



PUBLIC
FINANCE
ADVISORS



SPRINGVILLE UTAH

JULY
2024

IMPACT FEE FACILITIES PLAN (IFFP)
& IMPACT FEE ANALYSIS (IFA)

POWER

PREPARED BY:

LRB PUBLIC FINANCE ADVISORS

FORMERLY LEWIS YOUNG ROBERTSON & BURNINGHAM INC.

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IMPACT FEE CERTIFICATION

IFFP CERTIFICATION

LRB Public Finance Advisors certifies that the attached impact fee facilities plan:

1. includes only the costs of public facilities that are:
 - a. allowed under the Impact Fees Act; and
 - b. actually incurred; or
 - c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
 - a. costs of operation and maintenance of public facilities;
 - b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
 - c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and,
3. complies in each and every relevant respect with the Impact Fees Act.

IFA CERTIFICATION

LRB Public Finance Advisors certifies that the attached impact fee analysis:

1. includes only the costs of public facilities that are:
 - a. allowed under the Impact Fees Act; and
 - b. actually incurred; or
 - c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
 - a. costs of operation and maintenance of public facilities;
 - b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
 - c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement;
3. offsets costs with grants or other alternate sources of payment; and,
4. complies in each and every relevant respect with the Impact Fees Act.

LRB Public Finance Advisors makes this certification with the following caveats:

1. All of the recommendations for implementations of the IFFP made in the IFFP documents or in the IFA documents are followed by City Staff and elected officials.
2. If all or a portion of the IFFP or IFA are modified or amended, this certification is no longer valid.
3. All information provided to LRB is assumed to be correct, complete, and accurate. This includes information provided by the City as well as outside sources.

LRB PUBLIC FINANCE ADVISORS



DEFINITIONS

The following acronyms or abbreviations are used in this document:

CFP:	Capital Facilities Plan
HH:	Household
IFA:	Impact Fee Analysis
IFFP:	Impact Fee Facilities Plan
KSF:	Thousand Square Feet
kW:	Kilowatt
LOS:	Level of Service
LRB:	LRB Public Finance Advisors (Formerly Lewis Young Robertson & Burningham, Inc.)
M:	Million
MW:	Megawatt
SF:	Square Feet
SUVPS:	Southern Utah Valley Power Systems
UAMPS:	Utah Associated Municipal Power Systems



SECTION 1: EXECUTIVE SUMMARY

The purpose of the power facilities Impact Fee Facilities Plan (IFFP), with supporting Impact Fee Analysis (“IFA”), is to fulfill the requirements established in Utah Code Title 11 Chapter 36a, the “Impact Fees Act”, and assist Springville City (the City) in financing and constructing necessary capital improvements for future growth. This document will address the future infrastructure needed to serve the City through the next ten years, as well as the appropriate impact fees the City may charge to new growth to maintain the level of service (LOS). The City commissioned a Capital Facility Plan (CFP), completed in October 2023, to support the IFFP and IFA analysis.

- **Impact Fee Service Areas:** The impact fees related to power will be assessed within the proposed service area, which incorporates the entire municipal boundaries, and the area in Hobble Creek Canyon.
- **Demand Analysis:** A total of 30,780 additional kilowatts (kW) of demand will be generated within the current Service Area in the IFFP planning horizon. See **SECTION 3** for details regarding growth in kW.
- **Level of Service:** The power LOS is based on loading to the base rating on substation transformers and system voltage criteria. **SECTION 3** provides the LOS information used in this analysis. New facilities are designed to maintain the diversified kW LOS.
- **Excess Capacity:** This analysis includes excess capacity related to substations and the feeder system.
- **Capital Facilities Analysis:** The IFFP has identified the growth-related projects needed within the next ten years. The total construction year cost related to growth is **\$12M**, based on an inflation rate of four percent annually.
- **Financing of Future Facilities:** The future capital projects which are intended to serve new growth will be financed using utility rate revenues, impact fees, and other related funds. Southern Utah Valley Power Systems (SUVPS) anticipates obtaining a \$50 million bond to pay for the proposed SUVPS projects. The proposed bond period is 25 years. Each SUVPS member’s payment per year will be based on their usage of the system.

SUMMARY OF PROPOSED IMPACT FEES

The impact fees proposed in this analysis will be assessed within the Service Area. The tables below illustrate the calculated impact fee for power services.

TABLE 1.1: ILLUSTRATION OF COST PER NEW kW

POWER PROJECTS	TOTAL COSTS	% GROWTH RELATED AND IMPACT FEE FUNDED	GROWTH RELATED & CITY FUNDED COSTS	GROWTH RELATED kW	COST PER NEW kW
Buy-In: Existing Substation Transformers	\$9,709,636	31.73755%	\$3,080,630	98,273	\$31.35
Buy-In: Transmission/Distribution	\$20,373,003	57.49760%	\$11,713,987	98,273	\$119.20
Future System Improvements	\$52,207,452	22.98286%	\$11,998,766	30,780	\$389.82
Professional Expense	\$31,245	47.44759%	\$14,825	18,335	\$0.81
Impact Fee Fund Balance	(\$2,932,150)	100%	(\$2,932,150)	30,780	(\$95.26)
TOTALS:	\$79,389,186		\$23,876,058		\$445.92



IMPACT FEE FACILITIES PLAN AND IMPACT FEE ANALYSIS

SPRINGVILLE, UTAH

TABLE 1.2: ILLUSTRATION OF IMPACT FEE BY PANEL SIZE

PANEL RATING	LINE-TO-LINE VOLTAGE	100% PANEL KVA	AVG PANEL LOADING	AVG PEAK DEMAND @ PANEL (KVA)	POWER FACTOR	ESTIMATED DIVERSIFIED kW	PROPOSED FEE	EXISTING FEE	% CHANGE
Residential (120/240, 1 Phase)									
100	240	24	12.50%	3.00	95%	2.85	\$1,271	\$1,277	0%
125	240	30	12.50%	3.75	95%	3.56	\$1,589	\$1,597	0%
150	240	36	12.50%	4.50	95%	4.28	\$1,906	\$1,916	0%
200	240	48	12.50%	6.00	95%	5.70	\$2,542	\$2,554	0%
400	240	96	12.85%	12.34	95%	11.72	\$5,226	\$5,107	2%
600	240	144	12.85%	18.50	95%	17.58	\$7,839	\$7,665	2%
800	240	192	12.85%	24.67	95%	23.44	\$10,452	\$10,219	2%
Commercial (120/240, 1 Phase)									
100	240	24	25.00%	6.00	90%	5.40	\$2,407	\$1,277	89%
150	240	36	25.00%	9.00	90%	8.10	\$3,612	\$1,916	89%
200	240	48	25.00%	12.00	90%	10.80	\$4,816	\$2,554	89%
400	240	96	25.00%	24.00	90%	21.60	\$9,632	\$5,107	89%
600	240	144	25.00%	36.00	90%	32.40	\$14,448	\$7,661	89%
800	240	192	25.00%	48.00	90%	43.20	\$19,264	\$10,219	89%
Commercial (120/208, 3 Phase)									
200	208	72	25.00%	18.01	90%	16.21	\$7,229	\$3,833	89%
400	208	144	25.00%	36.03	90%	32.42	\$14,459	\$7,666	89%
600	208	216	25.00%	54.04	90%	48.64	\$21,688	\$11,499	89%
800	208	288	25.00%	72.05	90%	64.85	\$28,917	\$15,340	89%
1000	208	360	25.00%	90.06	90%	81.05	\$36,146	\$19,176	89%
1200	208	432	25.00%	108.08	90%	97.27	\$43,376	\$23,011	89%
1600	208	576	25.00%	144.11	90%	129.70	\$57,834	\$30,681	89%
1800	208	648	25.00%	162.12	90%	145.91	\$65,063	\$34,516	89%
2000	208	721	25.00%	180.13	90%	162.12	\$72,293	\$38,351	89%
2500	208	901	25.00%	225.17	90%	202.65	\$90,366	\$47,939	89%
3000	208	1081	25.00%	270.20	90%	243.18	\$108,439	\$57,527	89%
Commercial (277/480, 3 Phase)									
200	480	166	25.00%	41.57	90%	37.41	\$16,683	\$8,846	89%
400	480	333	25.00%	83.14	90%	74.82	\$33,366	\$17,691	89%
600	480	499	25.00%	124.71	90%	112.24	\$50,049	\$26,551	89%
800	480	665	25.00%	166.28	90%	149.65	\$66,732	\$35,383	89%
1000	480	831	25.00%	207.85	90%	187.06	\$83,414	\$44,251	89%
1200	480	998	25.00%	249.42	90%	224.47	\$100,097	\$53,074	89%
1600	480	1330	25.00%	332.55	90%	299.30	\$133,463	\$70,802	89%
1800	480	1496	25.00%	374.12	90%	336.71	\$150,146	\$79,652	89%
2000	480	1663	25.00%	415.69	90%	374.12	\$166,829	\$88,503	89%
2500	480	2078	25.00%	519.62	90%	467.65	\$208,536	\$110,628	89%
3000	480	2494	25.00%	623.54	90%	561.18	\$250,243	\$132,754	89%

A detailed explanation of the increase in the proposed impact fee is in **Section 6** of this report.

NON-STANDARD IMPACT FEES

The proposed fees are based upon growth in kW. The City reserves the right under the Impact Fees Act to assess an adjusted fee that more closely matches the true impact that the land use will have



upon public facilities.¹ A developer may submit studies and data for a particular development and request an adjustment. This adjustment could result in a higher or lower impact fee if the City determines that a particular user may create a different impact than what is standard for its land use. The following formulas will help determine the non-standard impact fee.

Estimated Diversified kW Usage * \$445.92

The formula for a non-standard impact fee should be included in the impact fee enactment (by resolution or ordinance). In addition, the impact fee enactment should contain the following elements:

- A provision establishing one or more service areas within which the local political subdivision or private entity calculates and imposes impact fees for various land use categories.
- A schedule of impact fees for each type of development activity that specifies the amount of the impact fee to be imposed for each type of system improvement or the formula that the local political subdivision or private entity will use to calculate each impact fee.
- A provision authorizing the local political subdivision or private entity to adjust the standard impact fee at the time the fee is charged to:
 - Respond to unusual circumstances in specific cases or a request for a prompt and individualized impact fee review for the development activity of the state, a school district, or a charter school and an offset or credit for a public facility for which an impact fee has been or will be collected.
 - Ensure that the impact fees are imposed fairly.
- A provision governing calculation of the amount of the impact fee to be imposed on a particular development that permits adjustment of the amount of the impact fee based upon studies and data submitted by the developer.
- A provision that allows a developer, including a school district or a charter school, to receive a credit against or proportionate reimbursement of an impact fee if the developer:
 - Dedicates land for a system improvement.
 - Builds and dedicates some or all of a system improvement.
 - Dedicates a public facility that the local political subdivision or private entity and the developer agree will reduce the need for a system improvement.
- A provision that requires a credit against impact fees for any dedication of land for, improvement to, or new construction of, any system improvements provided by the developer if the facilities:
 - Are system improvements; or,
 - Dedicated to the public and offset the need for an identified system improvement.

Other provisions of the impact fee enactment include exemption of fees for development activity attributable to low-income housing, the state, a school district, or a charter school. Exemptions may also include other development activities with a broad public purpose. If an exemption is provided,

¹ UC 11-36a-402(1)(c)

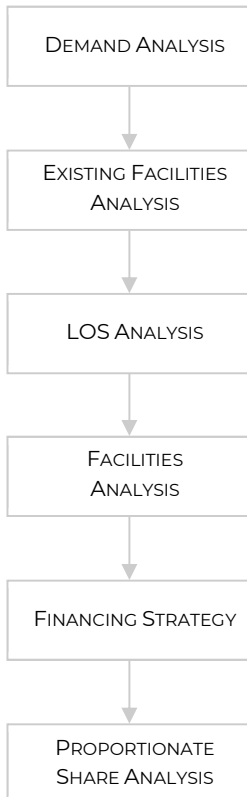


the entity should establish one or more sources of funds other than impact fees to pay for that development activity. The impact fee exemption for development activity attributable to a school district or charter school should be applied equally to either scenario.



SECTION 2: GENERAL IMPACT FEE METHODOLOGY

FIGURE 2.1: IMPACT FEE METHODOLOGY



The purpose of this study is to fulfill the requirements of the Impact Fees Act regarding the establishment of an IFFP and IFA. The IFFP identifies the demands placed upon the City's existing facilities by future development and evaluates how these demands will be met by the City. The IFFP is also intended to outline the improvements, which are intended to be funded by impact fees. The purpose of IFA is to allocate the cost of the new facilities and any excess capacity to new development, while ensuring that all methods of financing are considered. The Impact Fee Act requires that the IFFP and IFA consider the historic level of service provided to existing development and ensure that the proposed impact fees maintain the existing level of service. The following elements are important considerations when completing an IFFP and IFA.

DEMAND ANALYSIS

The demand analysis serves as the foundation for the IFFP and IFA. This element focuses on a specific demand unit related to each public service – the existing demand on public facilities and the future demand as a result of new development that will affect system facilities.

EXISTING FACILITY INVENTORY

In order to quantify the demands placed upon existing public facilities by new development activity, to the extent possible the IFFP provides an inventory of the City's existing system facilities. The inventory valuation should include the original construction cost and estimated useful life of each facility. The inventory of existing facilities is important to determine the excess capacity of existing facilities and the utilization of excess capacity by new development.

LEVEL OF SERVICE ANALYSIS

"Level of service" or LOS means the defined performance standard or unit of demand for each capital component of a public facility within a service area. Through the inventory of existing facilities, combined with the growth assumptions, this analysis identifies the existing LOS that is provided to a community's existing residents and ensures that future facilities maintain these standards.

EXCESS CAPACITY AND FUTURE CAPITAL FACILITIES ANALYSIS

The demand analysis, existing facility inventory and LOS analysis allow for the development of a list of capital projects necessary to serve new growth and to maintain the existing system. This list includes any excess capacity of existing facilities as well as future system improvements necessary to maintain the LOS. Any excess capacity identified within existing facilities can be apportioned to new development. Any demand generated from new development that overburdens the existing system beyond the existing capacity justifies the construction of new facilities.

FINANCING STRATEGY

This analysis must also include a consideration of all revenue sources, including impact fees, future debt costs, alternative funding sources and the dedication of system improvements, which may be used to finance system improvements.² In conjunction with this revenue analysis, there must be a determination that impact fees are necessary to achieve an equitable allocation of the costs of the new facilities between the new and existing users.³

PROPORTIONATE SHARE ANALYSIS

The written impact fee analysis is required under the Impact Fees Act and must identify the impacts placed on the facilities by development activity and how these impacts are reasonably related to the new development. The written impact fee analysis must include a proportionate share analysis, clearly detailing each cost component and the methodology used to calculate each impact fee. A local political subdivision or private entity may only impose impact fees on development activities when its plan for financing system improvements establishes that impact fees are necessary to achieve an equitable allocation of the costs borne in the past and to be borne in the future (UCA 11-36a-302).

² 11-36a-302(2)

³ 11-36a-302(3)

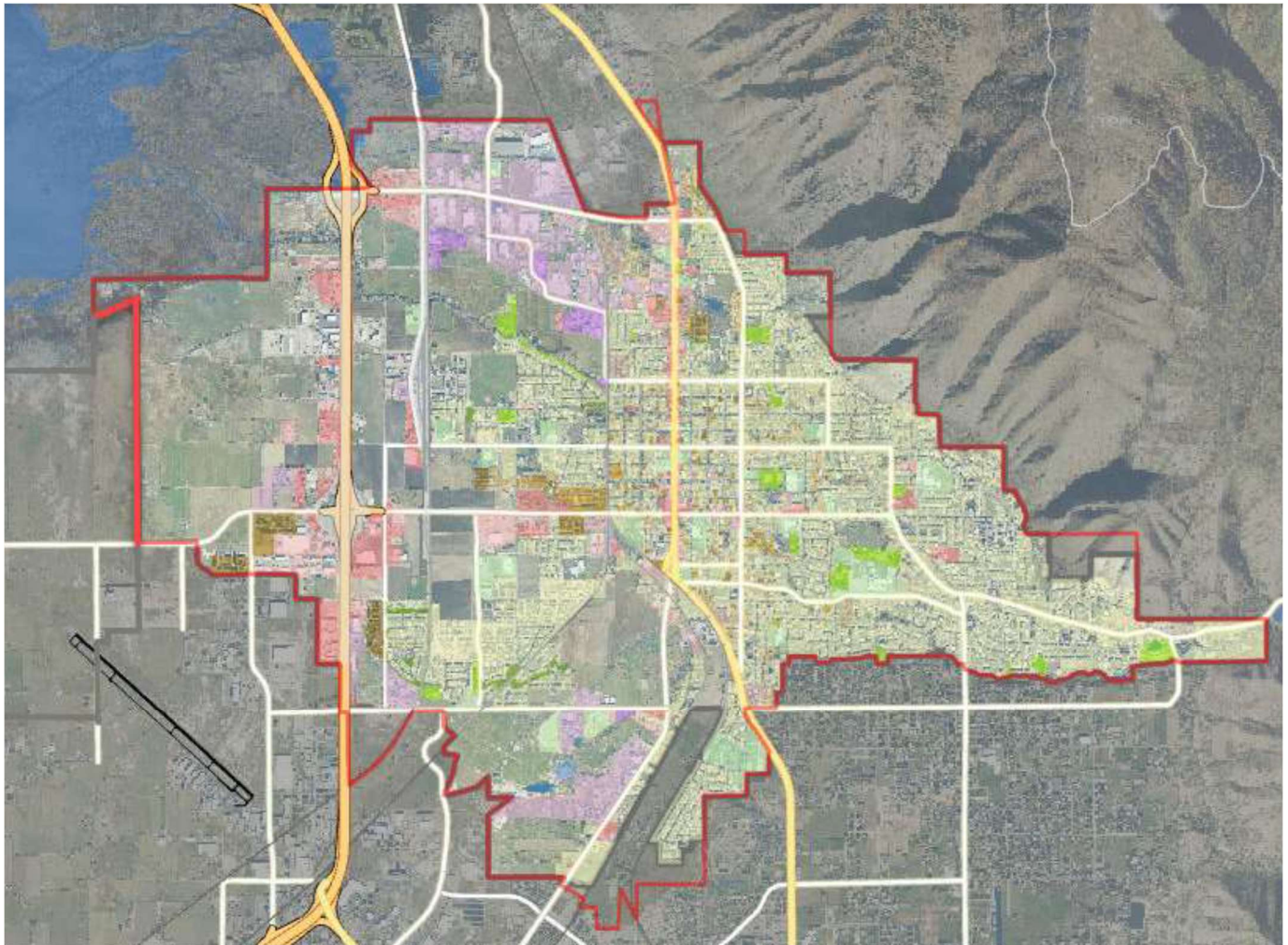


SECTION 3: SERVICE AREA, DEMAND, AND LOS

SERVICE AREA

Utah Code requires the impact fee enactment to establish one or more service areas within which impact fees will be imposed.⁴ This document identifies the necessary future system improvements for the Service Area that will maintain the existing LOS into the future. According to the 2023 CFP, the Service Area includes areas within the City boundary, and the area in Hobbles Creek Canyon, as shown in **Figure 3.1**.

FIGURE 3.1: POWER SERVICE AREA



DEMAND

The City's power system requires expansion to maintain the existing LOS as new growth and development activity occurs within the Service Area. To accurately determine the portion of the costs of future capital infrastructure that should be included in the impact fees, this analysis projects the future growth in megawatts (MW) and kilowatts (kW). The demand unit used in the calculation of the

⁴ UC 11-36a-402(1)(a)

power impact fees is the estimated MW and kW at a power factor of 95 percent.⁵ **TABLE 3.1** summarizes the projected annual increase in kW within the Service Area.

TABLE 3.1: PROJECTED DEMAND

YEAR	PEAK LOAD (MVA)	CFP POPULATION	FORECAST MW @ 95% P.F.	LOAD PER CAPITA (kW/POPULATION)
2023	72.5	36,765	68.9	1.87
2024	78.9	38,325	75.0	1.96
2025	82.4	39,130	78.3	2.00
2026	86.7	39,952	82.4	2.06
2027	91.8	40,791	87.2	2.14
2028	95.5	41,647	90.7	2.18
2029	98.8	42,521	93.9	2.21
2030	100.8	43,414	95.8	2.21
2031	102.9	44,326	97.8	2.21
2032	104.9	45,257	99.66	2.20
IFFP 10 Year Demand	32.4	8,492	30.8	
IFFP 5 Year Demand	19.3	4,026	18.3	
Projected New Growth through Buildout	103.45	23,773	98.3	

p.f. = Power Factor

It is anticipated that new growth will have an impact on the City's existing services. Power facilities will need to be expanded to maintain the existing LOS. The IFFP, in conjunction with the impact fee analysis, are designed to accurately assess the true impact of a particular user upon the City's infrastructure.

LEVEL OF SERVICE STANDARDS

Impact fees cannot be used to finance an increase in the LOS to current or future users of capital improvements. Therefore, it is important to identify the power LOS within the Service Area to ensure that the new capacities of projects financed through impact fees do not exceed the established standard. According to the most recent CFP, the City plans, designs and operates its system based on the following criteria:

- Transformer ratings under varying load levels and loading conditions must remain below their base rating;
- The system must be able to adequately serve load under single contingency (N-1) situations, where "N" is power system elements such as a transformer or line;
- The system switching required under an N-1 contingency should remain as simplified as possible to ensure that switching orders not become unnecessarily complex;
- Distribution circuit loading criteria must remain below 90% of its maximum current rating;
- Primary circuit voltage must remain between 95% and 105% of its nominal value; and,
- Distribution circuit main lines must be able to serve additional load under N-1 contingencies.

⁵ Power factor (p.f.) is the ratio of working power, measured in kilowatts (kW), to apparent power, measured in kilovolt amperes (kVA). The power factor of the present system is acceptable, above 0.95. The system power factor is primarily influenced by the types and level of loads on the system and the amount of shunt capacitors installed in the system.



TABLE 3.2 and **3.3** identify the existing system design criteria and LOS variables.

TABLE 3.2: SYSTEM DESIGN CRITERIA

ELEMENT	NORMAL SYSTEM	DURING EMERGENCY ("N-1" CONTINGENCY)
Substations Transformer Loading	100% of Base Rating (12 MVA, and 25 MVA on Hobble Creek T1)	100% of Highest Nameplate Rating (for example, 20 MVA, or 41.75 MVA about 167% of Base Rating)
Main line feeder Loading	90% of the conductor rating, 540 amps (11.7 MVA each feeder) for 1000 or 1100 MCM Al underground conductor & 477 ACSR overhead conductor	100% of the conductor rating, 600 amps max.—rating of 1000 or 1100 MCM Al underground conductor & 477 ACSR overhead conductor
Voltage	+/- 5% of nominal (0.95 p.u. to 1.05 p.u.)	+ 5% to -8.3% of nominal (0.917 p.u. to 1.05 p.u.)

Source: CFP p.19

TABLE 3.3: CONDUCTOR DESIGN CRITERIA

CONDUCTOR	USE	DESIGN CRITERIA	100% FULL RATING (AMPS)
1000 or 11000 kcmil Aluminum	Underground Mainline	540 amps	600 amps
477 kcmil ACSR	Overhead mainline	540 amps	600 amps
336 ACSR	Overhead mainline	477 amps	530 amps
4/0 ACSR	Overhead mainline	310 amps	345 amps
1000 or 11000 kcmil Aluminum	Underground Mainline	540 amps	600 amps

Source: CFP p.19



SECTION 4: EXISTING FACILITIES & EXCESS CAPACITY

This section is intended to summarize the existing public facilities related to power services. Generally, existing assets are separated into two areas: (1) Power Resources/Generation; and, (2) City Transmission and Distribution System Improvements. The City is a member city in the Utah Associated Municipal Power Systems (UAMPS). UAMPS works with its member cities to obtain the power supply for their electric power needs. Electric power is supplied to the City on transmission lines owned and maintained by Southern Utah Valley Power Systems (SUVPS) at 46 kV transmission voltage. These transmission lines deliver power at Springville's Baxter and Dry Creek substations. The City's external energy sources or points of delivery are the SUVPS Dry Creek Substation and the city's Calvin J. Baxter Substation. There are eighteen 12.47/7.2 kV distribution feeders from the City's distribution substations. The distribution substations and their associated transformers, ratings, loading, and remaining capacities are discussed below.

VALUE OF EXISTING POWER INFRASTRUCTURE

Based upon data provided by the City using the electric utility depreciation schedule, the existing system is valued at approximately \$88.82M, based on original cost, as shown in **TABLE 4.1**. Generation and SUVPS initial investment is excluded from the calculation of buy-in (\$43.35M). In addition, \$1.97M is subtracted from the substation/transformer buy-in value and \$13.42M is subtracted from the transmission/distribution buy-in value, representing impact fee revenues spent and other non-eligible value. As a result, \$30.08M is included as impact fee eligible value.

TABLE 4.1: VALUE OF EXISTING POWER SYSTEM

Total System Value	\$88,816,530
Eligible Substations	\$9,709,636
Eligible Distribution	\$20,373,003
Subtotal of Eligible Value	\$30,082,639

EXCESS CAPACITY

The City maintains a network of transmission and distribution infrastructure. **TABLE 4.2** and **4.3** illustrate the capacity analysis for the existing transformers and feeder loads. Based on this analysis, there is excess capacity related to existing infrastructure.

TABLE 4.2: EXISTING SUBSTATION/TRANSFORMER CAPACITY ANALYSIS

SUBSTATION	TRANSFORMER	BASE RATING-- CAPACITY USED FOR NORMAL LOAD (MVA)	JULY 2022 RECORDED LOADING (MVA)	REMAINING TRANSFORMER CAPACITY AVAILABLE (MVA)	REMAINING TRANSFORMER CAPACITY AVAILABLE (MW) AT 0.95 POWER FACTOR
Baxter	T1	12.00	10.19	1.81	1.72
Baxter	T2	12.00	6.71	5.29	5.03
Compound	T1	12.00	12.76	(0.76)	(0.72)
Hobble Creek	T1	25.00	9.21	15.79	15.00
Knight	T1	12.00	11.07	0.93	0.88
North	T1	12.00	8.10	3.90	3.71
Total		85.00	58.04	26.96	25.62
				Total MW Capacity	80.75
				% Excess Capacity	31.7%
				Original Value	\$9,709,636
				Buy-In Value	\$3,080,630



Within the capacity analysis of the feeder systems there is a factor of 90 percent applied to the “Rated Feeder MW”. This 90 percent of rated loading matches the capacity analysis to the stated Level of Service for distribution feeders as shown in Table 3.2. Its effect is to reduce the excess capacity showing as available, reserving that capacity for “N-1” contingency conditions where the loss on one distribution feeder is restored by the other remaining distribution system feeders. The 90 percent adjustment reduces the Buy-in Value that is used in the impact fee calculation.

TABLE 4.3: EXISTING FEEDER SYSTEM CAPACITY ANALYSIS

SUB	FEEDER	RATED FEEDER MVA	RATED FEEDER MW		RATED FEEDER AMPS	PHASE AMPS (JULY 2022)	MW (JULY 2022)	REMAINING CAPACITY AVAILABLE MW
			@ 0.95 Power Factor	@ 90% Rated Loading				
Baxter	101	12.96	12.31	11.08	540	233	4.92	6.16
Baxter	103	12.96	7.10	11.08	540	239	5.04	6.04
Baxter	104	7.47	7.10	6.37	311	234	4.95	1.42
Baxter	106	12.96	12.31	11.08	540	76	1.61	9.47
Compound	601	12.96	12.31	11.08	540	217	4.59	6.49
Compound	602	6.48	6.16	5.54	270	73	1.55	3.99
Compound	603	11.45	10.88	9.79	477	243	5.13	4.66
Compound	604	4.75	4.51	4.07	198	57	1.21	2.86
Hobble Creek	703	12.96	12.31	11.08	540	186	3.92	7.16
Hobble Creek	704	12.96	12.31	11.08	540	50	1.05	10.03
Hobble Creek	705	12.96	12.31	11.08	540	210	4.54	6.54
Hobble Creek	706	12.96	12.31	11.08	540	171	3.61	7.47
Knight	201	11.45	10.88	9.79	477	195	4.11	5.68
Knight	202	12.96	12.31	11.08	540	108	2.28	8.80
Knight	203	12.96	12.31	11.08	540	210	4.44	6.64
North	501	12.96	12.31	11.08	540	65	1.38	9.70
North	502	12.96	12.31	11.08	540	236	4.99	6.09
North	503	12.96	12.31	11.08	540	73	1.55	9.53
Total Feeder Rated Capacity:		210.08	199.58	179.60			60.87*	118.73
N-1 LOS		197.12	187.26	168.54			60.87*	107.67
Adjusted % Excess Capacity for “N-1”								57.5%
Original Value								\$20,373,003
Buy-In Value								\$11,713,987

*The MW peak for the entire Springville power system that includes the Stouffer substation load is about 70 MW. The value of 60.87 MW shown here is the sum of the MW peaks on each of the Springville power system distribution feeders—the sum does not include the peak MW on the Stouffer substation since it does not feed distribution feeders.

The excess capacity is assumed to serve development through buildout.

MANNER OF FINANCING EXISTING INFRASTRUCTURE

The City has funded its existing capital infrastructure through a combination of different revenue sources, including user fee revenues, service fees, and impact fees. Therefore, the City’s existing LOS standards have been funded by the City’s existing residents. The City does not foresee receiving revenues from other entities (i.e., grants, federal or state funds, other contributions, etc.) to fund new facilities.



SECTION 5: CAPITAL FACILITY ANALYSIS

The capital project and engineering data, planning analysis, and other information related to future capital needs can be found in the 2023 CFP. The accuracy and correctness of this plan is contingent upon the accuracy of the data and assumptions. Any deviations or changes in the assumptions due to changes in the economy or other relevant information used by the City for this study may cause this plan to be inaccurate and may require modification to this analysis to ensure accuracy.

SUMMARY OF FUTURE CAPITAL FACILITIES

Based upon the projected increase in kW and demand on the system, the City has identified the future capital projects that must be constructed over the next ten years to serve future development. The costs of these projects are summarized in **TABLE 5.1**. The percentage of the total cost that is attributable to growth is based upon the ratio of the capacity available for meeting future growth in the 10-year IFFP demand period to the total capacity provided by the project. All the projects listed in the table below have a life expectancy of more than 10 years.

TABLE 5.1: SUMMARY OF FUTURE POWER CAPITAL PROJECT COSTS

PROJECT # & TITLE	OPINION OF PROBABLE COST	YEAR	CONSTRUCTION YEAR COST	% TO IFFP DEMAND	COST TO GROWTH
1. Reconductor/rebuild the Baxter to WHPP 46 kV transmission line	\$2,672,900	2024	\$2,779,816	27.9%	\$775,569
2. Rebuild/reconductor Baxter Feeder 104	\$668,900	2024	\$695,656	23.8%	\$165,566
Springville-1. Reconductor/rebuild the Baxter to Compound 46kV transmission line	\$1,853,000	2024	\$1,927,120	56.0%	\$1,079,187
Springville-2, Replace/Upgrade North Substation Transformer	\$1,548,300	2024	\$1,610,232	36.4%	\$586,124
Springville-P-1, Upgrades to 46 kV Switchyard at Stouffers Substation	\$511,840	2024	\$532,314	35.0%	\$186,310
Springville-P-2, New Substation Near Center Street	\$3,213,100	2024	\$3,341,624	37.8%	\$1,263,134
Springville-3, Build New Center Street Substation Feeders	\$1,205,700	2024	\$1,253,928	32.1%	\$402,511
Springville-P-3, Upgrade Feeder 103 Overhead	\$417,630	2024	\$434,335	21.2%	\$92,079
Springville-P-4, Add New Feeder to North Sub	\$148,320	2024	\$154,253	9.4%	\$14,500
Springville-P-5, Capacitor Additions to System	\$50,000	2024	\$52,000	100.0%	\$52,000
Springville-4. Peaking Generation Capacity--15 MW total	\$25,500,000	2025	\$27,580,800	0.00%	\$0
3. Replace/Upgrade Compound Substation Transformer & Feeders	\$4,353,400	2026	\$4,896,983	27.9%	\$1,366,258
Springville-5. Rebuild/reconductor Feeder 602 Tie to 201	\$290,700	2026	\$326,998	63.4%	\$207,317
4. New West Feeder from New Springville Substation (Center St.)	\$529,800	2028	\$644,583	30.4%	\$195,953
Springville-6. System SCADA, OMS, Dispatch, System Model	\$433,000	2028	\$526,811	30.8%	\$162,258
SUVPS-1. Transmission System Capital Projects	\$5,450,000	2024-2039	\$5,450,000	100.0%	\$5,450,000
Total	\$48,846,590		\$52,207,452		\$11,998,766



The projected resource needs for the next several years is detailed in the following paragraphs. The estimated costs of future capital projects are based on historical experience with the system and projected growth patterns for the system.

SYSTEM VS. PROJECT IMPROVEMENTS

System improvements are defined as existing and future public facilities that are intended to provide services to service areas within the community at large.⁶ Project improvements are improvements and facilities that are planned and designed to provide service for a specific development (resulting from a development activity) and considered necessary for the use and convenience of the occupants or users of that development.⁷ The Impact Fee Analysis may only include the costs of impacts on system improvements related to new growth within the proportionate share analysis. However, impact fees will be used for the substations, etc. since these are considered system improvements.

FUNDING OF FUTURE FACILITIES

Future facilities are generally funded using the following resources:

UTILITY RATE REVENUES

Utility rate revenues serve as the primary funding mechanism within enterprise funds. Rates are established to ensure appropriate coverage of all operations and maintenance expenses, debt service coverage, and capital project needs not related to growth.

GRANTS AND DONATIONS

The City does not anticipate receiving grants or donations to fund improvements currently contemplated in this IFFP. However, the impact fees will be adjusted if grants become available to reflect the grant monies received. A donor may be entitled to reimbursement for the value of the system improvements funded through impact fees if donations are made by new development. **SECTION 6** further addresses proposed credits available to development.

IMPACT FEE REVENUES

Impact fees are charged to ensure that new growth pays its proportionate share of the costs for the development of public infrastructure. Impact fee revenues can also be attributed to the future expansion of public infrastructure if the revenues are used to maintain an existing level of service. Increases to an existing level of service cannot be funded with impact fee revenues. Impact fee revenues are generally considered non-operating revenues and help offset future capital costs. The City is opting to include the unincumbered impact fee fund balance, estimated at \$2,932,150, as a credit against future impact fee capital costs.

DEBT FINANCING

In the event the City has not accumulated sufficient impact fees to pay for the construction of time sensitive or urgent capital projects needed to accommodate new growth, the City must look to revenue sources other than impact fees for funding. The Impact Fees Act allows for the costs related to the financing of future capital projects to be legally included in the impact fee. This allows the City

⁶ 11-36a-102(20)

⁷ 11-36a102(13)

to finance and quickly construct infrastructure for new development and reimburse itself later from impact fee revenues for the costs of issuing debt. SUVPS anticipates obtaining a \$50 million bond to pay for the proposed SUVPS projects. The proposed bond period is 25 years. Each SUVPS member's payment per year will be based on their usage of the system.

EQUITY OF IMPACT FEES

Impact fees are intended to cover the costs of system improvements (infrastructure) that relate to future growth. The impact fee calculations are structured for impact fees to fund 100 percent of the growth-related facilities identified in the proportionate share analysis as presented in the impact fee analysis. Even so, there may be years when actual impact fee revenues cannot cover the annual growth-related expenses. In those years, growth-related projects may be delayed, or other revenues such as general utility rate revenues may be borrowed to make up any annual deficits. Any borrowed funds are to be repaid in their entirety through subsequent impact fees.

NECESSITY OF IMPACT FEES

An entity may only impose impact fees on development activity if the entity's plan for financing system improvements establishes that impact fees are necessary to achieve parity between existing and new development. This analysis has identified the improvements to public facilities and the funding mechanisms to complete the suggested improvements. Impact fees are identified as a necessary funding mechanism to help offset the costs of new capital improvements related to new growth. In addition, alternative funding mechanisms have been identified to help offset the cost of future capital improvements.

SECTION 6: POWER IMPACT FEE CALCULATION

The calculation of impact fees relies upon the information contained in this analysis. Impact fees are calculated based on many variables centered on proportionality and LOS. The following paragraph briefly discusses the methodology for calculating impact fees. Impact fees can be calculated using a specific set of costs specified for future development. The improvements are identified in the IFFP or CFP as growth-related projects. The total project costs are divided by the total demand units the projects are designed to serve. Under this methodology, it is important to identify the existing LOS and determine any excess capacity in existing facilities that could serve new growth.

POWER IMPACT FEE CALCULATION

Based on the growth-related projects, as well as the applicable buy-in fee, the cost per new kW is estimated at \$445.92, as shown in **TABLE 6.1**.

TABLE 6.1: ESTIMATE OF IMPACT FEE COST PER KW

POWER PROJECTS	TOTAL COSTS	% GROWTH RELATED AND IMPACT FEE FUNDED	GROWTH RELATED & CITY FUNDED COSTS	GROWTH RELATED KW	COST PER NEW KW
Buy-In: Existing Substation Transformers	\$9,709,636	31.72755%	\$3,080,630	98,273	\$31.35
Buy-In: Transmission/Distribution	\$20,373,003	57.49760%	\$11,713,987	98,273	\$119.20
Future System Improvements	\$52,207,452	22.98286%	\$11,998,766	30,780	\$389.82
Professional Expense	\$31,245	47.44759%	\$14,825	18,335	\$0.81
Impact Fee Fund Balance	(\$2,932,150)	100%	(\$2,932,150)	30,780	(\$95.26)
TOTALS:	\$79,389,186		\$23,876,058		\$445.92

The fee per kW is then applied to the general usage statistics for residential and commercial users, as shown in **Table 6.2**. This table shows the proposed impact fee for commercial customers changing by 89 percent. The differences between the prior impact fee analysis and this one that affect the change of fee include:

- The higher impact fee base cost per kW of system capacity in this analysis
- The “Average Panel Loading” (called the “Utilization Factor” in the prior analysis) is 12.5 percent to 12.85 percent for residential, and 25 percent for commercial in this study. It was 30 percent for both customer categories in the prior study.

The higher impact fee base cost per kW in this analysis comes from the type of proposed projects in this analysis, the higher cost of system components and the increased costs construction labor since the last analysis was done. The change in this analysis on panel loading/utilization was made after conducting a survey of actual customers’ panel sizes and meter data and calculating averages for residential and commercial customers.



IMPACT FEE FACILITIES PLAN AND IMPACT FEE ANALYSIS

SPRINGVILLE, UTAH

TABLE 6.2: ILLUSTRATION OF IMPACT FEE BY PANEL RATING

PANEL RATING	LINE-TO-LINE VOLTAGE	100% PANEL KVA	AVG PANEL LOADING	AVG PEAK DEMAND @ PANEL (KVA)	POWER FACTOR	ESTIMATED DIVERSIFIED kW	PROPOSED FEE	EXISTING FEE	% CHANGE
Residential (120/240, 1 Phase)									
100	240	24	12.50%	3.00	95%	2.85	\$1,271	\$1,277	0%
125	240	30	12.50%	3.75	95%	3.56	\$1,589	\$1,597	0%
150	240	36	12.50%	4.50	95%	4.28	\$1,906	\$1,916	0%
200	240	48	12.50%	6.00	95%	5.70	\$2,542	\$2,554	0%
400	240	96	12.85%	12.34	95%	11.72	\$5,226	\$5,107	2%
600	240	144	12.85%	18.50	95%	17.58	\$7,839	\$7,665	2%
800	240	192	12.85%	24.67	95%	23.44	\$10,452	\$10,219	2%
Commercial (120/240, 1 Phase)									
100	240	24	25.00%	6.00	90%	5.40	\$2,407	\$1,277	89%
150	240	36	25.00%	9.00	90%	8.10	\$3,612	\$1,916	89%
200	240	48	25.00%	12.00	90%	10.80	\$4,816	\$2,554	89%
400	240	96	25.00%	24.00	90%	21.60	\$9,632	\$5,107	89%
600	240	144	25.00%	36.00	90%	32.40	\$14,448	\$7,661	89%
800	240	192	25.00%	48.00	90%	43.20	\$19,264	\$10,219	89%
Commercial (120/208, 3 Phase)									
200	208	72	25.00%	18.01	90%	16.21	\$7,229	\$3,833	89%
400	208	144	25.00%	36.03	90%	32.42	\$14,459	\$7,666	89%
600	208	216	25.00%	54.04	90%	48.64	\$21,688	\$11,499	89%
800	208	288	25.00%	72.05	90%	64.85	\$28,917	\$15,340	89%
1000	208	360	25.00%	90.06	90%	81.05	\$36,146	\$19,176	89%
1200	208	432	25.00%	108.08	90%	97.27	\$43,376	\$23,011	89%
1600	208	576	25.00%	144.11	90%	129.70	\$57,834	\$30,681	89%
1800	208	648	25.00%	162.12	90%	145.91	\$65,063	\$34,516	89%
2000	208	721	25.00%	180.13	90%	162.12	\$72,293	\$38,351	89%
2500	208	901	25.00%	225.17	90%	202.65	\$90,366	\$47,939	89%
3000	208	1081	25.00%	270.20	90%	243.18	\$108,439	\$57,527	89%
Commercial (277/480, 3 Phase)									
200	480	166	25.00%	41.57	90%	37.41	\$16,683	\$8,846	89%
400	480	333	25.00%	83.14	90%	74.82	\$33,366	\$17,691	89%
600	480	499	25.00%	124.71	90%	112.24	\$50,049	\$26,551	89%
800	480	665	25.00%	166.28	90%	149.65	\$66,732	\$35,383	89%
1000	480	831	25.00%	207.85	90%	187.06	\$83,414	\$44,251	89%
1200	480	998	25.00%	249.42	90%	224.47	\$100,097	\$53,074	89%
1600	480	1330	25.00%	332.55	90%	299.30	\$133,463	\$70,802	89%
1800	480	1496	25.00%	374.12	90%	336.71	\$150,146	\$79,652	89%
2000	480	1663	25.00%	415.69	90%	374.12	\$166,829	\$88,503	89%
2500	480	2078	25.00%	519.62	90%	467.65	\$208,536	\$110,628	89%
3000	480	2494	25.00%	623.54	90%	561.18	\$250,243	\$132,754	89%

NON-STANDARD IMPACT FEES

The proposed fees are based upon growth in kW. The City reserves the right under the Impact Fees Act to assess an adjusted fee that more closely matches the true impact that the land use will have



upon public facilities.⁸ A developer may submit studies and data for a particular development and request an adjustment. This adjustment could result in a higher or lower impact fee if the City determines that a particular user may create a different impact than what is standard for its land use.

Estimated Diversified kW Usage * \$445.92

⁸ UC 11-36a-402(1)(c)



CALCULATION OF IMPACT FEE INTEREST CREDIT

This analysis calculates projected interest earnings and applies a credit in the fee calculation. The table below illustrates that the timing of impact fee expenditures relative to collections will not produce a positive fund balance in interest earnings. Therefore, no credit is applied in this analysis.

TABLE 6.3: IMPACT FEE INTEREST CALCULATION

YEAR	KW	NEW KW	FEE PER KW	PROJECTED REVENUE	PROJECTED EXPENSE	PROJECTED BUY-IN EXPENSE	NET	CUMULATIVE	INTEREST EARNED
2024	78,900	800	\$446	\$356,736	(\$4,616,980)	(\$120,440)	(\$4,380,684)	(\$4,380,684)	(\$65,710)
2025	82,400	3,500	\$446	\$1,560,720	\$0	(\$526,925)	\$1,033,795	(\$3,346,889)	(\$50,203)
2026	86,700	4,300	\$446	\$1,917,456	(\$1,573,575)	(\$647,365)	(\$303,484)	(\$3,650,373)	(\$54,756)
2027	91,800	5,100	\$446	\$2,274,192	\$0	(\$767,805)	\$1,506,387	(\$2,143,986)	(\$32,160)
2028	95,500	3,700	\$446	\$1,649,904	(\$358,211)	(\$557,035)	\$734,658	(\$1,409,328)	(\$21,140)
2029	98,800	3,300	\$446	\$1,471,536	\$0	(\$496,815)	\$974,721	(\$434,607)	(\$6,519)
2030	100,800	2,000	\$446	\$891,840	(\$5,450,000)	(\$301,100)	(\$4,859,260)	(\$5,293,867)	(\$79,408)
2031	102,900	2,100	\$446	\$936,432	\$0	(\$316,155)	\$620,277	(\$4,673,590)	(\$70,104)
2032	104,900	2,000	\$446	\$891,840	\$0	(\$301,100)	\$590,740	(\$4,082,850)	(\$61,243)
Total				\$11,950,656	(\$11,998,766)				(\$441,243)

Assumes interest earnings based on 1.5 percent interest rate.

CONSIDERATION OF ALL REVENUE SOURCES

The Impact Fees Act requires the proportionate share analysis to demonstrate that impact fees paid by new development are the most equitable method of funding growth-related infrastructure. See **SECTION 5** for further discussion regarding the consideration of revenue sources.

EXPENDITURE OF IMPACT FEES

Legislation requires that impact fees should be spent or encumbered within six years after each impact fee is paid. Impact fees collected in the next five to six years should be spent or encumbered on only those projects outlined in the IFFP as growth-related costs to maintain the LOS or to reimburse existing development for excess capacity used. The existing impact fee fund balance is included in this analysis and will be spent on the projects that are shown here that were identified in the prior Impact Fee Facilities Plan (also included in this analysis).

PROPOSED CREDITS OWED TO DEVELOPMENT

Credits may be applied to developers who have constructed and donated system facilities to the City that are included in the IFFP in-lieu of impact fees. Credits for system improvements may be available to developers up to, but not exceeding, the amount commensurate with the LOS identified within this IFA. Credits will not be given for the amount by which system improvements exceed the LOS identified within this IFA. This situation does not apply to developer exactions or improvements required to offset density or as a condition of development. Any project that a developer funds must be included in the IFFP if a credit is to be issued.

In the situation that a developer chooses to construct system facilities found in the IFFP in-lieu of impact fees, the decision must be made through negotiation with the developer and the City on a case-by-case basis.



GROWTH-DRIVEN EXTRAORDINARY COSTS

The City does not anticipate any extraordinary costs necessary to provide services to future development.

SUMMARY OF TIME PRICE DIFFERENTIAL

The Impact Fees Act allows for the inclusion of a time price differential to ensure that the future value of costs incurred at a later date are accurately calculated to include the costs of construction inflation. A four percent annual construction inflation adjustment is applied to projects completed after 2023 (the base year cost estimate).

