

STATE OF SOUTH CAROLINA)

(Caption of Case))

Integrated Resource Plan)

BEFORE THE
PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

COVER SHEET

DOCKET
NUMBER: 2011 - 11 - E

(Please type or print)

Submitted by: Lockhart Power Company

SC Bar Number: _____

Address: P.O. Box 10

Telephone: 864-545-2211

Lockhart, S.C. 29364

Fax: 864-545-2591

Other: _____

Email: jseay@lockhartpower.com

NOTE: The cover sheet and information contained herein neither replaces nor supplements the filing and service of pleadings or other papers as required by law. This form is required for use by the Public Service Commission of South Carolina for the purpose of docketing and must be filled out completely.

DOCKETING INFORMATION (Check all that apply)

Emergency Relief demanded in petition

Request for item to be placed on Commission's Agenda expeditiously

Other: _____

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)		
<input checked="" type="checkbox"/> Electric	<input type="checkbox"/> Affidavit	<input type="checkbox"/> Letter	<input type="checkbox"/> Request
<input type="checkbox"/> Electric/Gas	<input type="checkbox"/> Agreement	<input type="checkbox"/> Memorandum	<input type="checkbox"/> Request for Certification
<input type="checkbox"/> Electric/Telecommunications	<input type="checkbox"/> Answer	<input type="checkbox"/> Motion	<input type="checkbox"/> Request for Investigation
<input type="checkbox"/> Electric/Water	<input type="checkbox"/> Appellate Review	<input type="checkbox"/> Objection	<input type="checkbox"/> Resale Agreement
<input type="checkbox"/> Electric/Water/Telecom.	<input type="checkbox"/> Application	<input type="checkbox"/> Petition	<input type="checkbox"/> Resale Amendment
<input type="checkbox"/> Electric/Water/Sewer	<input type="checkbox"/> Brief	<input type="checkbox"/> Petition for Reconsideration	<input type="checkbox"/> Reservation Letter
<input type="checkbox"/> Gas	<input type="checkbox"/> Certificate	<input type="checkbox"/> Petition for Rulemaking	<input type="checkbox"/> Response
<input type="checkbox"/> Railroad	<input type="checkbox"/> Comments	<input type="checkbox"/> Petition for Rule to Show Cause	<input type="checkbox"/> Response to Discovery
<input type="checkbox"/> Sewer	<input type="checkbox"/> Complaint	<input type="checkbox"/> Petition to Intervene	<input type="checkbox"/> Return to Petition
<input type="checkbox"/> Telecommunications	<input type="checkbox"/> Consent Order	<input type="checkbox"/> Petition to Intervene Out of Time	<input type="checkbox"/> Stipulation
<input type="checkbox"/> Transportation	<input type="checkbox"/> Discovery	<input type="checkbox"/> Prefiled Testimony	<input type="checkbox"/> Subpoena
<input type="checkbox"/> Water	<input type="checkbox"/> Exhibit	<input type="checkbox"/> Promotion	<input type="checkbox"/> Tariff
<input type="checkbox"/> Water/Sewer	<input type="checkbox"/> Expedited Consideration	<input type="checkbox"/> Proposed Order	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Administrative Matter	<input type="checkbox"/> Interconnection Agreement	<input type="checkbox"/> Protest	
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Interconnection Amendment	<input type="checkbox"/> Publisher's Affidavit	
	<input type="checkbox"/> Late-Filed Exhibit	<input checked="" type="checkbox"/> Report	

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June 30, 2011

THE HONORABLE JOCELYN BOYD
Chief Clerk and Administrator
South Carolina Public Service Commission
101 Executive Center Drive
Suite 100
Columbia, South Carolina 29210

Docket No. 2011-11-E
Order No. 94-348 & 98-502

Dear Jocelyn Boyd:

Pursuant to Docket No. 2011-11-E, Order No 94-348 & 98-502, please find enclosed for filing Lockhart Power Company's **INTEGRATED RESOURCE PLAN** dated June, 2011.

Very truly yours,

A handwritten signature in black ink that reads "James H. Seay, Jr." in a cursive script.

James H. Seay, Jr.
Manager – Engineering & Regulatory Affairs
Lockhart Power Company
Lockhart, SC 29364

LOCKHART POWER COMPANY

INTEGRATED RESOURCE PLAN

1 **1. STATEMENT OF OBJECTIVE**

2 Lockhart Power Company's (LPC) objective in developing an Integrated Resource Plan
3 (IRP) is to minimize our long run total costs and produce the least cost to our customers
4 consistent with the availability of an adequate and reliable supply of electric energy while
5 maintaining system flexibility and considering environmental impacts. We intend for the
6 plan to also improve customer service, offer additional customer options, and improve
7 efficiencies of energy usage.

8

9 **2. RELEVANT SUPPORTING DOCUMENTATION**

10

11 a. See ATTACHMENTS

12

1 --- DEMAND FORECAST

13

2 --- SUPPLY AND SALES FORECAST

14

3 --- LOCKHART POWER COMPANY ENERGY SOURCES

15

4 --- CASH FLOW BREAKEVEN TEST WORKSHEET

16

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23

1 **3. SUPPLY RESOURCES**

2
3 LPC presently utilizes five sources of supply --- Lockhart hydroelectric facility, Pacolet
4 hydroelectric facility, Lockhart’s Diesel Generation facility in Pacolet, SC, Lockhart’s
5 Diesel Generation facility in Union, SC, and purchases from Duke Energy . LPC
6 purchases approximately 80% of its total system input in MWH's. SEE ATTACHMENT
7 3. LPC uses its run-of-river hydro plant as a peaking unit through out the year. Duke
8 Energy’s rates to LPC are presumptively just and reasonable, having been permitted by
9 the FERC. We plan to continue to use Duke Energy for the foreseeable future. However,
10 LPC intends to investigate other sources to determine if the costs and benefits, both short
11 run and long run, meet the objectives of our IRP. The sources we intend to investigate
12 include, but are not limited to the following:

13
14 **GENERATION** --- Additional Hydro for peak shaving.

15 **PURCHASES** --- Spot, Short Term, Long Term from present
16 supplier to reduce supply cost. Spot, Short Term, Long Term from
17 Independent Power Producers or Exempt Wholesale Generators to
18 reduce supply cost.

19
20
21
22 **4. VARIOUS ENERGY ALTERNATIVES, EFFICIENT ENERGY CHOICES AND**
23 **PROPER PRICING SIGNALS**

24 LPC has and continues to do the following:

25 A. Designed its rates to economically encourage improved load factors and to
26 reduce monthly demands by:

27 1. Incorporating a demand penalty by use of a demand ratchet
28 in its resale rates. This encourages peak shaving.

1 2. Dividing its commercial and industrial rates into a first 200
2 hours use of billing demand rate and an over 200 hours use of
3 billing demand rate with the rates in the latter considerably less
4 expensive than the first 200 hours use block. This encourages peak
5 shaving.

6 3. Incorporating stringent conservation requirements in its
7 Residential - All Electric and General Service - All Electric rates.
8 This encourages conservation.

9 4. Designing its Residential and Residential - All Electric
10 rates such that they are identical during the summer months, the
11 season of LPC's system peak. This encourages peak shaving and
12 conservation.

13 5. Designing its General Service Commercial and General
14 Service - All Electric rates such that they are identical during the
15 summer months, the season of LPC's system peak. This
16 encourages peak shaving and conservation.

17 6. Converting its Residential rate and Residential - All
18 -Electric rate (summer months) from a declining block rate to an
19 inverted rate. This encourages conservation.

20
21
22 **5. EVALUATING POTENTIAL OPTIONS**

23
24 LPC will employ unbiased analysis techniques for potential options included in its IRP.

25 LPC will evaluate each option by including all appropriate costs and and benefits and will
26 provide a detailed explanation with supporting evidence for our choice.

27

1 **6. EVALUATING THE COST EFFECTIVENESS OF SUPPLY-SIDE AND**
2 **DEMAND SIDE OPTIONS**

3
4 LPC will evaluate the cost effectiveness of each supply-side and demand-side option by
5 considering relevant costs and benefits. LPC will evaluate each option by the cash flow
6 breakeven method. SEE ATTACHMENT 4. Worksheets will be used to show the detail
7 for Columns 2, 3, 4, and 5. Savings and Environmental costs will be included as Added
8 Net Sales or an Expense depending on the value developed for that particular item. If
9 Column 13 shows that the project will take longer than six years to break even, the
10 project will probably not be implemented.

11
12
13 **7. MEASURE OF NET BENEFITS**

14 LPC will provide the net benefits resulting from the options chosen for use, keeping
15 within the objective stated in 1. Benefits will be quantified on the Worksheets described
16 in 6. above. Benefits are considered to be, but are not limited to, cost savings, peak load
17 shaving, conservation, load shifting, valley filling, environmental concerns, improvement
18 of customer service, offering of additional customer options, improved efficiencies of
19 energy usage, and improved outage times and reliability.

20
21
22 **8. ENVIRONMENTAL COSTS**

23
24 LPC will consider environmental costs on a monetized basis where reasonable and
25 sufficient data is available in its planning process and evaluation of options. Those
26 environmental costs that cannot be monetized will be addressed on a qualitative basis
27 within the planning process and evaluation of options. Environmental costs can be

1 increased or reduced. The environmental costs referred to here are those costs associated
2 with demand or supply side options which impact the customer directly or indirectly.

3
4 **9. DEMAND AND ENERGY FORECAST**

5
6 SEE ATTACHMENTS 1 AND 2

7
8 **10. EVALUATION AND REVIEW OF EXISTING DEMAND-SIDE OPTIONS**

9
10 SEE 4. ABOVE

11
12 **11. FUTURE STUDIES**

13
14 LPC presently has no significant studies in progress.

15
16 **12. FLEXIBILITY AND QUICK RESPONSE**

17 LPC intends to remain flexible enough to react quickly to changes in a manner consistent
18 with minimizing costs while maintaining reliability.

19
20
21 **13. MAINTENANCE**

22
23 Maintenance is a continuous process at LPC. Actual maintenance costs for 2009 and
24 2010 are shown below as well as the forecast of maintenance costs for 2011 through
25 2025.

26

<u>YEAR</u>	<u>MAINTENANCE COST</u>	<u>YEAR</u>	<u>MAINTENANCE COST</u>
2009	\$1,207,606	2018	\$1,595,803
2010	1,259,742	2019	1,643,677

27
28

1	2011	1,297,534	2020	1,692,987
2	2012	1,336,460	2021	1,743,777
3	2013	1,376,554	2022	1,796,090
4	2014	1,417,850	2023	1,849,973
5	2015	1,460,386	2024	1,905,472
6	2016	1,504,197	2025	1,962,636
7	2017	1,549,323		

8

9 **14. THIRD PARTY POWER PURCHASES**

10 LPC will investigate other purchase sources if the occasion arises and is willing to pursue
 11 any other purchase sources to determine if the costs and benefits, both short run and long
 12 run, provide our customers with the options consistent with our IRP objective.

13

14

15 **15. NEW TECHNOLOGIES**

16

17 LPC will continuously evaluate, pursuant to its IRP objective, new technology for both
 18 demand-side and supply-side options.

19

20 **16. FUTURE SUPPLY-SIDE OPTIONS**

21

22 LPC presently has no certain scheduled supply side options other than those described in
 23 3.

24

25

26 **17. CAPTURING LOST OPPORTUNITY RESOURCES**

27 LPC gives attention to capturing lost-opportunity resources which include cost-effective
 28 energy efficiency savings such as in new construction, renovation, and in routine

1 replacement of existing equipment. In routine replacement of any and all equipment,
2 LPC includes energy and efficiency savings as a component of evaluation.

3
4 **18. DYNAMICS OF IRP PROCESS**

5
6 LPC realizes that the IRP process is dynamic and that modifications may be necessary
7 over time. As new issues arise, existing issues or components of the plan change in
8 significance and improved analysis techniques developed; LPC intends to file revisions to
9 its IRP with The Public Service Commission of South Carolina and request that the
10 Commission incorporate the revision into LPC's IRP or approve it as a separate
11 consideration.

LOCKHART POWER COMPANY

DOCKET NO. 2011-11-E
ORDER NO. 94-348 & 98-502

SUMMER DEMAND FORECAST

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
SYSTEM SUMMER PEAK DEMAND IN MW'S	70.8	71.5	72.2	72.9	73.7	74.4	75.2	75.9	76.7	77.4	78.2	79.0	79.8	80.6	81.4
SYSTEM PEAK DEMAND															
DEMAND SOURCES															
LOCKHART HYDRO GENERATION	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
PACOLET HYDRO GENERATION	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PACOLET DIESEL GENERATION	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
UNION DIESEL GENERATION	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
PURCHASES FROM DUKE ENERGY	40.9	41.6	42.3	43.0	43.8	44.5	45.3	46.0	46.8	47.5	48.3	49.1	49.9	50.7	51.5
TOTAL DEMAND SOURCES	70.8	71.5	72.2	72.9	73.7	74.4	75.2	75.9	76.7	77.4	78.2	79.0	79.8	80.6	81.4

WINTER DEMAND FORECAST

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
SYSTEM WINTER PEAK DEMAND IN MW'S	65.7	66.4	67.0	67.7	68.4	69.1	69.7	70.4	71.1	71.9	72.6	73.3	74.0	74.8	75.5
SYSTEM PEAK DEMAND															
DEMAND SOURCES															
LOCKHART HYDRO GENERATION	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
PACOLET HYDRO GENERATION	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
PACOLET DIESEL GENERATION	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
UNION DIESEL GENERATION	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
PURCHASES FROM DUKE ENERGY	35.8	36.5	37.1	37.8	38.5	39.2	39.8	40.5	41.2	42.0	42.7	43.4	44.1	44.9	45.6
TOTAL DEMAND SOURCES	65.7	66.4	67.0	67.7	68.4	69.1	69.7	70.4	71.1	71.9	72.6	73.3	74.0	74.8	75.5

LOCKHART POWER COMPANY

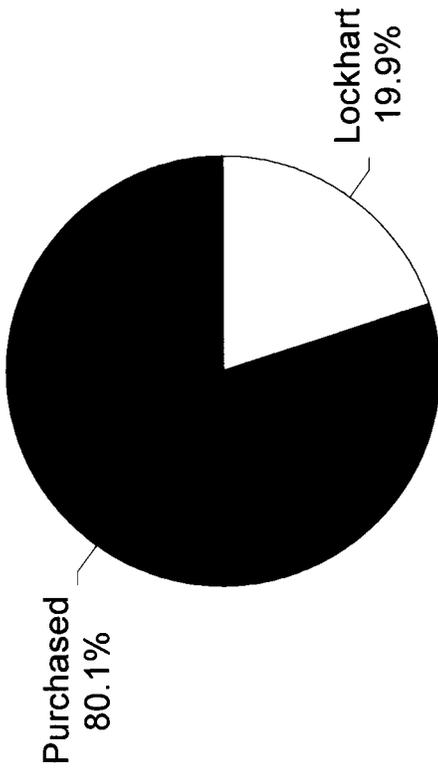
Docket NO. 2011-11-E
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SUPPLY AND SALES FORECAST (MWH)

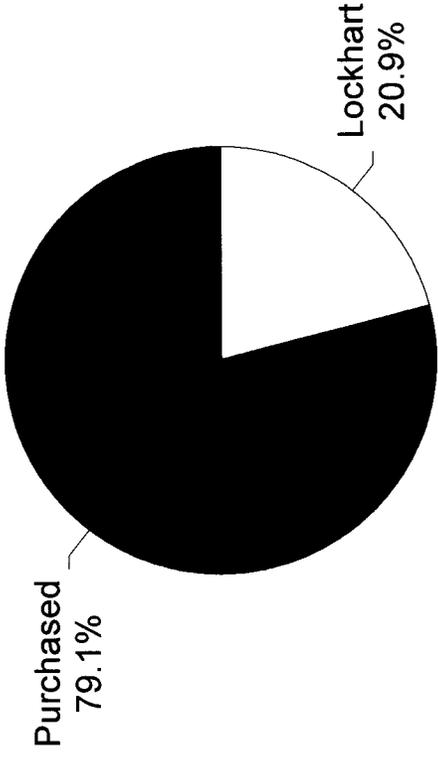
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
System Requirements															
Metered Sales	335,581	338,937	342,326	345,749	349,207	352,699	356,226	359,788	363,386	367,020	370,690	374,397	378,141	381,922	385,742
Company Use	642	642	642	642	642	642	642	642	642	642	642	642	642	642	642
Losses	19,703	19,900	20,099	20,300	20,503	20,708	20,915	21,124	21,336	21,549	21,764	21,982	22,202	22,424	22,648
Required System Input	355,926	359,479	363,067	366,691	370,352	374,049	377,783	381,555	385,364	389,211	393,097	397,021	400,985	404,988	409,032
Supply Sources															
Lockhart Hydro Generation	66841	66841	66841	66841	66841	66841	66841	66841	66841	66841	66841	66841	66841	66841	66841
Pacolet Hydro Generation	3234	3234	3234	3234	3234	3234	3234	3234	3234	3234	3234	3234	3234	3234	3234
Pacolet Diesel Generation	366	366	366	366	366	366	366	366	366	366	366	366	366	366	366
Union Diesel Generation	498	498	498	498	498	498	498	498	498	498	498	498	498	498	498
Purchases from Duke	284,987	288,540	292,128	295,752	299,413	303,110	306,844	310,616	314,425	318,272	322,158	326,082	330,046	334,049	338,093
Total Supply	355,926	359,479	363,067	366,691	370,352	374,049	377,783	381,555	385,364	389,211	393,097	397,021	400,985	404,988	409,032

LOCKHART POWER COMPANY

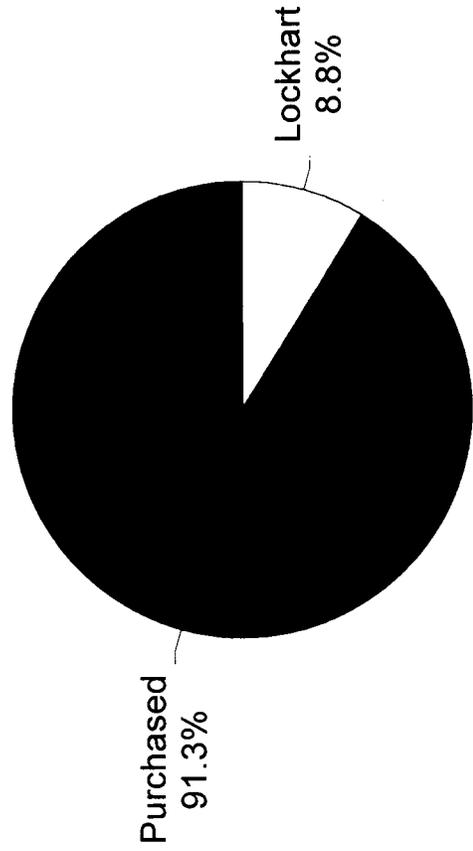
ENERGY SOURCES IN PERCENT OF MWH'S INPUT



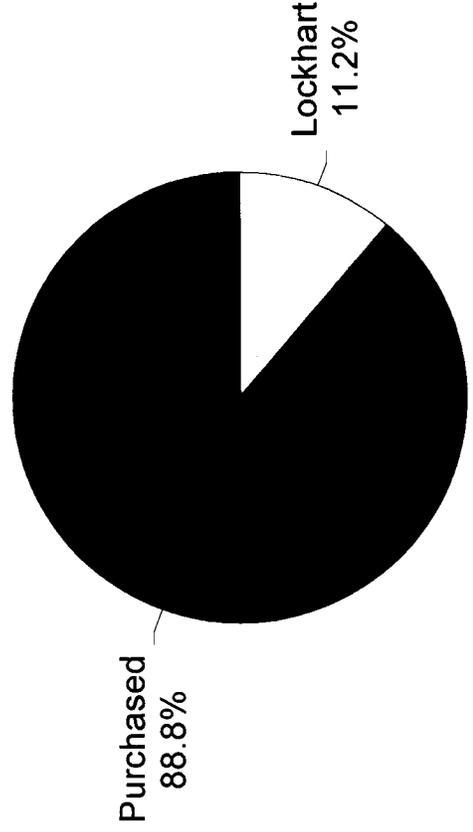
2010



2009



2008



2007

Note: Purchased Power obtained from Duke Energy

