COMLINK LAND SERVICES

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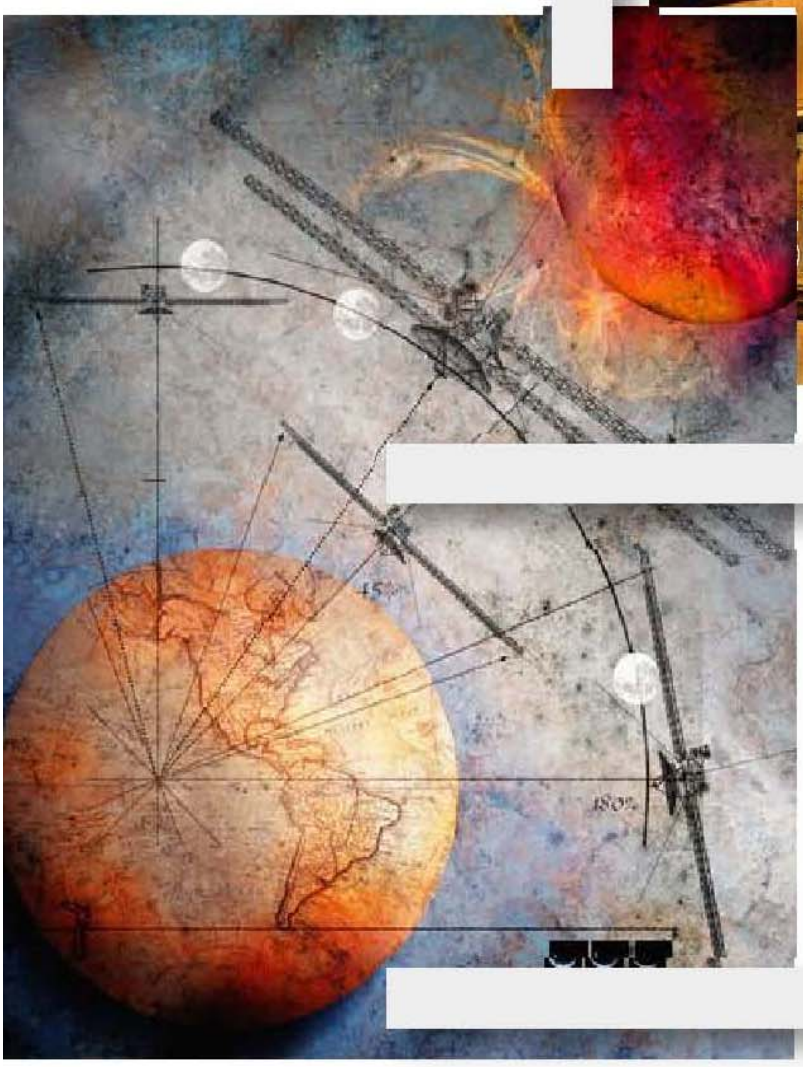
Salem City

Impact Fee

Study Update

October 25, 2007



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Salem City
Power Facilities Impact Fee Analysis
Executive Summary

Impact fees are one-time charges imposed on development, as a condition of development approval, to cover costs associated with necessary capital improvements to the electric system needed to serve new development. In April 1995, the Utah State Legislature passed Title 11, Chapter 36, Sections 101-401 (the "Impact Fee Act"). The "Impact Fee Act" put in place requirements regulating impact fees which apply to political subdivisions which own electric utilities. This study has been prepared on behalf of Salem City by Comlink Land Services, LLC as part of the process in setting the City's Impact Fee for electrical or power facilities.

As documented in this report, Salem City has complied with all requirements of the Utah Impact Fees Act. Electric impact fees for the city are calculated using incremental costs which is one of several methods for calculating impact fees. This method determines what new developments should pay for improvements or a portion of the improvements needed to serve them. This is a "capacity-based" fee structure. In this way existing customers are not burdened by the new growth.

The calculation of the Power Impact Fee for electrical or city power facilities is based on the Spatial Load Forecast, a prediction of future electric demand that includes location and magnitude, and historical growth rates, which identifies the need to build additional capacity and main distribution facilities, and the city's Action Plan for capital facility additions. The cost of these facilities was estimated at today's prices and will need to be reviewed and periodically adjusted as needed for inflation.

The growth rate was determined from historical data from 2000 through 2007. The city's summer peak power needs have grown at a rate of 8.2% per year from 2000 to 2007 and have grown at a 10.4% rate the last two years. A growth rate of 8.62% was used in the study. The recommended impact fee will provide the funds necessary to construct the additional capacity and main distribution lines required to meet the new demand created by the anticipated future growth.

The cost per unit (1 kilowatt) of capacity needed for new development is calculated by dividing the projected facility costs needed to serve future development divided by the total potential demand of the new development.

The capital cost attributed to projected load growth from the Action Plan is $4,961,496. This will provide for sufficient system capacity through FY2017 to meet the system Capacity Service Standard. New development capacity needs are projected to be 15,251 kilowatts during this period.

The Power Impact Fee for different types of new load in residential, commercial and industrial categories are calculated by determining the estimated peak demand (kW) of each type of load and multiplying it by the cost per capacity unit.

Electric Impact Fee = Expected kW demand of each new load X $325 per kW

Based upon the Power Department's experience the expected load for each connection size was developed and was used in the new Power Impact Fee.

The recommended Power Impact Fees for typical residential and commercial customers including Residential Single Phase Service Sizes of 200 Amps and 400 Amps and Commercial 3 Phase Service Size of 400 Amps are shown in the following table. For a complete listing of recommended Power Impact Fees see Table 4 in the study document.

Power Impact Fee

Residential Single Phase Service	
200 Amps	$2,603
400 Amps	$4,554
Commercial 3 Phase (120/240V) Service	
400 Amps	$20,495

Salem City
Power Facilities Impact Fee Analysis

I. INTRODUCTION

The Salem City Power System currently provides electric service to 1,561 residential customers, 75 commercial customers, six churches, three schools and one industrial customer. The maximum demand for the system was 8,000 kilowatts in the summer of 2007.

Electric power is delivered to the system at 46,000 volts to two substations, the Arrowhead Substation with 5,000 kW of capacity (50% ownership of 10,000 kW transformer), and the Loafer substation with 3750 kW of capacity (50% ownership of 7,500 kW transformer).

II. SERVICE STANDARD

The standard of service for all customers is based on having sufficient installed transformation capacity to meet the maximum system demand and not exceed 50% loading on substation transformers.

III. SPATIAL LOAD FORECAST

In order to plan the efficient operation and economic capital expansion of an electric power system, the system owner must be able to anticipate the need for power delivery – how much power must be delivered, and where and when it will be needed. Such information is provided by a spatial load forecast, a prediction of future electric demand that includes location (where) as one of its chief elements, in addition to magnitude (how much) and temporal (when) characteristics.[1] Salem City has provided what types of future development is anticipated and its general locations by building zone classification. From this information the 2006 Spatial Load Forecast was developed showing the projected power demand at build-out. The power demand at build-out is approximately 150,297 kW as shown in Table 1.

[1] Spatial Electric Load Forecasting, Second Edition, Revised and Expanded, H. Lee Willis, ABB Inc. Raleigh, North Carolina.

Table 1

Salem City
Spatial Load Forecast
Projected Power Demand at Buildout

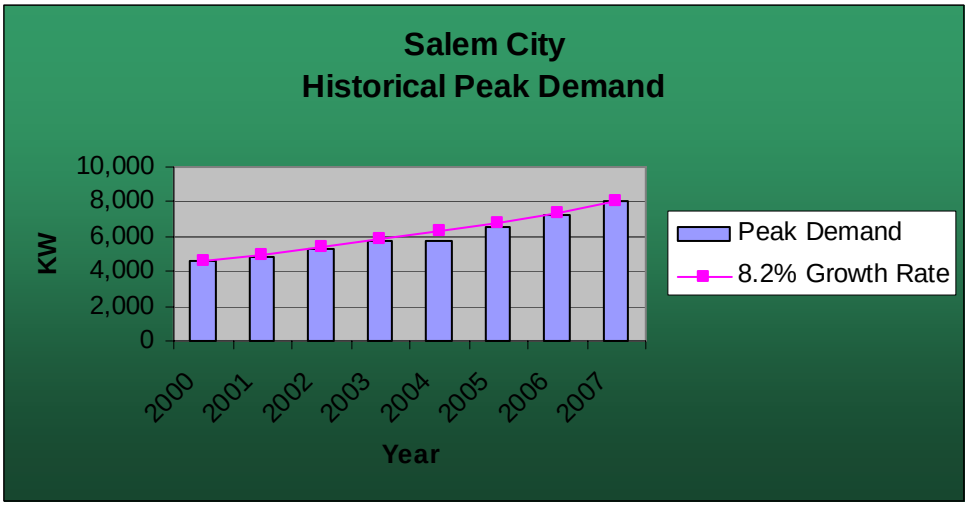
Salem City Undeveloped Parcels		Number of Units per Acre	Demand per Customer (kW)	Spatial Forecast Demand (kW)
A-1	762	0.5	8	3,048
A-1 Agricultural	500	0.5	12	3,000
C-1	82	5	31	12,710
C-1 Agricultural	18	0.5	31	279
C-2	2	5	31	310
I-1	225	2	145	65,250
I-5	138	5	63	43,470
R-1	133	3	8	3,192
R-1 Agricultural	15	3	8	360
R-2	394	3	6	7,092
R-2 Agricultural	119	3	6	2,142
R-3	95	2.3	6	1,311
R-3 Agricultural	24	1.5	6	216
R-4	20	9	5	900
R-5	10	9	5	450
Totals	2537			143,730

Future Load From Spatial Forecast (kW)	143,730
2005 Peak Load (kW)	6,567
Total (kW)	150,297

IV. GROWTH

Salem City has experienced an 8.2% annual rate of growth in its summer system peak demand over the last 7 years. The growth rate has been10.4% over the last two years (see Figure 1). A growth rate of 8.62% was used in the ten year study.

Figure 1
System Demand



V. FUTURE CAPACITY REQUIREMENTS

In 2007 system capacity was 8,750 kilowatts. Capacity needed to meet the service standard was 16,001 kW. This represents the need for an additional 7,251 kW to meet the Service Standard Capacity requirement. Table 2 shows the surplus or additional capacity needed on the system to meet the Service Standard Capacity requirement through the summer of 2017. Planned capacity additions are included in the table.

Table 2

Capacity Needs

									1
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Loafer Peak Load	4,619	4,802	2,777	2,623	2,676	3,263	3,501	3,756	4,080
Arrowhead Peak Load			2,470	3,104	3,097	3,304	3,747	4,244	4,610
New Load Adjustment									2,000
Coincident Peak Load	**4,619**	**4,802**	**5,247**	**5,727**	**5,773**	**6,567**	**7,248**	**8,000**	**10,690**
Service Standard Capacity Requirement	**9,238**	**9,604**	**10,494**	**11,454**	**11,546**	**13,134**	**14,496**	**16,001**	**21,380**
Present Loafer Owned Capacity	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750
Present Arrowhead Owned Capacity			5,000	5,000	5,000	5,000	5,000	5,000	5,000
Total Present Substation Capacity	**3,750**	**3,750**	**8,750**	**8,750**	**8,750**	**8,750**	**8,750**	**8,750**	**8,750**
Surplus/Additional capacity to meet standard	(5,488)	(5,854)	(1,744)	(2,704)	(2,796)	(4,384)	(5,746)	(7,251)	(12,630)
Rebuild Loafer Substation with 20000 kW Capacity									20,000
Remove 7500 kW from Loafer									(3,750)
Surplus/Additional capacity to meet standard									3,620
Install 20000 kW at Loafer or Arrowhead									20,000
Surplus/Additional capacity to meet standard									23,620
Total Capacity after additions	**3,750**	**3,750**	**8,750**	**8,750**	**8,750**	**8,750**	**8,750**	**8,750**	**45,000**

	2	3	4	5	6	7	8	9	10
Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Loafer Peak Load	4,432	4,814	5,229	5,679	6,169	6,701	7,278	7,906	8,587
Arrowhead Peak Load	5,007	5,439	5,908	6,417	6,970	7,571	8,224	8,932	9,702
New Load Adjustment	2,172	2,360	2,563	2,784	3,024	3,285	3,568	3,875	4,209
Coincident Peak Load	**11,611**	**12,612**	**13,699**	**14,880**	**16,163**	**17,556**	**19,070**	**20,713**	**22,499**
Service Standard Capacity Requirement	**23,223**	**25,224**	**27,399**	**29,761**	**32,326**	**35,112**	**38,139**	**41,427**	**44,998**
Present Loafer Owned Capacity	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750
Present Arrowhead Owned Capacity	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Total Present Substation Capacity	**8,750**	**8,750**	**8,750**	**8,750**	**8,750**	**8,750**	**8,750**	**8,750**	**8,750**
Surplus/Additional capacity to meet standard	(14,473)	(16,474)	(18,649)	(21,011)	(23,576)	(26,362)	(29,389)	(32,677)	(36,248)
Rebuild Loafer Substation with 20000 kW Capacity	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Remove 7500 kW from Loafer	(3,750)	(3,750)	(3,750)	(3,750)	(3,750)	(3,750)	(3,750)	(3,750)	(3,750)
Surplus/Additional capacity to meet standard	1,777	(224)	(2,399)	(4,761)	(7,326)	(10,112)	(13,139)	(16,427)	(19,998)
Install 20000 kW at Loafer or Arrowhead	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Surplus/Additional capacity to meet standard	21,777	19,776	17,601	15,239	12,674	9,888	6,861	3,573	2
Total Capacity after additions	**45,000**	**45,000**	**45,000**	**45,000**	**45,000**	**45,000**	**45,000**	**45,000**	**45,000**

In 2008 an additional 12,630 kW of Capacity will be needed to meet the Service Standard Capacity Requirement. With the construction of the new Loafer substation with 20,000 kW of transformer capacity for Salem City and the addition of a 20,000 kW transformer at Arrowhead Substation, along with transmission and distribution main feeder upgrades and additions, there is sufficient capacity to meet the Capacity Service Standard through the 10 year forecast. Additional capacity needs are anticipated one year outside the 10 year planning horizon.

Although the Arrowhead 20,000 kW transformer is being installed in 2008 along with the Loafer transformer, Table 2 shows that it would be needed in 2010 just two years after the 2008 installation. The transformer for Arrowhead was purchased at the same time as the Loafer transformer which has resulted in over a $200,000 savings due to the increase in transformer costs since the purchase.

VI. ACTION PLAN

Table 3 lists the capital projects, in present dollars, needed to meet the Capacity Service Standard through 2017.

Table 3
Action Plan

Captial Additions		**Cost**	**Year**
Rebuild Loafer with new 20000 KW transformer	$	1,800,000	2007-2008
Install new 20000 kW transformer at Arrowhead	$	1,225,000	2008
Remaining Payments on Existing Bond	$	752,496	2007-2011
East Main Feeder Loop	$	250,000	2008
West Main Feeder Loop	$	225,000	2009
Sectionalizing Switches	$	100,000	2008-2011
Engineering and Construction Mangement	$	525,000	
Network Mapping and Model in Support of Projects	$	84,000	2008-2011
Total	**$**	**4,961,496**	

In 2008 Salem City's action plan begins with the construction and completion of a substation to replace the existing Loafer Substation in partnership with South Utah Valley Electric Service District, d.b.a. S.E.S.D. The existing Loafer Substation is owned in partnership with S.E.S.D. with each owning 50% of the existing 7,500 kVA transformer. The new substation will be built with two 20,000 kVA transformers and each entity will have 50% ownership in each transformer. Each will contribute $1,800,000, the estimated cost of their 50% share of the

completed substation. The existing Loafer Substation is being replaced due to road widening projects and cost and difficulty of increasing transformer capacity with the existing structure. The existing 7,500 kVA Loafer transformer will be removed for use in a future location.

The construction of the Main Feeder Loops, reinforcing the ties between the Loafer and Arrowhead Substations, are projected to begin with the East Feeder in 2008 and the West Feeder in 2009.

Sectionalizing switches are projected to be installed from 2008 thru 2011 as determined by the network modeling in support of the projects for operability of the system and load movement as required.

The cost of the engineering and construction management of the proposed projects as well as the cost for mapping and modeling the net work in support of the projects is included for the first five years of the action plan.

VII. FUNDING

The existing system was built through operating revenues from power sales. Undeveloped property has not used power and has not contributed to the funding of the existing system. New development creates impacts on the existing system and benefits from the capital improvements. With new development, additional system capacity is needed to maintain the Service Standard. Only impact fees and operating revenues will be available to fund system improvements required by development impacts. Impact fees become an important element to achieve an equitable allocation of costs borne in the past and to be borne in the future in comparison to the benefits already received and yet to be received.

VIII. ELECTRIC IMPACT FEES

Impact fees are one-time charges imposed on development to cover costs associated with necessary capital improvements to the electric system needed to serve development. In April 1995, the Utah State Legislature passed Title 11, Chapter 36, Sections 101-401 (the “Impact Fee Act”). The “Impact Fee Act” put in place requirements regulating impact fees which apply to municipalities that own their own electric utilities.

To implement impact fees as defined by the Impact Fee Act, “local political subdivisions” must conduct an analysis with the following elements:

- Identification of the impact on system improvements required by the

development activity;

- Demonstration of how those impacts on system improvements are reasonably related to the development activity;
- Estimation of the proportionate share of the costs of impacts on system improvements that are reasonably related to the new development activity[2]; and
- Explanation of how the impact fee was calculated.

Electric impact fees in Salem City are calculated using incremental costs which is one of several methods for calculating impact fees. This method determines what new developments pay for improvements or a portion of the improvements needed to serve them. This is a "capacity-based" fee structure. In this way existing customers are not burdened by the new growth.

IX. Calculating Impact Fees

There are two steps in the process of calculating impact fees.

1. Determine the cost of improvements attributable to new development.
2. Allocate the identified costs to various types of development (customers).

Step 1

In 2007 the summer peak demand for the system was 8,000 kilowatts. There was not sufficient capacity to meet the Service Standard. The costs of improvements in the Action Plan are attributable to the new development identified in the Spatial Load Forecast and based on historical growth patterns projected in to the future and are needed to meet the Service Standard.

Step 2

The cost per capacity unit (1 kilowatt) is calculated by dividing the projected facility costs needed to serve future development divided by the potential demand of the new development over the study period. The capital cost attributed to projected load growth from the Action Plan is $4,961,496. This will provide for sufficient system capacity through 2017 to meet the system capacity Service Standard. New development capacity needs are projected to be 15,251 kilowatts during this period.

The cost per capacity unit is $4,961,496 divided by 15,251 kilowatts of new load, equaling $325 per kW.

The Electric Impact Fee for different types of new load in residential, commercial

[2] See the Proportionate Share Analysis included on page 9 of this document.

and industrial categories are calculated by determining the estimated peak demand (kW) of each type of load and multiplying it by the cost per capacity unit.

Electric Impact Fee = Expected peak kW demand of each new load X $325 per kW

Based upon the Power Department's experience[3] the expected load for each connection size was developed and was used in the new Power Impact Fee Schedule (see Table 4, Power Impact Fee, on the following page).

[3] See Salem City Power Department memorandum, included as page 10 of this document.

Table 4

Residential Single Phase Service Sizes			Impact Fee	Cost per Capacity Unit
AMPS	KVA	PEAK DEMAND (kW)		$ 325
100	24	5	$ 1,627	
125	30	6	$ 1,952	
150	36	7	$ 2,277	
200	48	8	$ 2,603	
225	54	10	$ 3,253	
400	96	14	$ 4,554	

Commercial Single Phase Service Sizes			
AMPS	KVA	PEAK DEMAND (kW)	
100	24	5	$ 1,627
125	30	7	$ 2,277
150	36	9	$ 2,928
200	48	14	$ 4,554
400	96	19	$ 6,181

Commercial 3 Phase (120/240V) Service Sizes			
AMPS	KVA	PEAK DEMAND (kW)	
125	52	16	$ 5,205
150	62	24	$ 7,808
200	83	31	$ 10,085
400	166	63	$ 20,495
600	249	94	$ 30,580
800	332	126	$ 40,990
1000	415	157	$ 51,075
1200	498	189	$ 61,486
1600	664	252	$ 81,981
2000	830	315	$ 102,476
2500	1038		$ -

Commercial 3 Phase (120/208V) Service Sizes			
AMPS	KVA	PEAK DEMAND (kW)	
125	45	16	$ 5,205
150	54	24	$ 7,808
200	72	31	$ 10,085
400	144	63	$ 20,495
600	216	94	$ 30,580
800	288	126	$ 40,990
1000	360	157	$ 51,075
1200	432	189	$ 61,486
1600	576	252	$ 81,981
2000	720	315	$ 102,476
2500	900		$ -

Commercial 3 Phase (277/480V) Service Sizes			
AMPS	KVA	PEAK DEMAND (kW)	
125	104	35	$ 11,386
150	125	52	$ 16,917
200	166	73	$ 23,748
400	332	145	$ 47,172
600	498	219	$ 71,245
800	664	290	$ 94,343
1000	830	364	$ 118,417
1200	996	436	$ 141,840
1600	1329	583	$ 189,662
2000	1661	728	$ 236,834
2500	2076		$ -
3000	2494	1092	$ 355,251
3500	2905	1272	$ 413,935
3750	3113	1363	$ 443,502
4000	3320	1454	$ 473,069

Proportionate Share Analysis

The Salem City Electrical Power Impact Fee is proportionate and reasonable in order to provide proper electrical service for new loads developing within the City. This written analysis establishes an equitable allocation of the costs and includes the factors as outlined in the Utah Impact Fees Act (11-36-201(5)(b)(i-vii)). It is noted that Salem City has included the costs for voltage transformation and main distribution lines as the system improvements which will be necessary in order to deliver energy to its customers in the Power Impact Fee. A brief discussion of these seven factors is set forth below:

i. **The cost of existing public facilities;** This item is not applicable because the Electrical Impact Fees are based on the recommendations of the capital facilities plan for the Salem City electrical system. There is no excess existing capacity available to serve new development. The Power Impact Fee is based on the costs required to provide the same established level of service to new customers as provided historically to the current electrical system customers.

ii. **The manner of financing existing public facilities, such as user charges, special assessments, bonded indebtedness, general taxes, or federal grants;** This item is not applicable because the Electrical Impact Fee is not based on existing facilities and general tax revenues are not anticipated to be used to fund the capital facilities plan.

iii. **The relative extent to which the newly developed properties and the other properties in the city have already contributed to the cost of existing public facilities, by such means as user charges, special assessments, or payment from the proceeds of general taxes**; The system improvements that are included in the impact fee have not been contributed to previously by newly developed properties through other funding means. No general revenue funds or other taxing revenues have been used to build any of these facilities.

iv. **The relative extent to which the newly developed properties and the other properties in the district will contribute to the cost of existing public facilities in the future**; It is anticipated that the additional electrical facilities will be paid for from Power Impact Fee funding. Future contributions from other sources are not anticipated at this time.

v. **The extent to which the newly developed properties are entitled to a credit because the city is requiring their developers or owners, by contractual arrangement or otherwise, to provide common facilities, inside or outside the proposed development, that have been provided by the city and financed through general taxation or other means, apart from user charges, in other parts of the city;** The system improvements included in the Power Impact Fee have not received funding from general taxation or other means and will be built by the City as outlined in the capital facilities Plan.

vi. **Extraordinary costs, if any, in servicing the newly developed properties;** No extraordinary costs are anticipated in servicing new development. Salem City consists of a single service area and provides the same level of service city wide to each of its customers. The facilities constructed through the Power Impact Fees collected will be used to serve new Salem City electrical customers.

vii. **The time-price differential inherent in fair comparisons of amounts paid at different times;** only present day pricing for the facilities included in the impact fee have been used. Required cost adjustments should be included as part of the periodic Power Impact Fee review and updating process.

Expected load based on Connection Size

In developing the Power Impact Fee, the Power Department provides input as to the impact for each improvement listed in the Action Plan attributable to new developments within the city. This is quantified based on the projected load demand of a new development.

The estimated peak load (in kW) necessary to serve new development is set forth below. It is to be used in calculating the Power Impact Fee and is based on service connection size.

The expected peak load has been calculated based upon the Power Department's historical experience with the expected demand as a percentage of the maximum potential load for a service connection.

Expected Demand Based on Service Size

Residential Single Phase Service Sizes

AMPS	PEAK DEMAND (kW)
100	5
125	6
150	7
200	8
225	10
400	14

Commercial Single Phase Service Sizes

AMPS	PEAK DEMAND (kW)
100	5
125	7
150	9
200	14
400	19

Commercial 3 Phase (120/240V) Service Sizes

AMPS	PEAK DEMAND (kW)
125	16
150	24
200	31
400	63
600	94
800	126
1000	157
1200	189
1600	252
2000	315
2500	

Commercial 3 Phase (120/208V) Service Sizes

AMPS	PEAK DEMAND (kW)
125	16
150	24
200	31
400	63
600	94
800	126
1000	157
1200	189
1600	252
2000	315
2500	

Commercial 3 Phase (277/480V) Service Sizes

AMPS	PEAK DEMAND (kW)
125	35
150	52
200	73
400	145
600	219
800	290
1000	364
1200	436
1600	583
2000	728
2500	

Appendix A

Salem City

Map of Unimproved Areas by Zoning Designation

Used In The

Spatial Load Forecast

Salem City Zoning

1 inch equals 1,000 feet

3/07/2006