Hoosier Environmental Council

3951 N. Meridian St., Ste. 100, Indianapolis, IN 46208
P 317.685.8800 F 317.688.4794
WWW.HECWEB.ORG

May 16, 2022

Dr. Bradley Borum
Director of Research, Policy, and Planning Division
Indiana Utility Regulatory Commission
bborum@urc.in.gov

RE: Comments on the Duke Energy Indiana 2021 Integrated Resource Plan (IRP)

Dear Dr. Borum,

I am writing on behalf of the Hoosier Environmental Council regarding Duke Energy Indiana's proposed 2021 Integrated Resource Plan (IRP). HEC sincerely appreciates the opportunity to submit these comments.

Founded in 1983, the Hoosier Environmental Council (HEC) is the largest statewide environmental policy organization in Indiana. HEC aims to advance solutions that are good for the economy and good for the environment. HEC's work has included advocating for safe coal ash disposal in Indiana for over 20 years.

Duke's proposed IRP continues the use of coal for another 12 years, retiring all uses of coal by 2035. A choice to continue using coal means continuing to deal with the waste. Unfortunately, the coal ash left after burning coal contains toxic heavy metals that contaminate water. Further, Duke's coal ash disposal in Indiana is largely in flood-prone areas where the stored ash creates a spill risk. In these comments I have assembled information on the quantity of coal ash Duke currently produces in Indiana, the projected amount over the next 12 years, the disposal costs, and the risks of coal ash damage to natural resources that could be imposed on society from Duke's continued burning of coal.

Burning coal creates a toxic byproduct with long-term consequences. In judging Duke's 2021 IRP, we urge the Utility Regulatory Commission to take the full impact of generating coal ash into account, along with the myriad other reasons to stop burning coal, and push for a more rapid phase-out.

Burning coal creates a large amount of waste

In its 2021 IRP, Duke Energy Indiana proposes to continue using coal at its Cayuga, Gibson, and Edwardsport plants. Coal combustion at the Cayuga and Gibson Generating Stations leads to the generation of fly ash, bottom slag, and flue-gas desulfurization waste, which are referred to collectively as coal ash or coal combustion residuals (CCR). Duke Energy Indiana (DEI) is currently burning enough coal to generate more than 1.4 million tons of coal ash per year.

Quantity of coal-related waste from DEI[1]

	Tons of waste produced in 2018	Tons of waste produced in 2019	Tons of waste produced in 2020	Average tons of waste 2018-2020
Cayuga	599,900	417,900	548,900	522,200
Gibson	1,918,800	1,027,200	1,196,700	1,380,900
Edwardsport	312,100	312,500	246,600	

Coal gasification at the Edwardsport plant creates a waste called gasification slag. While gasification slag is considered to have lower environmental risks than coal ash[2], it still creates a burden in that it must be collected, transported, and either sold for reuse or landfilled. The Edwardsport plant is generating around 300,000 tons of gasification slag per year[3]. The focus of these comments is the coal ash from Cayuga and Gibson.

In the 2021 IRP, DEI gives projected dates of retirement for its remaining coal-burning power plants. Using the average coal ash (CCR) production from 2018 through 2020, it is possible to estimate approximately what the production of CCR will be between now and retirement for each of these facilities. For the coal-burning units at Gibson, the estimates below use their proportion of Gibson's total energy production to estimate the amount of CCR from each of the retiring units.

[1] US Energy Information Administration, Form EIA-923, Schedule 8
[2] National Energy Technology Laboratory. *Major Gasification Solid Byproducts.* https://netl.doe.gov/research/Coal/energy-systems/gasification/gasifipedia/solid-byproducts
[3] US Energy Information Administration, Form EIA-923, Schedule 8

Estimated CCR from DEI through 2034[4]

	Average tons CCR per year[5]	Retirement	Years of CCR production before retirement	Tons CCR production before retirement
Gibson (2845 MW)	1,380,900			
Gibson 5 (313 MW)	151,923	2025	2.5	380,000
Cayuga 1&2	522,200	2027	4.5	2,350,000
Gibson 3&4 (1262 MW)	612,547	2029	6.5	3,982,000
Gibson 1&2 (1270 MW)	616,430	2035	12.5	7,705,000
Total				14,417,000

This table shows that if DEI follows the retirements listed in the 2021 IRP, it will produce approximate 14.4 million tons of additional coal ash between now and 2035 when the last coal-burning unit retires.

Environmental and Health Risks from CCR

If not handled properly, coal ash (coal combustion residuals or CCR) can create dust hazards, catastrophic spills, contaminated land, and contaminated water. Dry CCR that becomes air-borne creates a dust hazard because particles in coal ash can be as small as 1 micron.[6] At that size, the particles can be inhaled deep into the alveoli of human lungs. Fine particulate matter at that size is well documented to exacerbate both respiratory and cardiovascular diseases.[7]

CCR spills happen when coal ash disposal sites fail and release the ash onto the landscape and into waterways. Coal ash released into waterways can damage aquatic life through the contaminants it adds to the water and by smothering habitat[8]. There have been a number of costly examples. A coal ash

[4] Duke Energy Indiana (15 Dec 2021). 2021 Duke Energy Integrated Resource Plan: Non-Technical Summary, Vol II, coal retirements page 13
[5] Based on CCR production data from Form EIA-923, Schedule 8 for years 2018, 2019, and 2020.
[6]Electric Power Research Institute (2009). Coal Ash: Characteristics, management and environmental issues.
[7]Romieu, I. Hernandez-Avila, M. and Holguin, F. (2011). Outdoor Air Pollution. Chapter 6 in Occupational and Environmental Health, Levy, B, Wegman, D, Baron, S, and Sokas, R editors.
[8] U.S. EPA (March 2014). *Response update: Eden North Carolina Coal Ash Spill.* https://www.epaosc.org/sites/9065/files/Eden%20NC%20Coal%20Ash%20Spill%20info%20update%203%20Final%20030614.pdf

impoundment at the Eagle Valley Generating Station in Indiana failed twice in 2007 and 2008 releasing a total of 60 million gallons into the White River[9]. None of that ash was ever recovered[10]. In 2008, 1.1 billion gallons of coal ash spilled from an impoundment in Kingston, Tennessee. It covered 300 acres[11] with sludge up to 6 feet deep[12] and destroyed 12 homes[13]. No one was killed during the spill, but many of the cleanup workers became sick and 40 died from causes believed to be linked to working on the ash[14, 15]. The spill entered rivers that were sources of drinking water and caused a major fish kill[16]. The Kingston coal ash cleanup cost Tennessee Valley Authority (TVA) ratepayers a total of $1.2 billion[17].

In 2014, 39,000 tons of coal ash spilled from an impoundment at Duke Energy's Dan River Generating Station into the Dan River in North Carolina and was carried downstream as far as Kerr Lake in Virginia, 70 miles downstream[18]. One study estimated the total ecological, recreational, human health, property value, and aesthetic cost of the Dan River spill at $295 million[19]. Assessments by North Carolina, Virginia, and the U.S. government found significant damage to natural resources that led them to file a suit against Duke Energy in 2019[20].

Even without a spill, CCR can contaminate land and water because it contains toxic heavy metals. Among the 15 coal ash disposal sites in Indiana with groundwater monitoring under the federal CCR Rule, all but one have contaminated the groundwater rendering it unfit for use as drinking water with

---

[9] Commissioner of Department of Environmental Management v. Indianapolis Power and Light Co., Agreed Order, Case No. 2007-16780-W, 2008-17693-W, April 18, 2008. IDEM Virtual File Cabinet document #56808632

[10] Indianapolis Power and Light (May 2009). Response to U.S. EPA 104(e) Information Request to Indianapolis Power and Light Company ("IPL") - Eagle Valley Generating Station.

[11] Satterfield, J. (December 2018). TVA coal ash spill: 5 things to know on 10-year anniversary. *Knox News.* https://www.knoxnews.com/story/news/crime/2018/12/20/tennessee-coal-ash-spill-2008-kingston-tva-workers-dying/2333814002/

[12] (March 2019) *Kingston coal ash disaster still reverberates 10 years later.* https://www.southernenvironment.org/news-and-press/news-feed/kingston-coal-ash-disaster-still-reverberates-10-years-later

[13] (2009, May) The Lasting Damage of the Tennessee Coal Ash Spill. *Scientific American.* https://www.scientificamerican.com/article/tennessee-coal-ash-spill/

[14] Bourne, J.K. (Feb, 2019). *Coal's other dark side.* https://www.nationalgeographic.com/environment/2019/02/coal-other-dark-side-toxic-ash/

[15] Satterfield, J. (2019). TVA admits potential liability in case of sickened coal ash workers, may hit ratepayers https://www.knoxnews.com/story/news/crime/2019/02/05/coal-ash-spill-sick-workers-tva-liability-jacobs-engineering/2733792002/

[16] (2009, May) The Lasting Damage of the Tennessee Coal Ash Spill. *Scientific American.* https://www.scientificamerican.com/article/tennessee-coal-ash-spill/

[17] Satterfield, J. (2018, December). TVA coal ash spill: 5 things to know on 10-year anniversary. *Knox News.* https://www.knoxnews.com/story/news/crime/2018/12/20/tennessee-coal-ash-spill-2008-kingston-tva-workers-dying/2333814002/

[18] Complaint filed in United States of America; The State of North Carolina; and the Commonwealth of Virginia, Secretary of Natural Resources v. Duke Energy Carolinas, LLC., U.S. District Court Middle District of North Carolina (2019) Civil Action No. 1:19-cv-707.

[19] Lemly, D.A. (2015). Damage cost of the Dan River coal ash spill. *Env Pollution* 197, https://doi.org/10.1016/j.envpol.2014.11.027

[20] US, NC and VA vs Duke Energy (2019). Civil Action No. 1:19-cv-707

varying combinations of antimony, arsenic, boron, cobalt, lead, lithium, molybdenum, radium, selenium and thallium[21]. These metals do not biodegrade, so they are long-term pollutants.

The Town of Pines, Indiana, is an example of soil contamination by coal ash. In past decades, coal ash was used extensively as road bed and landscaping fill throughout the town. Discovery of contaminated wells in the early 2000's eventually led to investigation of soil on residential properties. The utility, NIPSCO, had to remediate many properties by removing soil with high levels of arsenic and other metals and replacing it with clean soil[22].

Given the risks from coal ash – dust hazards, spills, and soil and water contamination – safe handling and disposal are essential. The safest options for coal ash disposal are 1) mixing it into a solid matrix that locks the contaminants away, like cement, or 2) disposing of it in a well-engineered, lined landfill located on high ground away from flood-prone areas. Unfortunately, the majority of Indiana's coal ash currently resides in unlined disposal structures in the floodplain.

Short-term Costs of Disposal

Safe disposal of coal ash that is protective of human health and the environment requires steps to control dust hazards, prevent spills, and prevent soil and water contamination. For many decades, disposal of coal combustion residuals was exempt from most waste handling laws, so utilities disposed of it in the least expensive manner. Inexpensive disposal methods led to externalized costs imposed on society in the form of contaminated water, contaminated soil, and spills[23]. Eventually, documentation of coal ash hazards triggered EPA's writing the Coal Combustion Residuals Rule (CCR Rule), which went into effect in 2015[24]. The CCR Rule imposes requirements for controlling dust and for disposal that reduces the risk of spills and soil and water contamination.

Because of the federal CCR Rule, Duke Energy Indiana has had to make significant changes in handling and disposal of coal ash. Since 2015, the company has implemented dry ash handling and dust control plans, and shifted from using impoundments to landfilling the majority of its ash.

Going forward, any coal ash generated by Duke will have disposal costs, and those costs are higher than they used to be prior to the 2015 federal CCR Rule. Duke has reportedly estimated that dry ash handling costs 185% more per ton than the former wet disposal in impoundments[25].

---

[21] HEC compiled the utilities' groundwater data into a report, *Our Waters at Risk, Part 2: The Impact of Coal Ash on Indiana's Water Resources,* available at https://www.hecweb.org/wp-content/uploads/2020/11/Our-Waters-at-Risk-Part-2.pdf

[22] US EPA (Sept 2016). Town of Pines Superfund Site, Record of Decision. https://semspub.epa.gov/work/05/508886.pdf

[23] EPA (2007). *Coal Combustion Waste Damage Case Assessments.*

[24] https://www.epa.gov/coalash/coal-ash-rule

[25] John Downey (Dec 6, 2019). What insurers allege about Duke Energy's knowledge of coal-ash risk at Mayo plant, *Charlotte Business Journal*

Short-term disposal costs for coal ash include controlling dust, transporting the ash, placement in the landfill, control of run-on and run-off stormwater, construction of cover over the ash, collection of leachate that forms in the ash, and treatment and disposal of the leachate. The leachate alone can be a significant disposal burden. In 2020, the Gibson South Landfill generated more than 69 million gallons of leachate[26]. As disposal facilities reach capacity, there is also the cost of constructing expansions for the landfills.

Long-term Costs of Coal Ash Disposal

Given the enduring nature of the heavy metal contaminants in coal ash, disposal solutions for coal ash must be stable and permanent, so there are long-term costs associated with generating coal ash. Coal contains trace heavy metals that are more concentrated in the coal ash after the carbon has been burned off. Depending on the source of the coal, coal ash contains a variable mix of antimony, arsenic, boron, hexavalent chromium, cobalt, lead, lithium, mercury, molybdenum, radium, selenium and thallium[27]. Some wastes breakdown into harmless degradation products over time, but this is not the case with coal ash and the heavy metals it contains. Over time, these metals can shift between chemical forms or be moved around by wind or water, but they do not break down or disappear. This makes coal ash a forever pollutant.

The federal CCR Rule only partially accounts for the long-lasting nature of coal ash. After a disposal site stops receiving coal ash, the Rule requires closure, which involves either excavating and removing the waste to a safer location or -- if site conditions allow -- leaving the ash in place by constructing a final cover system over the ash and implementing other measures to ensure protection of ground and surface waters. Specifically, the final cover and other measures must prevent release of the ash, prevent stormwater and groundwater from infiltrating into the waste, and prevent coal ash contaminants from leaching into the groundwater or running off to nearby surface waters.[28]

The Rule also requires that coal ash disposal sites monitor groundwater to detect any release of coal ash contaminants. If a release is detected, the Rule requires corrective measures to prevent further releases and to address the contaminated groundwater[29]. The maintenance of the final cover over the ash, collection and treatment of leachate, and monitoring groundwater are required for 30 years after closure; and may continue thereafter if there is ongoing groundwater contamination at the 30-year mark[30].

[26] O.Schwartz (March 1, 2021). Gibson Station South Landfill Leachate Generation Report. VFC doc # 83121347
[27] Electric Power Research Institute (2006). *Characterization of Field Leachates at Coal Combustion Product Management Sites.*
[28] 40 CFR § 257.102
[29] 40 CFR § 257.90 through 257.98
[30] 40 CFR § 257.104

The more than 14 million tons of coal ash that will be generated by Duke Energy Indiana's preferred portfolio over the next 12 years will be subject to these long-term requirements of the CCR Rule and the costs of those requirements. Those costs must be taken into account in planning future energy production. Groundwater contamination has already been detected at Cayuga and Gibson, so the process of assessing and implementing groundwater corrective measures and closure is already under way for coal ash that was disposed of in the past. If DEI elects to continue burning coal and generating coal ash, the future disposal sites will be subject to closure requirements and are at risk of also contaminating groundwater and needing corrective measures, as well.

In Duke's response to HEC's data requests during the IRP process, they stated that their modeling included their variable operations and maintenance costs for CCR management including handling, transportation and placement expenses, and their fixed operations and maintenance costs, which include inspections, monitoring, and maintenance of landfills. Duke's response did not specifically mention the costs of corrective measures for groundwater contamination, leaving the inference that they are not accounted for in Duke's modeling.

Corrective measure for groundwater contamination can vary widely from millions of dollars to pump the groundwater and treat it to very little for a wait and watch approach referred to as "monitored natural attenuation". The EPA recently made it clear that "monitored natural attenuation" is an inappropriate corrective measure for the contaminants in coal ash because it relies on dispersion and dilution rather than removal of the contaminants from the environment, as required under 40 CFR 257.97(b)(1) and (4)[31]. Therefore, if the 14 million tons of additional coal ash Duke produces between now and 2035 contaminates groundwater, as so much of the coal ash produced to date has done, the required corrective measures are likely to be expensive.

Long-term Costs Beyond the CCR Rule

Unfortunately, coal ash lasts indefinitely and could generate significant costs to society well beyond the 30-year regulatory window from the federal CCR Rule. Those costs would be in the form of damage to natural resources from spills and from water contamination. After 30 years, maintenance of the disposal structures (impoundments and landfills) is no longer required, unless there is still ongoing groundwater contamination at that time. Duke's maintenance obligation will end, but the coal ash will still be there.

At Duke's Cayuga and Gibson plants, the coal ash disposal structures are at risk of failure due to their locations and construction and that risk increases once maintenance ends. The Gibson Station is located in the New Madrid and Wabash Valley seismic zones, which increases the risk of a spill. AECOM performed a seismic evaluation of the Gibson landfill and recommended modifications of the perimeter

[31] EPA (11 Jan, 2022) Proposed Denial of Alternative Closure Deadline for Clifty Creek Power Station. Pages 60-61

embankments[32]. ATC Group Services has written that it plans to follow AECOM's recommendations at Gibson[33], and Duke Energy has certification by a professional engineer that the landfill meets the requirements of 40 CFR 257.64 regarding CCR units in unstable areas[34]. However, there are no guarantees that there won't be releases of CCR during future seismic events, particularly once the company is no longer responsible for site maintenance.

The liner under the newer sections of the Gibson landfill is built to CCR Rule specifications, but seismic forces could disrupt it. In AECOM's seismic evaluation, they qualified their assessment of whether the liner at the Gibson landfill would fail during an earthquake because they did not have access to actual liner materials in order to test them.[35] A failed liner would lead to groundwater contamination.

Coal ash disposal at Cayuga is also at risk of failure. The impoundments at Cayuga hold more than 10 million tons of coal ash accumulated over multiple decades. They are deep enough that up to 20 feet of the ash is below the water table and soaking in the groundwater. This saturated ash does not provide a stable foundation for the waste and could lead to failure of the closed structure and release of the ash[36, 37].

Along with their seismic and structural risks for failure, Duke's coal ash disposal sites at Gibson and Cayuga are located immediately adjacent to the Wabash River, which could threaten their integrity. At Gibson, the South Landfill is located in the 100-year floodplain, as are portions of the coal ash impoundments at Cayuga [38]. Future flood events could damage those disposal structures and allow release of coal ash.

The coal ash disposal structures at Gibson and Cayuga could also be impacted by fluvial processes that cause the Wabash River to shift in its course over time. In 2013 the US Geological Survey published a report on channel migration rates for 38 of the largest streams in Indiana[39]. The image below, from the cover of the USGS report, illustrates channel migration over a period of just 7 years. The blue arrows point to utility poles.

---

[32] AECOM (June 25, 2021) Geotechnical Engineering Report Duke Gibson South Aggregate Landfill Expansion Project Revised Seismic Evaluation. Available in Appendix A of VFC doc # 83180925

[33] ATC Group Services LLC (July 9, 2021). Response to Request for Additional Information, VFC doc #83180925.

[34] D. Duffy, P.E. (Oct 9, 2018). Unstable Areas, CCR Landfill: Gibson Steam Station, CCR Unit: Restricted Waste Site Type I Landfill. https://desitecoreprod-cd.azureedge.net/_/media/pdfs/our-company/ash-management/183130/p08-126-gib-unstable-areas-sland.pdf?la=en&rev=e81671b05c9a46e89181aa21a08e22a9

[35] AECOM (June 25, 2021) Geotechnical Engineering Report Duke Gibson South Aggregate Landfill Expansion Project Revised Seismic Evaluation. Available in Appendix A of VFC doc # 83180925

[36] Hoosier Environmental Council, Sierra Club, Earthjustice, and Citizens Action Coalition. (July 24, 2017). Comments on the Cayuga Generating Station Ash Pond System Modified Closure & Post-closure Plan.

[37] (Dec 16, 2016). Proposed Modification to Existing Closure and Post-closure Plan, Ash Disposal Area #1, Cayuga Generating Station. VFC doc #80399269

[38] Flood Insurance Rate Map (FIRM) accessed at maps.Indiana.edu

[39] US Geological Survey, *Recent (circa 1998 to 2011) Channel-Migration Rates of Selected Streams in Indiana,* Report 2013-5168

Where coal ash disposal sites are adjacent to rivers, as is the case at Gibson and Cayuga, channel migration could erode into the coal ash disposal structures over time causing release of the ash. This will be particularly true after Duke's maintenance obligation ends.

Once Duke is released from its obligation to maintain the coal ash disposal structures, the covers built over the ash could also fail. The planned covers will be constructed of geomembrane, soil, and vegetation. Over time, the processes of erosion, flood damage, tree-root growth, animal burrowing, and seismic activity will reduce the cover's ability to keep water out of the ash. Water in contact with coal ash becomes contaminated with the heavy metals. The longer Duke is producing coal ash, the more coal ash will be placed under such covers, and the greater the likelihood of water contamination in the future.

In the 2021 IRP, Duke is proposing to burn enough coal to generate another 14 million tons of coal ash. If their plan is enacted, Duke will close the coal ash disposal structures at Cayuga after the plant's retirement in 2027 and at Gibson after its retirement in 2035. Then there will be 30 years of maintaining the disposal structures and monitoring groundwater. Once Duke is free from maintenance obligations, the disposal structures will naturally start to deteriorate. They will be damaged during flood events, since a significant portion of them are in the floodplain. Deterioration of the disposal structures will lead to release of coal ash, water contamination, and spills. That will damage Indiana's natural resources and the cost burden from that damage will fall to the state and its citizens. If Duke stops

burning coal sooner, the disposal structures will contain less coal ash and the eventual burden to society will be less.

The Cost of Natural Resource Damage

Coal ash damage to natural resources has created high cleanup costs in other states. In the Carolinas, Virginia, Tennessee, Illinois, Georgia, and Florida utilities are excavating old, leaking coal ash impoundments that are contaminating groundwater and rivers. In fact, Duke Energy is excavating all of its leaking coal ash impoundments in the Carolinas and either sending that ash for use in cement or placing it in landfills on high ground at a cost of more than $100 million per site[40].

So far, Duke Energy is not providing the same level of natural resource protection in Indiana as it is in other states when it comes to coal ash cleanup. In Indiana, its plans to date have been to leave the leaking coal ash impoundments in place in flood-prone areas and saturated in groundwater thereby perpetuating the groundwater contamination. In the future, if Duke is held to the same standards in Indiana that it has to meet in the Carolinas, it could face significant added cleanup costs for coal ash. If it is not, then the natural resource damage will be an externalized cost imposed on Hoosiers. The longer Duke generates coal ash, the greater that cost.

Conclusion

Duke Energy Indiana's current preferred portfolio in the 2021 IRP will continue the burning of coal for an additional 12 years in Indiana generating approximately 14.4 million tons of new coal ash. Coal ash contains toxic heavy metals which do not biodegrade over time, so coal ash is a forever pollutant that must have a permanent solution. When coal ash gets wet, it contaminates water with the heavy metals, so the disposal solution must not only be permanent, it must also keep the coal ash dry.

Current disposal practices at the Cayuga and Gibson plants, where Duke proposes to continue burning coal, are not stable, secure, or permanent solutions for the coal ash, nor are they keeping the coal ash dry. At Cayuga, ash currently being produced is being added to impoundments where the deepest ash is infiltrated by groundwater, which lowers the stability of the structure. The Gibson coal ash landfill is in the New Madrid seismic zone, and both Cayuga and Gibson are in the floodplain of the Wabash River and at risk of being flooded. If the Cayuga or Gibson disposal structures fail, they will produce significant and highly damaging spills. Both sites have significant groundwater contamination from the coal ash and continued production of coal ash will worsen the contamination.

Continuing to burn coal for another 12 years in Indiana means incurring the costs associated with coal ash. There are the short-term costs of handling and transporting the ash and placement in a disposal

[40] Direct Testimony of Jon F. Kerin (2017). Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina. Docket no. E-7 Sub 1146, Exhibit 11.

structure. Following closure of the disposal structure, regulations require the utilities to maintain the disposal structure and monitor the groundwater for another 30 years. If groundwater contamination is detected, as has been the case at nearly all coal ash disposal sites in Indiana to date, then corrective measures are required, which are likely to be expensive.

Beyond these predictable costs of coal ash disposal and the regulatory requirements, coal ash creates additional cost burdens to society. The regulatory requirements to maintain the disposal structures ends, but the coal ash remains a threat indefinitely. It will be capable of damaging natural resources long after the utility's regulatory obligation has ended. The cost of spills, releases, and groundwater contamination that happen after Duke's regulatory obligation ends will fall on society. The cost of using coal includes this lasting potential for damage to natural resources.

When coal is used to generate electricity, a hazardous byproduct, is generated. The continued use of coal for electricity is not in the public's best interest for many reasons including the production of greenhouse gases, the environmental damage from coal mining, and the release of air pollutants. The production of coal ash and the damage it causes to natural resources is one more reason the use of coal is not in the public interest.

The Hoosier Environmental Council urges the Utility Regulatory Commission to do all it can to phase out Duke's use of coal as rapidly as possible.

Sincerely,

Indra N. Frank, MD, MPH
Environmental Health and Water Policy Director
Hoosier Environmental Council

cc William Fine, Indiana Utility Consumer Counselor