically energy efficient, reduces the load served by higher-emission utility units, and mitigates the rate burdens of new generation funded by the public. For states like Indiana where private generation projects supporting industrial operations do not fit neatly in the categories of either a renewables portfolio or a regulatory efficiency program, performance under a rate-based goal may not capture the

reduced emissions attributable to any increase in the utilization of private energy resources. The emissions impact of private generation should count toward the achievement of state goals under any methodology, whether the state opts for a rate-based or mass-based structure and whether performance is measured by a portfolio approach or by emission limits.

II. Emission Reductions Consistent with a Growing Economy

The NPRM recognizes that "state plans for emission reductions can, and must, be consistent with a vibrant and growing economy and supply of reliable, affordable electricity to support that economy." See NPRM Section I(A)(2)(b). The impacts of the proposed regulations on energy costs and the potential risks to reliability threaten the objective of supporting a vibrant and growing economy, and therefore a measured and careful approach is appropriate to preserve the supply of reliable and affordable electricity. State goals, accordingly, should not be too aggressive and the timetable for compliance should provide sufficient time to implement measures consistent with economic growth.

A. Impact of Compliance Costs

While noting it is "especially important" that overall compliance costs be reasonable (see NPRM Section VI(E)(8)), the recited cost projections reflect only the direct expenses of anticipated compliance measures and not the full economic consequences for industrial consumers. See Section X(E). The NPRM correctly acknowledges that changes in energy prices "impact markets for goods and services produced by sectors that use these energy inputs in the production process" and that "[c]hanges in the cost of production may result in changes in price, changes in quantity produced, and changes in profitability of firms affected." See Section X(F). In contrast to the quantification of projected health and welfare "co-benefits" associated with reduced emissions (see Section X(G)), however, the full impact on American-manufactured

products and industrial employers has not been assessed or squared with the asserted goal of compatibility with a "vibrant and growing economy."

The broader economic consequences for productivity and employment that are recognized but unquantified in the NPRM are underscored by the circumstances in Indiana in particular. Indiana is a manufacturing-intensive state with a prevalence of large employers in energy-intensive industries that receive power from regulated utilities using predominantly coal-fired generation. Indiana is already facing serious challenges from escalating industrial energy prices, and the proposed regulations will magnify that problem. The manufacturing sector plays a pivotal role in the Indiana economy. At some 30%, Indiana has the highest percentage of gross domestic product from manufacturing of any state in the nation.[1] Indiana also has the highest percentage of manufacturing employees in the United States, accounting for more than one in six jobs in the State.[2] The vitality and performance of industrial operations is key to the Indiana economy and materially important to the United States economy.

B. Impact on Energy Prices

The industries concentrated in Indiana are among the most energy-intensive. Industrials consume nearly half of the electricity in Indiana.[3] The cost of that vital resource is a major component in the cost of production. Industrial businesses in Indiana, moreover, operate in intensely competitive national and global markets. The availability of reliable and reasonably priced electricity, therefore, is a substantial factor in the relative success and productivity of such operations, and plays a significant role in decisions regarding where to locate new facilities,

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[1] *See* 24/7 Wall St., *10 States Where Manufacturing Still Matters* (August 5, 2014), http://247wallst.com/special-report/2014/08/05/10-states-where-manufacturing-still-matters/; Indiana Manufacturers Association, *Indiana Leads the U.S. in Manufacturing Production, Employment* (March 3, 2014), http://imaweb.com/indiana-leads-u-s-manufacturing-production-employment/.

[2] *Id.*

[3] *See* U.S. Energy Information Administration, *Electric Power Monthly* (with data for December 2013) (February 2014), Table 5.4.B, available at http://www.eia.gov/electricity/monthly/.

where to source production and where to expand or constrict existing facilities. The cost of electricity, consequently, has a strong and direct impact on economic conditions and growth opportunities in Indiana.

Indiana is a regulated state in which power is provided by public utilities in exclusive service territories, and industrial consumers in Indiana do not have the option of purchasing from alternative suppliers. Indiana, furthermore, has already experienced a sharp increase in industrial electricity prices and that trend is projected to continue. From 2003 to 2013, Indiana's industrial electricity prices increased by nearly 70%. The increase is shown on Exhibit B, attached hereto. In a 2013 report, the State Utility Forecasting Group projected an additional 30% increase in the coming decade, based on assumptions that included the absence of any additional environmental regulations not already in effect.[4] The price impact of the proposed new regulations, in other words, will hit Indiana industrials on top of the 30% increase already projected for the next ten years. Indiana, notably, relies predominantly on coal-fired electric generation. Where the national average is about 40% generated from coal units, Indiana has more than twice that percentage. The data used in setting the state goals for Indiana indicates over 85% of Indiana's total generation in 2012 came from coal-fired units. See Goal Computation TSD, App. 1, Step 1. The economic impact of the proposed regulations, consequently, will fall much heavier on Indiana than other states that have less dependence on coal generation.

In addition to the impact on electricity prices, industrial consumers are also significantly affected by the impact of the proposed regulations on the natural gas market. The NPRM anticipates an increase in natural gas prices of 9-12% by 2020 (see Section X(D)). That projection, however, reflects an array of assumptions regarding what has historically been a

[4] *See* State Utility Forecasting Group, *Indiana Electricity Projections: The 2013 Forecast* (December 2013) at 3-6, http://www.purdue.edu/apps/dpmanage/Resource/c3d0b0f5c7204124b46de5fda691e12a.pdf.

commodity exhibiting substantial price volatility. Depending on factors such as regulations affecting shale gas, the timing and extent of pipeline construction, the development of liquefied natural gas exports and future weather patterns, the market could well experience price impacts exceeding the projections for increased utilization of natural gas for electric generation. Industrial operations rely on cost-effective supplies of natural gas as well as electricity, and therefore the price impacts on both are important to industrial productivity and growth.

C. Impact on Reliability

The economic vitality of industrial operations depends on reliable as well as reasonably priced energy supplies. Many manufacturers operate around the clock, with consistent energy needs at all times. In the event of supply constraints or system emergencies, industrial consumers are subject to service curtailment in advance of residential and human needs customers. The risk of any impairment to reliability, consequently, falls earlier and harder on industrials. At the same time, service interruptions impose serious hardship on such operations, halting production, idling workers, disrupting downstream processes and potentially damaging product and equipment.

Regulations that significantly alter the generation and supply of essential energy resources, accordingly, should be implemented with due care to mitigate the potential disruption and economic impact of any degradation in reliability. As indicated by a recent report by the North American Electric Reliability Corporation (NERC), there is substantial reason for concern that the proposed regulations may impair the reliability of electricity service in the United States.[5] In particular, the level of potential generating plant retirements, the extent of gas infrastructure required to support the anticipated shift to greater utilization of gas-fired

[5] *See* NERC, *Potential Reliability Impacts of EPA's Proposed Clean Power Plan* (November 2014), http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/Potential_Reliability_Impacts_of_EPA_Proposed_CPP_Final.pdf.

generation, and uncertainties regarding the development of renewable energy resources and sustained achievement of projected energy efficiency savings, in combination, raise serious concerns regarding the future sufficiency of energy resources.

In addition to the potential impact on electric reliability, the proposed regulations will also have potential impact on the reliability of natural gas service. The NPRM recognizes that a mandatory increase in utilization of gas-fired generation will necessitate construction and investment in production and transportation capabilities. See Section VI(C)(2)(b). If those changes cannot be implemented as quickly and efficiently as assumed, the reliability of natural gas service could be compromised by the required shift to gas-fired generation. In addition, pipeline operators maintain service priorities for firm and interruptible customers, industrials are typically subject to curtailment in advance of heating load in the event of supply deficiencies, and the relative priority of power generation is a subject of ongoing debate. As with electricity disruptions, any impairment in the quality of natural gas service can be expected to impose substantial hardship on energy-intensive industrial consumers.

D. Measures to Support a Growing Economy

In four respects, the proposed regulations should be better aligned with the objective of supporting a vibrant and growing economy: (1) the less stringent alternative goals are preferable to the more aggressive state goals; (2) the timetable for compliance should provide greater opportunity to implement measures consistent with affordable, reliable energy; (3) the baseline time period for measuring reductions should better reflect improvements already implemented and anticipated economic conditions moving forward; and (4) state goals should be subject to reasonable adjustment for load growth due to population changes and increased productivity.

The members of INDIEC understand the importance of the policy underlying the initiative targeting carbon emissions, and have demonstrated a longstanding commitment to the efficient and responsible utilization of energy resources. The proposed regulations, however, will exacerbate an existing problem of rising electricity prices affecting energy-intensive industries in Indiana, impairing their competitiveness and productivity to the detriment of the State and national economy. In light of the stated goal of implementing measures consistent with a vibrant and growing economy, and the objectives of preserving affordable energy and imposing only reasonable compliance costs, emission reduction goals should not be established on the basis of overly aggressive projections or implemented on an unduly accelerated timetable.

As compared to the proposed goals for Indiana (see NPRM Section VII(C)), the less stringent alternative goals (Section VII(E)) would mitigate the adverse economic consequences of compliance and are more appropriate. INDIEC further supports extending the time periods for achieving interim and final goals, in order to provide Indiana with better opportunity and greater flexibility to establish measures consistent with preserving the reliable and reasonably priced energy needed to support economic growth in the State.

The selection of 2012 as the baseline for measuring improvements, furthermore, fails to account for substantial improvements that have already been achieved and at the same time ties reduction goals to data from a period of economic recovery. Notably, the NPRM computes projected national reductions relative to 2005 levels, not 2012. See Section I(A)(3). During that intervening period, industrial consumers in Indiana diligently pursued energy efficiency initiatives that, under the proposed regulations, would not be properly credited toward the achievement of the Indiana goals. In many other respects, Indiana would be penalized for earlier efforts to achieve heat rate improvements in coal-fired generation, to increase gas-fired and

renewable energy resources and to promote efficiency. In 2012, moreover, economic conditions in Indiana and the United States were still recovering from a serious recession, and for a manufacturing-intensive state such as Indiana in particular, the level of energy consumption in 2012 was not representative of productivity at full strength. Locking in emission reduction goals to a baseline period in which consumption was down due to economic adversity is inconsistent with the objective of supporting a vibrant and growing economy. An earlier baseline period such as 2005 would better reflect both measures already implemented and reasonably expected conditions moving forward.

The setting of state goals and determination of acceptable performance, finally, should account for changes in load characteristics arising from shifts in demographics, productivity and economic growth. For example, for purposes of demonstrating achievement, the NPRM contemplates fluid year-to-year adjustments to reflect measured energy savings attributable to demand-side efficiency efforts, and yet calls for rigid adherence to overall reduction goals established at the outset. See, e.g., Section I(A)(1)(c) ("Once the final goals have been promulgated, a state would no longer have an opportunity to request that the EPA adjust its CO_2 goal."). Depending on the interaction of efficiency savings and load growth over time, even the successful deployment of planned measures may well produce results that deviate from projected reductions. That prospect is particularly the case with a baseline of 2012, a period when industrial operations in Indiana were in the process of emerging from a recessionary slump.

Load growth projections are premised on an array of assumptions regarding future conditions that may or may not track the actual course of events.[6] In the event of stronger than expected industrial production, or greater increases in population, electric consumption will

[6] *See, e.g.*, U.S. Energy Information Administration, *Assumptions to the Annual Energy Outlook 2013* (May 2013), http://www.eia.gov/forecasts/aeo/assumptions/pdf/0554(2013).pdf.

outpace projections no matter how well-designed a state plan to limit carbon emissions may be or how diligently the measures are implemented. Conversely, even without any planned measures, emissions would be reduced if industrial production deteriorates, plants close, and state population decreases, but such reductions would be directly contrary to the stated goal of supporting a vibrant and growing economy.

The NPRM calls for comment on how the consequences of a deficiency in performance should vary depending on the underlying reasons, acknowledging that "a possible scenario is that despite successful plan implementation, emissions under the plan turn out to be higher than projected at the time of plan approval because actual economic conditions vary from economic assumptions used when projecting emission performance." See Section VIII(B)(2)(e). That possibility could arise, for instance, where a mass-based goal is established or an emissions approach to measurement is utilized, and actual demand ends up exceeding projections due to greater productivity, industrial expansion or new employers deciding to locate in the state. A state should not be penalized for success in achieving better than expected economic growth. Productivity gains should be credited when assessing performance in the same manner and to the same degree that efficiency savings are computed.

III. Efficiency Goals Compatible with Indiana's Industrial Opt Out

Under Indiana law, demand-side energy efficiency programs are established on a utility-by-utility basis under the oversight of the Indiana Utility Regulatory Commission, as opposed to a statewide approach. See Ind. Code §8-1-8.5-9. By a statute enacted in 2014, industrial consumers are authorized to opt out of such regulatory programs. Id. §9(e)-(h). That statute legislatively overturned a 2009 regulatory order requiring industrial consumers to fund efficiency programs through rates. The Indiana legislature reasonably concluded that energy-intensive

industries active in highly competitive markets already have ample incentive to pursue energy efficiency initiatives independent of regulatory programs, and that forcing industrial consumers to pay higher energy rates to support such programs impairs productivity and economic development.

The NPRM asserts that no particular type of demand-side energy efficiency policy is assumed (see Section VI(C)(4)(b)) and recognizes that differences from state to state include degree of regulatory oversight (Section VIII(F)(4)). The proposed regulations, then, should be compatible with the industrial opt out under Indiana law, and should not require Indiana to channel all efficiency efforts through regulatory programs, just to comply with environmental requirements. Nevertheless, the NPRM indicates that state plans involving demand-side energy efficiency must include evaluation, measurement and verification (EM&V) provisions and notes that current practice for EM&V is primarily defined by regulatory requirements for customer-funded programs. See Sections VIII(C)(3), VIII(D)(9), VIII(F)(4). Further, the NPRM notes that state EM&V plans will be subject to EPA approval, indicates that the EPA plans to develop guidance for EM&V requirements for demand-side energy efficiency, and solicits comment on whether "harmonization of state approaches" should be required. See Sections VIII(C)(1), VIII(D)(8), VIII(F)(4).

INDIEC respectfully opposes any requirements under the proposed regulations that would interfere with the industrial opt out from regulatory efficiency programs under Indiana law. INDIEC further opposes any federally mandated EM&V requirements that would impose a new regimen of reporting and verification procedures for efficiency measures independently undertaken by industrial consumers.

Industrial consumers have strong motivation to optimize the efficient use of energy. Industrial operations are energy-intensive, making energy expense a major portion of the overall cost of production. Industrial consumers are subject, moreover, to intense competitive pressure in national and global markets, requiring a high degree of diligence in managing costs and avoiding waste. Especially as industrial electricity rates have escalated sharply in Indiana and are expected to continue to increase in the foreseeable future, efficient utilization of highly expensive energy resources has a material impact on the competitiveness of Indiana facilities. Aside from financial performance, industrial consumers are sophisticated businesses comprised of motivated individuals who take great pride in their work and care deeply about the quality of life in their communities. They continually strive to identify and realize process improvements as a routine component of the functions they perform. Both as a matter of corporate responsibility and individual commitment, they support the policy of energy efficiency and understand the benefits of conserving energy resources and preventing waste.

As sophisticated energy users, furthermore, industrial consumers are not dependent on utility personnel or third party administrators of regulatory programs to evaluate potential efficiencies. They are the experts in their own industrial processes and business operations, and are in the best position to determine where and how to implement any improvements. Unlike small volume consumers who may benefit from home energy audits and education on efficiency, industrial consumers have the expertise and resources to assess efficiency improvements without reliance on regulatory programs. Voluntary measures by large consumers maximize efficiency and cost-effectiveness because the consumer does not have to pay for administrative and program costs. At the same time, the devotion of private resources results in efficiency gains that are achieved without an impact on regulated rates.

The NPRM acknowledges that some core energy efficiency measures have established EM&V protocols while other types of measures do not, and calls for comment on whether EPA guidance should be limited to certain well-established programs. See Section VIII(F)(4). The State Plan Considerations TSD, at §4.2.1, points out that programs subject to Utility Commission oversight tend to have more rigorous and reliable EM&V procedures, while efficiency measures that are not subject to regulatory oversight have less established EM&V methodologies. Industrial efficiency efforts undertaken outside the scope of regulatory programs tend to be context-specific and driven by the particulars of the given industrial process, and hence are not readily quantified through established and standardized methodologies. Instead of attempting to establish uniform federal or state standards and requirements for individualized reporting and verification of industrial energy efficiency, measurement approaches utilizing sector-wide consumption and productivity data are both feasible and considerably less burdensome. See Projecting EGU CO_2 Emission Performance in State Plans TSD §V(A)(1) (describing distinction between "bottom-up" and "top-down" approaches to analyzing efficiency measures).

As an illustration of the preferable approach, attached as Exhibit C is a chart showing, for the time period from 1997 to 2013, both: (1) the aggregate annual electricity consumption of industrial consumers in Indiana, in GWhs as reported by the Energy Information Administration; and (2) the aggregate annual GDP output of Indiana manufacturers, in inflation-adjusted millions of dollars as reported by the Bureau of Economic Analysis. That chart shows significant increases in productivity over the time period, with relatively steady levels of electricity usage. The primary exceptions are a drop around 2001 and a larger drop around 2009, which are reflected in both reduced energy consumption and reduced productivity.

The same data, then, can be utilized to track the energy efficiency of industrial consumers in Indiana from 1997 through 2013, as shown in Exhibit D. That chart shows MWhs consumed per million dollars of GDP produced each year by Indiana manufacturers, or in other words the amount of energy consumed per unit of production. The progressive downward slope of the charted data indicates that Indiana industrial operations have consistently achieved continued improvements in energy efficiency, on the order of 30% or more across the 16-year period. The efficiency gains, notably, were being achieved long before the 2009 regulatory order requiring industrial consumers in Indiana to fund regulatory efficiency programs, and did not accelerate appreciably during the 2009-13 period of mandatory industrial participation in such programs. The data, in short, support the conclusion of the Indiana legislature that industrial consumers have more than sufficient incentive to pursue efficiency initiatives independent of regulatory programs.

The data presented in Exhibits C and D show that a top-down measurement approach is a feasible method for tracking industrial energy efficiency measures, without imposition of an onerous bureaucracy of individualized reporting and third party validation requirements. The data further point to several material considerations relating to industrial energy efficiency. In particular, with such substantial efficiency improvements being implemented since the late 1990s, it would be unreasonable to assume there is still a sizable reservoir of unaddressed potential to support incremental gains in coming decades. The circumstances of sophisticated energy consumers like the members of INDIEC, accordingly, are far different from residential consumers who may not yet have implemented an array of energy-saving measures that regulatory programs can target in the future. Any efficiency standard aimed at industrial consumers should recognize the extent of improvements already implemented.

In addition, Exhibit C indicates progressive advances in productivity over the 16-year period while energy consumption levels remained fairly steady. With improvements in energy efficiency, Indiana industrials have been able to increase productive output and cover the costs of relatively consistent energy usage, despite rising electricity rates. Compare Exhibit B. The significant improvements in energy efficiency shown in Exhibit D, however, have correlated to greater productivity rather than decreases in energy consumption. In the context of energy-intensive industrial operations, efficiency improves competitive position, mitigates unit cost and facilitates greater output. The relation between energy efficiency and productivity therefore promotes the policies of minimizing waste in energy usage and supporting a vibrant and growing economy, but simply assuming for purposes of setting state goals and assessing performance that advances in industrial efficiency will translate directly into corresponding reductions in carbon emissions does not account adequately for the dynamics of productive growth. Similarly, the assumption in the NPRM that the costs of energy efficiency measures will be offset by bill reductions due to decreased usage in all end-use sectors (see Section VI(C)(4)(c)) is less apparent in the context of industrial consumers. Compare Section VI(C)(1) (recognizing "rebound" effect by which heat rate improvements at coal-fired EGUs could lead to higher dispatch priority and increased utilization of more economically competitive units).

While Exhibits C and D show substantial improvements in industrial energy efficiency without reductions in energy consumption levels, Exhibit C does indicate industrial consumption declines when production drops due to adverse economic conditions. Around 2001 and again around 2009, manufacturing GDP in Indiana suffered significant plunges, and levels of industrial energy consumption tracked those drops with contemporaneous declines. That correlation confirms the common sense proposition that economic hardship drives down both the production

and energy usage of industrial operations. Economic adversity, however, is not the chosen implement for reducing energy use and emissions that the proposed regulations are designed to deploy, contrary to the objective of supporting a vibrant and growing economy.

The goals for Indiana should recognize that industrial operations consume nearly half of the electricity in the State, and should reflect the material differences between industrial efficiency efforts and regulatory programs aimed at residential and commercial consumers. Industrial consumers in Indiana can and do exercise great diligence in achieving efficient use of energy resources. Federal environmental regulations should respect the Indiana legislation allowing industrial consumers to opt out of regulatory efficiency programs, and should refrain from imposing unnecessary individualized EM&V requirements on Indiana industrials.

IV. Private Generation as a Valid and Effective Compliance Measure

The NPRM supports state flexibility in formulating and implementing compliance plans, notes that acceptable plans may include measures not used in determining the BSER, and seeks comment on consideration of other potential measures besides the four Building Blocks. See Section VIII(F)(8). The NPRM anticipates that the new regulations will spur private investment in low-emission power sources (Section I(A)(1)(a)), that new NGCC capacity would be an acceptable measure to reduce emissions (Section VI(C)(5)(c)), and that self-generation by large energy users such as combined heat and power (CHP) units would be a compliance option (Sections VI(E)(6)(b)(ii), VII(F)). The NPRM seeks specific comment on whether industrial CHP warrants particular consideration. See Section VIII(F)(8).

At the same time, the proposed criteria for measuring performance and determining achievement of state goals do not fully and readily accommodate the incorporation of private generation projects as a compliance measure. Under a rate-based system, renewable and

demand-side energy efficiency measures may be either credited toward a demonstrated emission rate or used by a state to administratively adjust an average emission rate. See NPRM Section VIII(F)(3). Under the alternative approaches to determining the BSER, similarly, the separately determined effects of the four Building Blocks as a portfolio are aggregated or, in addition to the first block, the other three are bases for quantifying reduced emissions. See Section VI(E)(7). In that context, comment is sought on whether measures other than Building Blocks 2-4 can support a showing that reduced utilization is adequately demonstrated. Id.

Private generation projects by industrial consumers, however, do not neatly fit into the categories of either Building Block 3 or 4. Such projects may or may not involve renewable energy resources, and may not be properly classified as demand-side energy efficiency, especially in light of the industrial opt out structure under Indiana law. In order to recognize the effect of private generation projects in reducing the emissions of affected EGUs, it is important that the standards and metrics for measuring performance properly capture such projects as a valid compliance measure.

In multiple respects, the development of private generation supporting industrial operations supports the objective of reducing carbon emissions from affected EGUs. Similar to demand-side energy efficiency initiatives, private energy resources tend to reduce the load served by the predominantly coal-fired utility generation in Indiana. New generation units built to modern standards and tailored to meet the needs of a specific industrial operation, moreover, tend to have a high degree of energy efficiency. A variety of technologies and fuel types may be deployed,[7] including NGCC and renewables, which generally will involve lower emission rates.

[7] *See, e.g.*, ICF International and U.S. Dept. of Energy, *Combined Heat and Power Units Located in Indiana*, http://www.eea-inc.com/chpdata/States/IN.html (listing units with combined cycle, boiler/steam turbines, microturbines, reciprocating engines, waste heat to power, and combustion turbines, fueled by natural gas, waste, biomass, coal and oil).

The utilization of private investment and financing, finally, does not require recovery through regulated utility rates and thereby reduces the compliance cost burden on the public.

The NPRM makes special note of industrial CHP (Sections VI(E)(6)(b)(ii), VIII(F)(8)), but recognition of private generation projects as a compliance measure should not be limited to a narrow definition of CHP. Depending on the application, the generation of electricity may have greater significance than producing thermal output, while other industrial processes utilize both. Large volume consumers may pursue projects involving renewable energy resources, which promote emission reductions even without a thermal component. Given the variety of approaches that may be developed and the objective of encouraging technological advances, all types of private energy projects that mitigate reliance on the capacity of affected EGUs should be accepted as a compliance measure in a valid state plan and should be duly reflected in the determination of performance and achievement of state goals.

V. Conclusion

INDIEC respectfully submits the foregoing comments in response to the NPRM. The proposed regulations should: (1) adopt standards and requirements consistent with the objective of supporting a vibrant and growing economy; (2) utilize the less stringent alternative goals and provide sufficient compliance time in order to preserve access to reliable and cost-effective energy; (3) reference a more representative baseline period than 2012 that will appropriately credit improvements already implemented and better reflect economic conditions moving forward; (4) establish goals that do not penalize gains in productivity and economic development; (5) preserve compatibility with the industrial opt out from regulatory efficiency programs under Indiana law; (6) avoid imposition of individualized reporting and validation

requirements for industrial energy efficiency efforts; and (7) fully recognize the broad array of private generation options as acceptable compliance measures under a valid state plan.

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Exhibit A
List of INDIEC Members

Indiana Industrial Energy Consumers, Inc.

The Voice of Industrial Energy in Indiana
2014 Members List

INDUSTRIAL MEMBERS

1. *Air Liquide*
2. *Air Products and Chemicals, Inc.*
3. *Allison Transmission, Inc.*
4. *ALCOA*
5. *ArcelorMittal*
6. *Ardagh Glass, Inc.*
7. *BP*
8. *Chrysler LLC*
9. *Eli Lilly and Company*
10. *General Motors*
11. *Haynes International, Inc.*
12. *Honda of America Mfg., Inc.*
13. *Ingredion (formerly National Starch/Corn Products)*
14. *Lehigh Hanson*
15. *Linde Group*
16. *Marathon Petroleum Company LLC*
17. *NLMK Indiana*
18. *Novelis Corporation*
19. *Praxair, Inc.*
20. *Rolls-Royce Corporation*
21. *Sony DADC*
22. *Subaru of Indiana Automotive, Inc.*
23. *Tate & Lyle*
24. *Toyota Motor Manufacturing Indiana*
25. *U.S. Gypsum*
26. *Vertellus Specialties, Inc.*

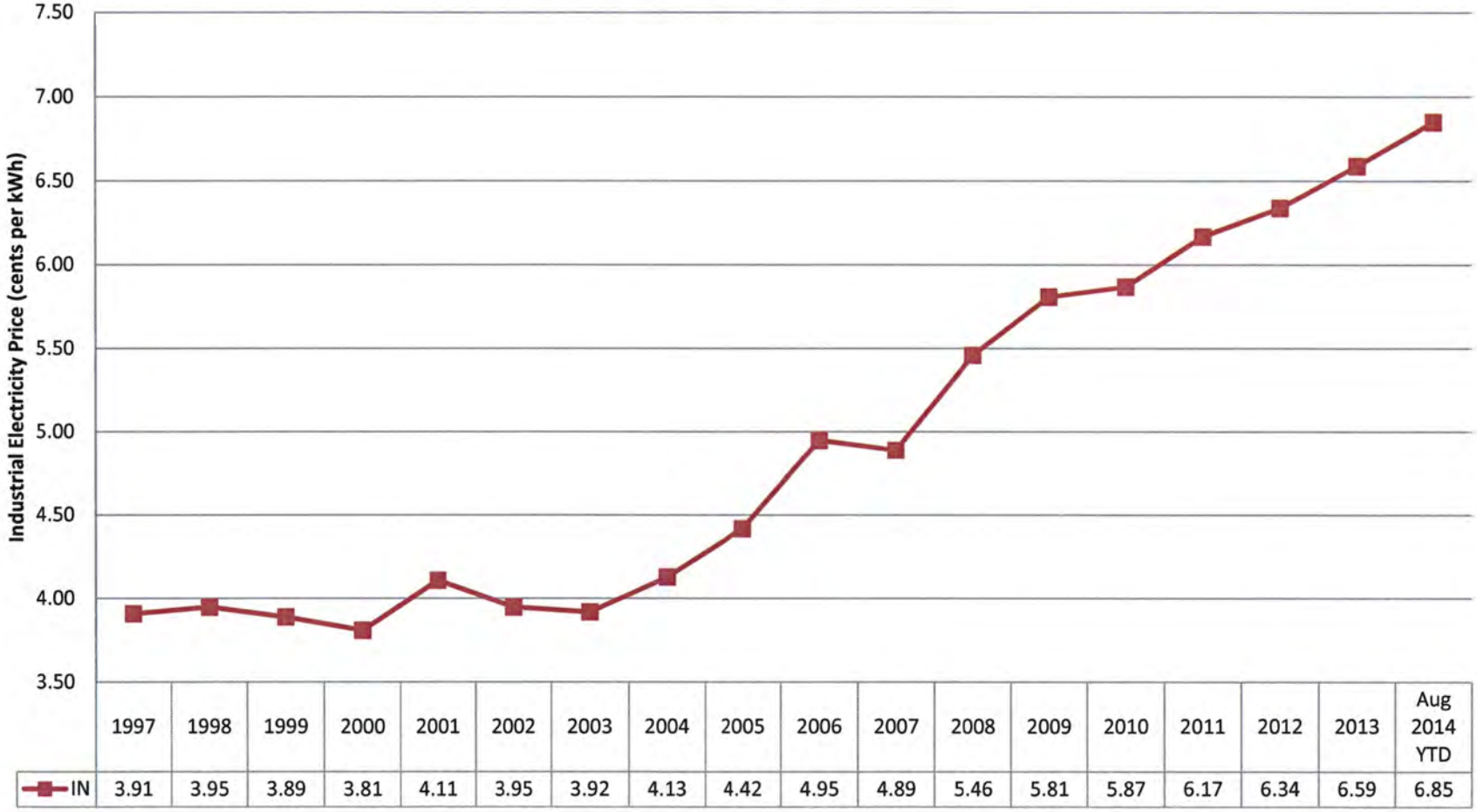
AFFILIATE MEMBERS

1. *Indiana Cast Metals Association*
2. *BP Canada Energy Marketing Corp*
3. *Shell Energy North America*
4. *CenterPoint Energy*
5. *EDF Energy Services*

Exhibit B
Indiana Industrial Electricity Prices

Industrial Electricity Prices for Indiana

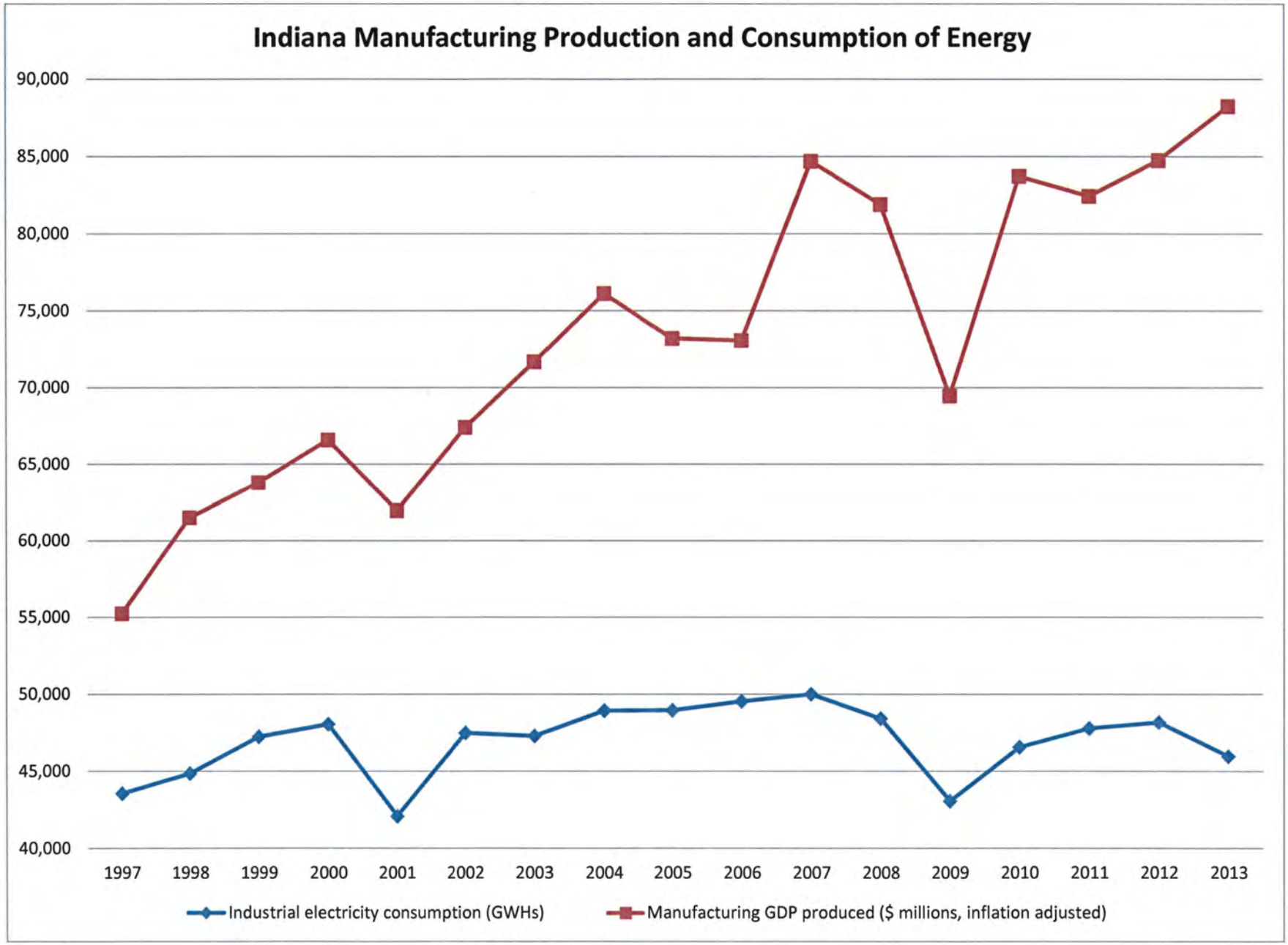
(1997-2014 YTD)



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Aug 2014 YTD
IN	3.91	3.95	3.89	3.81	4.11	3.95	3.92	4.13	4.42	4.95	4.89	5.46	5.81	5.87	6.17	6.34	6.59	6.85

Source: U.S. Energy Information Administration
"1990-2012 Average Price by State by Provider" available at http://www.eia.gov/electricity/data/state/.
"Average Retail Price of Electricity to Ultimate Customers," Table 5.6B, Electric Power Monthly (February 2014 and October 2014), available at http://www.eia.gov/electricity/monthly.

Exhibit C
Indiana Manufacturing Production and Consumption of Energy


Indiana Manufacturing Production and Consumption of Energy
90,000
85,000
80,000
75,000
70,000
65,000
60,000
55,000
50,000
45,000
40,000
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Industrial electricity consumption (GWHs)
Manufacturing GDP produced ($ millions, inflation adjusted)

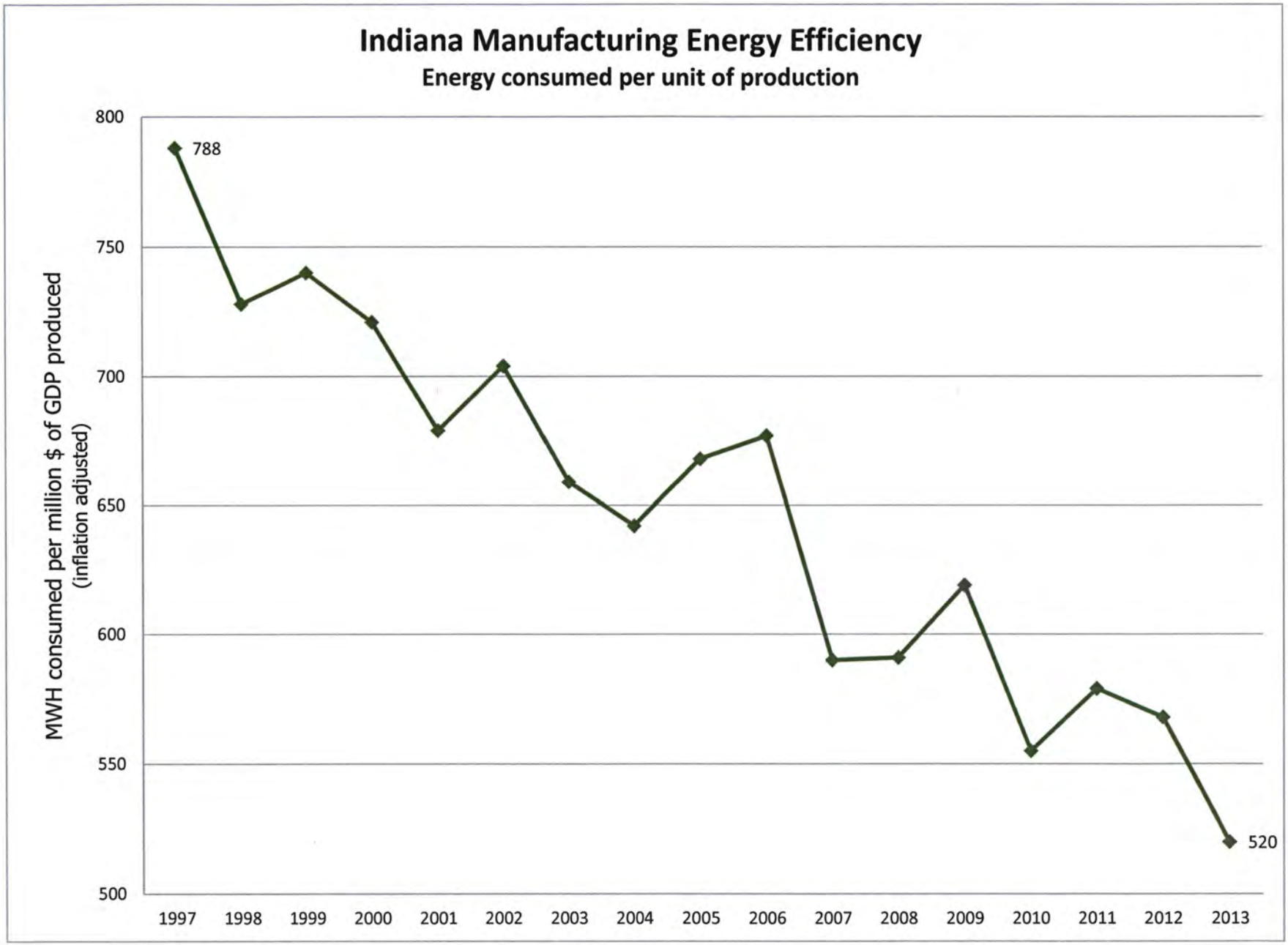
Indiana Industrial Manufacturing Production and Consumption of Energy

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Industrial electricity consumption (GWHs)	43,550	44,848	47,230	48,040	42,080	47,481	47,284	48,928	48,944	49,530	49,988	48,411	43,055	46,552	47,774	48,168	45,965
Manufacturing GDP produced ($ millions, inflation adjusted)	$ 55,254	$ 61,524	$ 63,799	$ 66,596	$ 61,972	$ 67,421	$ 71,703	$ 76,133	$ 73,223	$ 73,090	$ 84,702	$ 81,907	$ 69,476	$ 83,733	$ 82,453	$ 84,757	$ 88,249

*Source: Energy Information Administration (EIA).
Data through 2012 is available at "1990-2012 Retail Sales of Electricity by Sector by Provider," available at: http://www.eia.gov/electricity/data/state/. Data for 2013 is available at Electric Power Monthly, February 2014 Issue: Table 5.4B - Retail Sales of Electricity to Ultimate Consumers, available at: http://www.eia.gov/electricity/monthly/.

**Source: Bureau of Economic Analysis (BEA).
Real GDP by State (chained 2009 dollars) - Indiana Manufacturing. Available at: http://www.bea.gov/iTable/index_regional.cfm

Exhibit D
Indiana Manufacturing Energy Efficiency


Indiana Manufacturing Energy Efficiency
Energy consumed per unit of production
MWH consumed per million $ of GDP produced
(inflation adjusted)
800
750
700
650
600
550
500
788
520
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

Indiana Manufacturing Productivity: MWH Consumed / GDP Produced

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Retail Sales of Electricity to Industrial Customers (MWHs)*	43,549,837	44,848,353	47,230,192	48,040,239	42,079,603	47,481,232	47,283,820	48,928,497	48,944,355	49,529,872	49,987,609	48,411,138	43,055,162	46,551,671	47,774,083	48,167,545	45,965,000
Manufacturing GDP (millions of CHAINED 2009 dollars)**	$ 55,254	$ 61,524	$ 63,799	$ 66,596	$ 61,972	$ 67,421	$ 71,703	$ 76,133	$ 73,223	$ 73,090	$ 84,702	$ 81,907	$ 69,476	$ 83,733	$ 82,453	$ 84,757	$ 88,249

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
MWH consumed/$ million GDP produced	788	728	740	721	679	704	659	642	668	677	590	591	619	555	579	568	520

*Source: Energy Information Administration (EIA).

Data through 2012 is available at "1990-2012 Retail Sales of Electricity by Sector by Provider," available at: http://www.eia.gov/electricity/data/state/. Data for 2013 is available at Electric Power Monthly, February 2014 Issue: Table 5.4B - Retail Sales of Electricity to Ultimate Consumers, available at: http://www.eia.gov/electricity/monthly/.

**Source: Bureau of Economic Analysis (BEA).
Real GDP by State (chained 2009 dollars) - Indiana Manufacturing. Available at: http://www.bea.gov/iTable/index_regional.cfm