U.S. Hydropower

Resource Assessment

Kentucky

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U.S. Hydropower Resource Assessment for Kentucky

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ABSTRACT

The U.S. Department of Energy is developing an estimate of the undeveloped hydropower potential in the United States. The Hydropower Evaluation Software (HES) is a computer model that was developed by the Idaho National Engineering and Environmental Laboratory for this purpose. HES measures the undeveloped hydropower resources available in the United States, using uniform criteria for measurement. The software was developed and tested using hydropower information and data provided by the Southwestern Power Administration. It is a menu-driven program that allows the personal computer user to assign environmental attributes to potential hydropower sites, calculate development suitability factors for each site based on the environmental attributes present, and generate reports based on these suitability factors. This report describes the resource assessment results for the State of Kentucky.

ACKNOWLEDGMENTS

The authors thank Peggy A. M. Brookshier and John V. Flynn of the U.S. Department of Energy, and Ghasem Pour-ghasemi of the State of Kentucky for his active participation and timely comments.

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U.S. Hydropower Resource Assessment for Kentucky

INTRODUCTION

In June 1989, the U.S. Department of Energy initiated the development of a National Energy Strategy to identify the energy resources available to support the expanding demand for energy in the United States. Public hearings conducted as part of the strategy development process indicated that undeveloped hydropower resources were not well defined. As a result, the Department of Energy established an inter-agency Hydropower Resource Assessment Team to ascertain the undeveloped hydropower potential. In connection with these efforts by the Department of Energy, the Idaho National Engineering and Environmental Laboratory designed the Hydropower Evaluation Software (HES), which has been used to perform a resource assessment of the undeveloped conventional hydropower potential in over 40 states. This report presents the results of the hydropower resource assessment for the State of Kentucky. Undeveloped pumped storage hydropower potential is not included.

The HES was developed as a tool to measure undeveloped hydropower potential regionally or by state. The software is not intended to provide precise development factors for individual sites, but to provide regional or state totals. Because the software was developed as a generic measurement tool encompassing national issues, regional and state totals must be considered judiciously; various local issues may skew undeveloped hydropower potential totals. The information for the resource assessment was compiled from the Federal Energy Regulatory Commission's Hydroelectric Power Resources Assessment database and several other sources. Refer to DOE/ID-10338, the *User's Manual* (Francfort, Matthews, Rinehart 1991) for the specifics of the software and to DOE/ID-10430.1, the *Status Report* (Conner, Francfort, Rinehart 1996) for an overview of all resource assessment activities to date.

Model Development

Hydropower Evaluation Software, both a probability-factor computer model and a database, is a menu-driven program that is intended to be user-friendly. Computer screens and report-generation capabilities were developed to meet the needs of users nationwide. The software uses environmental attribute data to generate an overall project environmental suitability factor (PESF) between 0.1 and 0.9, where 0.9 indicates the highest likelihood of development and 0.1 indicates the lowest likelihood of development. The suitability factors depend on the unique environmental attributes of each potential site. They reflect the considerations that (a) environmental concerns can make a potential site unacceptable, prohibiting its development (for a suitability factor of 0.1), or (b) if there are no environmental concerns, there is no negative effect on the likelihood of site development (for a suitability factor of 0.9). A combination of attributes can result in a lower suitability factor because multiple environmental considerations would reduce the likelihood that a site may be developed to its physical potential.

Model Goal

The goal of the HES is to assemble an accurate resource database of all sites with undeveloped hydropower potential in the United States for use as a planning tool to determine the viable national hydropower potential. Undeveloped hydropower potential is not limited to the development of new sites; it also includes the development of additional hydropower-generating capacity at sites that currently have hydropower, but are not developed to their full potential. This undeveloped hydropower potential is a source of nonpolluting, renewable energy available to meet the growing power needs of the United States. The HES should help make this goal obtainable and ensure a set of uniform criteria for national assessment.

Dam Status

The effects of environmental attributes vary by dam status. The dam status classifications used are as follows:

W = Developed hydropower site with current power generation, but the total hydropower potential has not been fully developed. Only the undeveloped hydropower potential is discussed in this report.

W/O = Developed site without current power generation. The site has some type of developed impoundment or diversion structure, but no developed hydropower generating capability.

U = Undeveloped site. The site does not have power generation capability nor a developed impoundment or diversion structure.

ASSESSMENT RESULTS

Summary Results

A total of 51 sites (Table 1) have been identified and assessed for their undeveloped hydropower potential. The HES results for individual site capacities range from 35 kilo-

watts (kW) to 180 megawatts (MW). Sixty-five percent of the HES-modeled sites in Kentucky are small hydropower sites, less than 10 MW (Figure 1).

The nonmodeled undeveloped hydropower potential total for Kentucky was identified as 913 MW. The HES results lowers this estimate about 52% to 439 MW. The greatest reduction in undeveloped hydropower potential, by MW, occurs at sites that have some type of developed impoundment or diversion structure, but no hydropower generating capability (W/O category). These sites have a HES-modeled undeveloped hydropower potential of about 425 MW, a 426-MW, or 50% reduction in the estimated undeveloped hydropower potential (Figure 2). Figure 3 correlates the number of sites that have undeveloped hydropower potential with the total megawatts of HES-modeled undeveloped hydropower potential.

The 51 identified sites are located within three major river basins and several minor river basins. The number of sites per major river basin ranges from 2 in the Cumberland River basin to 17 in the Ohio Main Stream River basin (Figure 4). Fifty-two percent of the undeveloped hydropower potential in the State of Kentucky is contained within Ohio Main Stream River basin (Figure 5).

Table 1. Undeveloped hydropower potential summary for Kentucky. The table contains the nonmodeled undeveloped nameplate potential and the HES-modeled undeveloped potential totals.

	Number of projects	Nameplate potential (MW)	HES-modeled potential (MW)
With Power	1	19.2	9.6
W/O Power	46	851.3	425.1
Undeveloped	4	42.7	4.3
State Total	51	913.2	439.0

Figure 1. Number of sites, by capacity groups, with HES-modeled undeveloped hydropower potential.

Figure 2. The nonmodeled and HES-modeled undeveloped hydropower potential.

Figure 3. The number of sites with undeveloped hydropower potential and the total megawatts of HES-modeled undeveloped hydropower potential.

Figure 4. Number of sites with undeveloped hydropower potential in the Kentucky River basins.

Figure 5. Megawatts of HES-modeled undeveloped hydropower potential in the Kentucky River basins.

Detailed Results

The appendices contain, in the form of HES-generated reports, detailed information about the undeveloped hydropower potential in Kentucky. The appendices contain the following information:

Appendix A summarizes the undeveloped hydropower potential by dam status groups. The number of sites, nonmodeled undeveloped hydropower potential, and HES-modeled undeveloped hydropower potential is provided based on the dam status.

Appendix B provides the hydropower resource assessment by river basin, which includes the project number, project name, stream name, dam status, nonmodeled undeveloped hydropower potential, and the HES-modeled undeveloped hydropower potential for each site. Subtotals are provided for each river basin.

Appendix C lists the project numbers, plant name, stream name, if a site is Federally owned, nonmodeled undeveloped hydropower potential,

and HES-modeled undeveloped hydropower potential. The sites are grouped by dam status.

Appendix D contains a resource database list for the 51 sites in Kentucky. Information includes plant name, stream, state, county, river basin and owner names, project number, nameplate and HES-modeled undeveloped hydropower potential, the unit and plant types, dam status, latitude, longitude, and the environmental factors that the HES uses to determine the PESF.

OBTAINING INDIVIDUAL STATE INFORMATION

Additional copies of the hydropower resource assessment results for individual states are available and can be obtained by writing or calling the authors or the National Technical Information Service (NTIS).

Telephone Orders—(703) 487-4650. NTIS sales desk and customer services are available between 8:30 a.m. and 5:00 p.m., Eastern Standard Time.

Fax—(703) 321-8547. Customers may fax their orders to NTIS. These orders may be charged to a NTIS deposit account, American Express, VISA, or MasterCard.

Mail Orders—Mail orders should be sent to National Technical Information Service, Document Sales, 5285 Port Royal Road, Springfield, VA 22161. Call the sales desk for prices before placing an order.

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For Help in Tracing an Order—Call (703) 487-4650 and request the customer service option.

ADDITIONAL HYDROPOWER EVALUATION SOFTWARE INFORMATION

Additional information concerning the HES can be obtained by contacting Ben Rinehart or Jim Francfort at the addresses provided below. Copies of the software and the User's Manual may also be obtained from these individuals.

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REFERENCES

Conner, A. M., J. E. Francfort, and B. N. Rinehart, 1996, *Uniform Criteria for U.S. Hydropower Resource Assessment, Hydropower Evaluation Software Status Report-II*, DOE/ID 10430.1, Idaho National Engineering Laboratory, Idaho Falls, Idaho.

Francfort, J. E., S. D. Matthews, and B. N. Rinehart, 1991, *Hydropower Evaluation Software User's Manual*, DOE/ID-10338, Idaho National Engineering Laboratory, Idaho Falls, Idaho.

Appendix A
Summary Report

DATE: 07/09/98

H Y D R O P O W E R C A P A C I T Y S U M M A R Y

<u>State</u>	<u>Category</u>	<u>Number of Projects</u>	<u>Name Plate Capacity (KW)</u>	<u>HES Adjusted Capacity (KW)</u>
KY	With Power	1	19200	9600
	W/O Power	46	851269	425148.50
	Undeveloped	4	42680	4268
	STATE TOTAL	51	913149	439016.50
TOTALS	With Power	1	19200	9600
	W/O Power	46	851269	425148.50
	Undeveloped	4	42680	4268
GRAND TOTAL		51	913149	439016.50

Appendix B

River Basins Report

HYDROPOWER RESOURCE ASSESSMENT BY RIVER BASIN

FERC Number	Plant Name/ Stream	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
** River Basin CUMBERLAND RIVER BASIN					
KY010	WOOD CREEK WOOD CR, ROCKCASTLE R	WO	117.00	0.50	58.50
10018	PARKER BRANCH ROCKCASTLE R	WO	22000.00	0.50	11000.00
** Subtotal **			22117.00		11058.50
** River Basin KENTUCKY RIVER BASIN					
09394	KENTUCKY L&D 2 KENTUCKY R	WO	8200.00	0.50	4100.00
10517	KENTUCKY L&D 3 KENTUCKY R	WO	6000.00	0.50	3000.00
10506	KENTUCKY L&D 4 KENTUCKY R	WO	5000.00	0.50	2500.00
10507	KENTUCKY L&D 5 KENTUCKY R	WO	6000.00	0.50	3000.00
04138	KENTUCKY L&D 6 KENTUCKY R	WO	2500.00	0.50	1250.00
10508	KENTUCKY L&D 8 KENTUCKY R	WO	7000.00	0.50	3500.00
10509	KENTUCKY L&D 9 KENTUCKY R	WO	5100.00	0.50	2550.00
10516	KENTUCKY L&D 10 KENTUCKY R	WO	5100.00	0.50	2550.00
10510	KENTUCKY L&D 11 KENTUCKY R	WO	8000.00	0.50	4000.00
10511	KENTUCKY L&D 12 KENTUCKY R	WO	5500.00	0.50	2750.00
10512	KENTUCKY L&D 13 KENTUCKY R	WO	4000.00	0.50	2000.00
10513	KENTUCKY L&D 14 KENTUCKY R	WO	4000.00	0.50	2000.00
KY002	BOONEVILLE S FK KENTUCKY R	WO	7300.00	0.50	3650.00

HYDROPOWER RESOURCE ASSESSMENT BY RIVER BASIN

FERC Number	Plant Name/ Stream	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
07541	BUCKHORN M FK KENTUCKY R	WO	2800.00	0.50	1400.00
KY005	CARR FORK CARR FK,N FK KENTUCKY R	WO	92.00	0.50	46.00
KY012	KENTUCKY L&D 1 KENTUCKY R	WO	8200.00	0.50	4100.00
** Subtotal **			84792.00		42396.00
** River Basin MINOR RIVER BASINS					
KY003	BOSTON STATION LICKING R	U	22500.00	0.10	2250.00
07488	GREEN L&D 1 GREEN R,OHIO R	WO	5000.00	0.50	2500.00
07501	GREEN L&D 2 GREEN R	WO	11400.00	0.50	5700.00
09785	FALLS OF ROUGH ROUGH R,GREEN R	WO	110.00	0.50	55.00
02924	ROUGH RIVER ROUGH R,GREEN R	WO	8100.00	0.75	6075.00
KY008	ROCHESTER GREEN R	WO	179700.00	0.50	89850.00
09393	GREEN L&D 3 GREEN R	WO	11000.00	0.50	5500.00
07542	GREEN L&D 4 GREEN R	WO	5000.00	0.50	2500.00
04940	BARREN L&D 1 BARREN R	WO	4000.00	0.50	2000.00
10859	BARREN RIVER BARREN R	WO	7825.00	0.50	3912.50
07612	GREEN L&D 5 GREEN R,OHIO R	WO	4900.00	0.75	3675.00
07545	GREEN L&D 6 GREEN R	WO	5000.00	0.50	2500.00

HYDROPOWER RESOURCE ASSESSMENT BY RIVER BASIN

FERC Number	Plant Name/ Stream	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
10699	NOLIN NOLIN R	WO	10000.00	0.10	1000.00
10698	GREEN RIVER DAM GREEN R	WO	11000.00	0.50	5500.00
03806	FALMOUTH S.F. LICKING R	WO	40000.00	0.50	20000.00
08635	CAVE RUN LICKING R	WO	10000.00	0.50	5000.00
** Subtotal **			335535.00		158017.50
** River Basin OHIO MAIN STREAM					
KY004	CAMPGROUND BEECH FK,ROLLING FK	U	15000.00	0.10	1500.00
KY007	KEHOE TYGARTS CR,OHIO R	U	3030.00	0.10	303.00
KY011	YATESVILLE BLAINE CR,BIG SANDY R	U	2150.00	0.10	215.00
00289	OHIO FALLS(MCALPINE L&D) OHIO R	W	19200.00	0.50	9600.00
07522	OHIO L&D 53 OHIO R	WO	25000.00	0.50	12500.00
06641	SMITHLAND L&D OHIO R	WO	80000.00	0.50	40000.00
11511	UNIONTOWN L&D OHIO R	WO	45000.00	0.50	22500.00
11177	UNIONTOWN L&D OHIO R	WO	57200.00	0.50	28600.00
11494	NEWBURGH L&D OHIO R	WO	30000.00	0.50	15000.00
08619	DOE RUN DOE RUN,OHIO R	WO	35.00	0.90	31.50
09011	TAYLORSVILLE SALT R	WO	4000.00	0.50	2000.00

HYDROPOWER RESOURCE ASSESSMENT BY RIVER BASIN

FERC Number	Plant Name/ Stream	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
08348	GRAYSON LITTLE SANDY R	WO	1000.00	0.50	500.00
06030	PAINTSVILLE DAM PAINT CR, LEVISA FK	WO	1000.00	0.75	750.00
08338	PRESTONBURG (DEWEY) JOHNS CR, LEVISA FK	WO	2000.00	0.50	1000.00
07845	FISHTRAP LEVISA FK, BIG SANDY R	WO	1080.00	0.50	540.00
10228	CANNELTON OHIO R	WO	80010.00	0.50	40005.00
10395	MELDAHL L&D OHIO R	WO	105000.00	0.50	52500.00
** Subtotal **			470705.00		227544.50
*** Total ***			913149.00		439016.50

Appendix C
Kentucky Sites List

HYDROPOWER RESOURCE ASSESSMENT BY FERC NUMBER

Plant Name/ Stream	ST	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
** FERC Number KY003 BOSTON STATION LICKING R	KY	U	22500.00	0.10	2250.00
** Subtotal **			22500.00		2250.00
** FERC Number KY004 CAMPGROUND BEECH FK,ROLLING FK	KY	U	15000.00	0.10	1500.00
** Subtotal **			15000.00		1500.00
** FERC Number KY007 KEHOE TYGARTS CR,OHIO R	KY	U	3030.00	0.10	303.00
** Subtotal **			3030.00		303.00
** FERC Number KY011 YATESVILLE BLAINE CR,BIG SANDY R	KY	U	2150.00	0.10	215.00
** Subtotal **			2150.00		215.00
** FERC Number 00289 OHIO FALLS(MCALPINE L&D) OHIO R	KY	W	19200.00	0.50	9600.00
** Subtotal **			19200.00		9600.00
** FERC Number 02924 ROUGH RIVER ROUGH R,GREEN R	KY	WO	8100.00	0.75	6075.00
** Subtotal **			8100.00		6075.00
** FERC Number 03806 FALMOUTH S.F. LICKING R	KY	WO	40000.00	0.50	20000.00

HYDROPOWER RESOURCE ASSESSMENT BY FERC NUMBER

Plant Name/ Stream	ST	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
** Subtotal **			40000.00		20000.00
** FERC Number 04138 KENTUCKY L&D 6 KENTUCKY R	KY	WO	2500.00	0.50	1250.00
** Subtotal **			2500.00		1250.00
** FERC Number 04940 BARREN L&D 1 BARREN R	KY	WO	4000.00	0.50	2000.00
** Subtotal **			4000.00		2000.00
** FERC Number 06030 PAINTSVILLE DAM PAINT CR, LEVISA FK	KY	WO	1000.00	0.75	750.00
** Subtotal **			1000.00		750.00
** FERC Number 06641 SMITHLAND L&D OHIO R	KY	WO	80000.00	0.50	40000.00
** Subtotal **			80000.00		40000.00
** FERC Number 07488 GREEN L&D 1 GREEN R, OHIO R	KY	WO	5000.00	0.50	2500.00
** Subtotal **			5000.00		2500.00
** FERC Number 07501 GREEN L&D 2 GREEN R	KY	WO	11400.00	0.50	5700.00
** Subtotal **			11400.00		5700.00

HYDROPOWER RESOURCE ASSESSMENT BY FERC NUMBER

Plant Name/ Stream	ST	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
** FERC Number 07522 OHIO L&D 53 OHIO R	KY	WO	25000.00	0.50	12500.00
** Subtotal **			25000.00		12500.00
** FERC Number 07541 BUCKHORN M FK KENTUCKY R	KY	WO	2800.00	0.50	1400.00
** Subtotal **			2800.00		1400.00
** FERC Number 07542 GREEN L&D 4 GREEN R	KY	WO	5000.00	0.50	2500.00
** Subtotal **			5000.00		2500.00
** FERC Number 07545 GREEN L&D 6 GREEN R	KY	WO	5000.00	0.50	2500.00
** Subtotal **			5000.00		2500.00
** FERC Number 07612 GREEN L&D 5 GREEN R, OHIO R	KY	WO	4900.00	0.75	3675.00
** Subtotal **			4900.00		3675.00
** FERC Number 07845 FISHTRAP LEVISA FK, BIG SANDY R	KY	WO	1080.00	0.50	540.00
** Subtotal **			1080.00		540.00
** FERC Number 08338 PRESTONBURG (DEWEY) JOHNS CR, LEVISA FK	KY	WO	2000.00	0.50	1000.00

HYDROPOWER RESOURCE ASSESSMENT BY FERC NUMBER

Plant Name/ Stream	Dam ST Stat	Name Plate Rating (KW) PESF	PESF * KW
** Subtotal **		2000.00	1000.00
** FERC Number 08348 GRAYSON LITTLE SANDY R	KY WO	1000.00 0.50	500.00
** Subtotal **		1000.00	500.00
** FERC Number 08619 DOE RUN DOE RUN, OHIO R	KY WO	35.00 0.90	31.50
** Subtotal **		35.00	31.50
** FERC Number 08635 CAVE RUN LICKING R	KY WO	10000.00 0.50	5000.00
** Subtotal **		10000.00	5000.00
** FERC Number 09011 TAYLORSVILLE SALT R	KY WO	4000.00 0.50	2000.00
** Subtotal **		4000.00	2000.00
** FERC Number 09393 GREEN L&D 3 GREEN R	KY WO	11000.00 0.50	5500.00
** Subtotal **		11000.00	5500.00
** FERC Number 09394 KENTUCKY L&D 2 KENTUCKY R	KY WO	8200.00 0.50	4100.00
** Subtotal **		8200.00	4100.00

HYDROPOWER RESOURCE ASSESSMENT BY FERC NUMBER

Plant Name/ Stream	ST	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
** FERC Number 09785 FALLS OF ROUGH ROUGH R, GREEN R	KY	WO	110.00	0.50	55.00
** Subtotal **			110.00		55.00
** FERC Number 10018 PARKER BRANCH ROCKCASTLE R	KY	WO	22000.00	0.50	11000.00
** Subtotal **			22000.00		11000.00
** FERC Number 10228 CANNELTON OHIO R	KY	WO	80010.00	0.50	40005.00
** Subtotal **			80010.00		40005.00
** FERC Number 10395 MELDAHL L&D OHIO R	KY	WO	105000.00	0.50	52500.00
** Subtotal **			105000.00		52500.00
** FERC Number 10506 KENTUCKY L&D 4 KENTUCKY R	KY	WO	5000.00	0.50	2500.00
** Subtotal **			5000.00		2500.00
** FERC Number 10507 KENTUCKY L&D 5 KENTUCKY R	KY	WO	6000.00	0.50	3000.00
** Subtotal **			6000.00		3000.00
** FERC Number 10508 KENTUCKY L&D 8 KENTUCKY R	KY	WO	7000.00	0.50	3500.00

HYDROPOWER RESOURCE ASSESSMENT BY FERC NUMBER

Plant Name/ Stream	Dam ST Stat	Name Plate Rating (KW) PESF	PESF * KW
** Subtotal **		7000.00	3500.00
** FERC Number 10509 KENTUCKY L&D 9 KENTUCKY R	KY WO	5100.00 0.50	2550.00
** Subtotal **		5100.00	2550.00
** FERC Number 10510 KENTUCKY L&D 11 KENTUCKY R	KY WO	8000.00 0.50	4000.00
** Subtotal **		8000.00	4000.00
** FERC Number 10511 KENTUCKY L&D 12 KENTUCKY R	KY WO	5500.00 0.50	2750.00
** Subtotal **		5500.00	2750.00
** FERC Number 10512 KENTUCKY L&D 13 KENTUCKY R	KY WO	4000.00 0.50	2000.00
** Subtotal **		4000.00	2000.00
** FERC Number 10513 KENTUCKY L&D 14 KENTUCKY R	KY WO	4000.00 0.50	2000.00
** Subtotal **		4000.00	2000.00
** FERC Number 10516 KENTUCKY L&D 10 KENTUCKY R	KY WO	5100.00 0.50	2550.00
** Subtotal **		5100.00	2550.00

HYDROPOWER RESOURCE ASSESSMENT BY FERC NUMBER

Plant Name/ Stream	ST	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
** FERC Number 10517 KENTUCKY L&D 3 KENTUCKY R	KY	WO	6000.00	0.50	3000.00
** Subtotal **			6000.00		3000.00
** FERC Number 10698 GREEN RIVER DAM GREEN R	KY	WO	11000.00	0.50	5500.00
** Subtotal **			11000.00		5500.00
** FERC Number 10699 NOLIN NOLIN R	KY	WO	10000.00	0.10	1000.00
** Subtotal **			10000.00		1000.00
** FERC Number 10859 BARREN RIVER BARREN R	KY	WO	7825.00	0.50	3912.50
** Subtotal **			7825.00		3912.50
** FERC Number 11177 UNIONTOWN L&D OHIO R	KY	WO	57200.00	0.50	28600.00
** Subtotal **			57200.00		28600.00
** FERC Number 11494 NEWBURGH L&D OHIO R	KY	WO	30000.00	0.50	15000.00
** Subtotal **			30000.00		15000.00
** FERC Number 11511 UNIONTOWN L&D OHIO R	KY	WO	45000.00	0.50	22500.00

HYDROPOWER RESOURCE ASSESSMENT BY FERC NUMBER

Plant Name/ Stream	Dam ST Stat	Name Plate Rating (KW) PESF	PESF * KW
** Subtotal **		45000.00	22500.00
** FERC Number KY002 BOONEVILLE S FK KENTUCKY R	KY WO	7300.00 0.50	3650.00
** Subtotal **		7300.00	3650.00
** FERC Number KY005 CARR FORK CARR FK,N FK KENTUCKY R	KY WO	92.00 0.50	46.00
** Subtotal **		92.00	46.00
** FERC Number KY008 ROCHESTER GREEN R	KY WO	179700.00 0.50	89850.00
** Subtotal **		179700.00	89850.00
** FERC Number KY010 WOOD CREEK WOOD CR,ROCKCASTLE R	KY WO	117.00 0.50	58.50
** Subtotal **		117.00	58.50
** FERC Number KY012 KENTUCKY L&D 1 KENTUCKY R	KY WO	8200.00 0.50	4100.00
** Subtotal **		8200.00	4100.00
*** Total ***		913149.00	439016.50

Appendix D

Individual Resource Database List

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FERC Number	Plant Name	Stream	State Name
10517	KENTUCKY L&D 3	KENTUCKY R	KY

County Name	River Basin
OWEN	KENTUCKY RIVER BASIN

Class	Owner Name
R	KY L&D 3 HYDRO ASSOC/C.O.E. L&D

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
6000.00	0.50	3000.00	28900.00	14450

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3825.00 8453.00
C	ROR	XX	WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
09393	GREEN L&D 3	GREEN R	KY

County Name	River Basin
MUHLENBERG	MINOR RIVER BASINS

Class	Owner Name
R	INDEPENDENCE ELEC CORP/C.O.E. L&D

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
11000.00	0.50	5500.00	43000.00	21500

Unit Type	Plant Type	Project Status	Dam Status	Latitude	3713.00
C	ROR	XX	WO	Longitude	8654.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
KY007	KEHOE	TYGARTS CR, OHIO R	KY

County Name	River Basin
GREENUP	OHIO MAIN STREAM

Class	Owner Name
	NHPS/COE-PREL COST

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
3030.00	0.10	303.00	4520.00	452

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3829.00 8302.00
C	STG		U		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value		0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	Y	0.50
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.25	Federal Land Code 104	Y	0.50
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.25	Federal Land Code 108		0.90
Scenic Value	Y	0.50	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
10509	KENTUCKY L&D 9	KENTUCKY R	KY

County Name	River Basin
MADISON	KENTUCKY RIVER BASIN

Class	Owner Name
R	KY L&D 9 HYDRO ASSOC

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
5100.00	0.50	2550.00	18000.00	9000

Unit Type	Plant Type	Project Status	Dam Status	Latitude	3751.00
C	ROR	XX	WO	Longitude	8426.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or			Threatened/Endangered Fish		0.90
Upstream/Downstream			Threatened/Endangered Wildlife		0.90
Wild/Scenic Location		0.90	Federal Land Code 103		0.90
Cultural Value		0.90	Federal Land Code 104	Y	0.75
Fish Presence Value	Y	0.75	Federal Land Code 105		0.90
Geologic Value		0.90	Federal Land Code 106		0.90
Historic Value		0.90	Federal Land Code 107		0.90
Other Value		0.90	Federal Land Code 108		0.90
Recreation Value	Y	0.75	Federal Land Code 198		0.90
Scenic Value		0.90			

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FERC Number	Plant Name	Stream	State Name
07612	GREEN L&D 5	GREEN R, OHIO R	KY

County Name	River Basin
BUTLER	MINOR RIVER BASINS

Class	Owner Name
R	EASTERN STATES ENERGY & RES

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
4900.00	0.75	3675.00	20500.00	15375

Unit Type	Plant Type	Project Status	Dam Status	Latitude	Longitude
C	ROR	XX	WO	3710.00	8624.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value		0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value		0.90	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value		0.90	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
10018	PARKER BRANCH	ROCKCASTLE R	KY

County Name	River Basin
ROCKCASTLE	CUMBERLAND RIVER BASIN

Class	Owner Name
M	PARKERS BRANCH LAKE INDUST AUTH

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
22000.00	0.50	11000.00	30000.00	15000

Unit Type	Plant Type	Project Status	Dam Status	Latitude	3718.00
C	STG	XX	WO	Longitude	8409.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value	Y	0.75	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value	Y	0.90	Federal Land Code 105		0.90
Historic Value	Y	0.75	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value	Y	0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
11177	UNIONTOWN L&D	OHIO R	KY

County Name	River Basin
UNION	OHIO MAIN STREAM

Class	Owner Name
R	HYDRO MATRIX PARTNERSHIP/C.O.E. L&D

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
57200.00	0.50	28600.00	304000.00	152000

Unit Type	Plant Type	Project Status	Dam Status	Latitude	Longitude
C	ROR	XX	WO	3746.00	8758.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
09785	FALLS OF ROUGH	ROUGH R, GREEN R	KY

County Name	River Basin
OHIO	MINOR RIVER BASINS

Class		Owner Name			
R	C.O.E.				
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
110.00	0.50	55.00	334.00	167	

Unit Type	Plant Type	Project Status	Dam Status	Latitude	3735.00
C	ROR	XX	WO	Longitude	8634.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104		0.90
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
02924	ROUGH RIVER	ROUGH R, GREEN R	KY

County Name	River Basin
GRAYSON	MINOR RIVER BASINS

Class	Owner Name
M	GLASGOW, CITY OF

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
8100.00	0.75	6075.00	25000.00	18750

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3737.00 8630.00
C	STG	XX	WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value		0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value		0.90	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value		0.90	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
07522	OHIO L&D 53	OH1	KY

County Name	River Basin
BALLARD	OHIO MAIN STREAM

Class		Owner Name		
R	C.O.E.			
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
25000.00	0.50	12500.00	145000.00	72500
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude
C	ROR	XX	WO	3712.00 8902.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	Y	0.75
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife	Y	0.75
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value		0.90	Federal Land Code 104	Y	0.75
Geologic Value	Y	0.90	Federal Land Code 105		0.90
Historic Value	Y	0.75	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value	Y	0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
KY003	BOSTON STATION	LICKING R	KY

County Name	River Basin
PENDLETON	MINOR RIVER BASINS

Class	Owner Name
F	CORPS OF ENGINEERS

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
22500.00	0.10	2250.00	56000.00	5600

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3900.00 8427.00
C	STG		U		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.25
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value	Y	0.50	Federal Land Code 103		0.90
Fish Presence Value	Y	0.25	Federal Land Code 104		0.90
Geologic Value	Y	0.50	Federal Land Code 105		0.90
Historic Value	Y	0.50	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.25	Federal Land Code 108		0.90
Scenic Value	Y	0.50	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
10859	BARREN RIVER	BARREN R	KY

County Name	River Basin
BARREN	MINOR RIVER BASINS

Class		Owner Name		
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
7825.00	0.50	3912.50	57000.00	28500

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3654.00 8608.00
C	STG	XX	WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife	Y	0.75
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value	Y	0.75	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
10698	GREEN RIVER DAM	GREEN R	KY

County Name	River Basin
TAYLOR	MINOR RIVER BASINS

Class		Owner Name		
R	C.O.E.			
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
11000.00	0.50	5500.00	40300.00	20150

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3720.00 8515.00
C	ROR	XX	WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
10699	NOLIN	NOLIN R	KY

County Name	River Basin
EDMONDSON	MINOR RIVER BASINS

Class		Owner Name		
R	C.O.E.			
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
10000.00	0.10	1000.00	39000.00	3900

Unit Type	Plant Type	Project Status	Dam Status	Latitude	3717.00
C	ROR	XX	WO	Longitude	8615.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103	Y	0.10
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.90
Geologic Value	Y	0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value	Y	0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
10395	MELDAHL L&D	OHIO R	KY

County Name	River Basin
BRACKEN	OHIO MAIN STREAM

Class	Owner Name
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M	AUGUSTA, CITY OF
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Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
105000.00	0.50	52500.00	499000.00	249500

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3848.00 8410.00
C	ROR	MA	WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
10228	CANNELTON	OHIO R	KY

County Name	River Basin
HANCOCK	OHIO MAIN STREAM

Class	Owner Name
R	CANNELTON WV HYDRO

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
80010.00	0.50	40005.00	370000.00	185000

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3752.00 8652.00
C	ROR	MO	WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
08338	PRESTONBURG (DEWEY)	JOHNS CR, LEVISA FK	KY

County Name	River Basin
FLOYD	OHIO MAIN STREAM

Class	Owner Name
R	PRESTONBURG ASSOC

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
2000.00	0.50	1000.00	4500.00	2250

Unit Type	Plant Type	Project Status	Dam Status	Latitude	3744.00
C	STG	XX	WO	Longitude	8244.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or			Threatened/Endangered Fish		0.90
Upstream/Downstream			Threatened/Endangered Wildlife		0.90
Wild/Scenic Location		0.90	Federal Land Code 103		0.90
Cultural Value		0.90	Federal Land Code 104	Y	0.75
Fish Presence Value	Y	0.75	Federal Land Code 105		0.90
Geologic Value		0.90	Federal Land Code 106		0.90
Historic Value		0.90	Federal Land Code 107		0.90
Other Value		0.90	Federal Land Code 108		0.90
Recreation Value	Y	0.75	Federal Land Code 198		0.90
Scenic Value		0.90			

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FERC Number	Plant Name	Stream	State Name
09011	TAYLORSVILLE	SALT R	KY

County Name	River Basin
SPENCER	OHIO MAIN STREAM

Class	Owner Name
R C.O.E.	
Name Plate Rating (KW)	PESF PESF*KW Annual Energy Rating (MWh) PESF Annual Energy Rating (MWh)
4000.00	0.50 2000.00 10700.00 5350

Unit Type	Plant Type	Project Status	Dam Status	Latitude	3800.00
C	STG	XX	WO	Longitude	8518.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or			Threatened/Endangered Fish		0.90
Upstream/Downstream			Threatened/Endangered Wildlife		0.90
Wild/Scenic Location		0.90	Federal Land Code 103		0.90
Cultural Value		0.90	Federal Land Code 104	Y	0.75
Fish Presence Value	Y	0.75	Federal Land Code 105		0.90
Geologic Value		0.90	Federal Land Code 106		0.90
Historic Value		0.90	Federal Land Code 107		0.90
Other Value		0.90	Federal Land Code 108		0.90
Recreation Value	Y	0.75	Federal Land Code 198		0.90
Scenic Value	Y	0.90			

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FERC Number	Plant Name	Stream	State Name
08348	GRAYSON	LITTLE SANDY R	KY

County Name	River Basin
CARTER	OHIO MAIN STREAM

Class	Owner Name
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R	CARTER COUNTY ASSOC
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Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
1000.00	0.50	500.00	6316.00	3158

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3815.00 8259.00
C	ROR	XX	WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value	Y	0.75	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
09394	KENTUCKY L&D 2	KENTUCKY R	KY

County Name	River Basin
OWEN	KENTUCKY RIVER BASIN

Class	Owner Name
R	INDEPENDENCE ELEC CORP/C.O.E. L&D

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
8200.00	0.50	4100.00	33000.00	16500

Unit Type	Plant Type	Project Status	Dam Status	Latitude	3826.00
C	ROR	XX	WO	Longitude	8458.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
06641	SMITHLAND L&D	OHIO R	KY

County Name	River Basin
LIVINGSTON	OHIO MAIN STREAM

Class	Owner Name
M	MARION,CITY OF,ET AL

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
80000.00	0.50	40000.00	418000.00	209000

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3709.00 8825.00
C	ROR	MO	WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or			Threatened/Endangered Fish	Y	0.75
Upstream/Downstream			Threatened/Endangered Wildlife	Y	0.75
Wild/Scenic Location		0.90	Federal Land Code 103		0.90
Cultural Value		0.90	Federal Land Code 104	Y	0.75
Fish Presence Value	Y	0.75	Federal Land Code 105		0.90
Geologic Value	Y	0.90	Federal Land Code 106		0.90
Historic Value	Y	0.75	Federal Land Code 107		0.90
Other Value		0.90	Federal Land Code 108		0.90
Recreation Value	Y	0.75	Federal Land Code 198		0.90
Scenic Value	Y	0.90			

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FERC Number	Plant Name	Stream	State Name
04940	BARREN L&D 1	BARREN R	KY

County Name	River Basin
WARREN	MINOR RIVER BASINS

Class	Owner Name
R	EASTERN STATES ENERGY & RES

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
4000.00	0.50	2000.00	17500.00	8750

Unit Type	Plant Type	Project Status	Dam Status	Latitude	Longitude
C	ROR	XX	WO	3705.00	8630.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value		0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value	Y	0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
10506	KENTUCKY L&D 4	KENTUCKY R	KY

County Name	River Basin
FRANKLIN	KENTUCKY RIVER BASIN

Class	Owner Name
R	KY L&D 4 HYDRO ASSCO/C.O.E. L&D

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
5000.00	0.50	2500.00	26400.00	13200

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3813.00 8452.00
C	ROR	XX	WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
KY008	ROCHESTER	GREEN R	KY

County Name	River Basin
OHIO	MINOR RIVER BASINS

Class	Owner Name
F	CORPS OF ENGINEERS

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
179700.00	0.50	89850.00	346400.00	173200

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3713.00 8654.00
C	STG		WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104		0.90
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

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FERC Number	Plant Name	Stream	State Name
KY012	KENTUCKY L&D 1	KENTUCKY R	KY

County Name	River Basin
CARROLL	KENTUCKY RIVER BASIN

Class	Owner Name
R	INDEPENDENCE ELEC CORP/C.O.E. L&D

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
8200.00	0.50	4100.00	33000.00	16500

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	3839.30 8508.36
C	ROR	XX	WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90