Impact Fee Facilities Plan

for Power

July 2018

Prepared by:

BOWEN COLLINS & ASSOCIATES

Prepared for:

EST 1852
LEHI CITY

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EXECUTIVE SUMMARY

INTRODUCTION

Lehi City has retained Bowen Collins & Associates (BC&A) and Zions Bank Public Finance (ZBPF) to prepare impact fee facility plans (IFFPs) for eight different services provided by the City. The subject of this IFFP document is power. The purpose of an IFFP is to identify demands placed upon City facilities by future development and evaluate how these demands will be met by the City. The IFFP is also intended to outline the improvements, which may be funded through impact fees.

WHY IS AN IFFP NEEDED?

The IFFP provides a technical basis for assessing updated impact fees throughout the City. This document will address the future infrastructure needed to serve the City with regard to current land use planning. The existing and future capital projects documented in this IFFP will ensure that level of service standards are maintained for all existing and future residents who reside within the service area. Local governments must pay strict attention to the required elements of the Impact Fee Facilities Plan, which are enumerated in the Impact Fees Act.

PROJECTED FUTURE GROWTH

Existing power demand in the City based on observed peak day power loads is 113.67 MVA. To evaluate future infrastructure needs, it is first necessary to project how power demand will increase in the future. For this utility, this is slightly complicated by the fact that historic power usage has been changing over the last several years. While demand for most other utilities has held constant or even decreased (on a per capita basis), demand for power has steadily increased over the last decade. Since 2000, peak power use per customer has increased an average of 1.39 percent per year. This increase in demand is similar to increases reported by Rocky Mountain Power and other power providers in the region. It is suspected that demands are increasing because of increased loads associated with central air, increased lighting, and more and larger personnel electronics in homes and offices.

While per capita demands are expected to continue to increase in the future, it appears that this trend is beginning to slow. Observed increases in demand have only average 0.81 percent when measured over the last 10 years and only 0.42 percent when measured over the last 5. With this in mind, projections of demand have been based on the assumption that new construction will maintain the same level of per customer consumption as observed in the last couple of years. For existing construction, it has been assumed that per customer demands will continue to increase until they reach the same level of per customer consumption as for future users by the planning window. This functionally results in the same level of service for both types of users for the planning window. It is recommended that the City continue to track trends in per customer consumption over the next several years to update this plan as necessary.

Using this approach, projected 10-year growth in power demand was estimated and is contained in Table ES-1.

Table ES-1
Projected 10-Year Growth in Power Demand

Development Type	Power Demand (MVA)
Existing Development	113.67
Growth in Demand from Existing Development	3.50
10-year Growth	72.60
Total Demand	**189.77**

EXISTING CAPACITY AVAILABLE TO SERVE NEW GROWTH

Projected future growth will be met through a combination of available excess capacity in existing facilities and construction of additional capacity in new facilities. Existing system capacity has been calculated for each component of the system with excess capacity as follows:

Substations

Existing power demand in the City based on observed peak day power loads is 113.7 MVA. This demand more than consumes the available capacity in substations built before 2013 of 89.8 MVA. Substation facilities built subsequent to 2013 added 123.1 MVA of additional capacity and upgrades to the Carter Substation (as will be discussed subsequently) are expected to add another 24.5 MVA. If use of capacity is proportionally divided between these several sources, projected use of the existing 123.1 MVA of existing substation capacity (post 2013) by future growth is summarized in Table ES-2.

Table ES-2
Utilization Rate of Existing Substations (Post 2013) by Future Growth

Type of Demand	Demand (MVA)	Percent Use of Capacity
Existing Demand	23.87	19.39%
Growth in Existing Demands[1]	2.80	2.28%
10-Year Growth	58.23	47.30%
Growth Beyond 10-Years	38.20	31.03%
Total Existing Capacity (Post 2013)	123.1	

[1] Total growth in existing demands is 3.50 MVA. The amount included in this table represents only that portion of growth in existing demand to be satisfied by existing substations. The remainder to be satisfied through capacity in new facilities as shown in Table ES-5. Growth in existing demands will not be recovered through impact fees.

Distribution Lines

Each distribution line generally serves a limited area of the system. The calculated percentage of existing capacity used by growth in distribution lines with excess capacity during the 10-year planning window is summarized in Table ES-3.

Table ES-3
Proportionate Share Analysis for Distribution Lines

Distribution Line	Capacity (MVA)	Capacity Used by Existing Demand (MVA)	Capacity Used by Growth in Existing Demands[1] (MVA)	Capacity Used by 10-Year Growth (MVA)	Capacity Used by Growth Beyond 10-Years (MVA)	Percent Used by 10-Year Growth
2100 North	11.66	2.890	0.403	8.367	0.000	71.8%
SR-92	11.66	0.678	0.144	2.993	7.845	25.7%
Thanksgiving Point	23.32	11.539	0.541	11.239	0	48.2%
Other System Level	190.760	98.560	2.407	50.005	39.788	26.2%

[1] Growth in existing demands will not be recovered through impact fees. See Section 5.

Other Facilities

Other facilities within the power system that will provide capacity to future users include the City's internal generation project and new operations building. Based on the level of service defined previously, available capacity for use by future growth is summarized in Table ES-4.

Table ES-4
Proportionate Share Analysis for Other Power Facilities

Facility	Capacity (MVA)	Capacity Used by Existing Demand (MVA)	Capacity Used by Growth in Existing Demands[1] (MVA)	Capacity Used by 10-Year Growth (MVA)	Capacity Used by Growth Beyond 10-Years (MVA)	Percent Used by 10-Year Growth
Internal Generation	7.26	4.35	0.13	2.78	0.00	38.26%
Operations Building	378.19	113.67	3.50	72.60	188.42	19.20%

[1] Growth in existing demands will not be recovered through impact fees. See Section 5.

REQUIRED SYSTEM IMPROVEMENTS

Beyond available existing capacity, additional improvements required to serve new growth were identified and are summarized in Table ES-5.

Table ES-5
Summary of Future Power Infrastructure Costs

Project	Construction Year	Project Expense 2018 Dollars
Conversion of Carter Substation	2019	$2,492,400
Total Future Power Improvements		**$2,492,400**

For the purposes of impact fee calculation, Table ES-6 breaks down the capacity in each project associated with growth through the next 10 years and growth beyond 10 years. A challenge with power infrastructure is that it cannot be added at the exact increment needed for the planning window. As a result, the improvements proposed in the impact fee facility plan may include capacity for growth beyond the 10-year planning window. To accurately evaluate the cost of providing service for growth during the next ten years, added consideration must be given to evaluating how much of each facility will be used in the next 10 years.

Table ES-6
Proportionate Share Analysis for Power Facilities

Facility	New Reliable Capacity (MVA)	Capacity used by Existing Demand	Capacity Used by Growth in Existing Demand[1]	Capacity Used by 10-Year Growth	Capacity Used by Growth Beyond 10-Years	Percent Used by 10-Year Growth
Conversion of Carter Substation	24.50	0	0.69	14.38	9.43	58.68%

[1] Growth in existing demand will not be recovered through impact fees.

SECTION 1
INTRODUCTION

Lehi City has retained Bowen Collins & Associates (BC&A) and Zions Bank Public Finance (ZBPF) to prepare impact fee facility plans (IFFPs) for eight different services provided by the City. The subject of this IFFP document is power. The purpose of an IFFP is to identify demands placed upon City facilities by future development and evaluate how these demands will be met by the City. The IFFP is also intended to outline the improvements, which may be funded through impact fees.

Requirements for the preparation of an IFFP are outlined in Title 11, Chapter 36a of the Utah code (the Impact Fees Act). Under these requirements, an IFFP shall accomplish the following for each facility:

1. Identify the existing level of service
2. Establish a proposed level of service
3. Identify excess capacity to accommodate future growth
4. Identify demands of new development
5. Identify the means by which demands from new development will be met
6. Consider the following additional issues
    a. revenue sources to finance required system improvements
    b. necessity of improvements to maintain the proposed level of service
    c. need for facilities relative to planned locations of schools

The following sections of this report have been organized to address each of these requirements.

SECTION 2
EXISTING LEVEL OF SERVICE (11-36a-302(1)(a)(i))

Level of service is defined in the Impact Fees Act as "the defined performance standard or unit of demand for each capital component of a public facility within a service area". This section discusses the level of service being currently provided to existing users.

PERFORMANCE STANDARD

The performance standard defines the level of service the City has established to satisfy City and/or governing code performance requirements. For power, evaluation of performance includes the following standards:

- **Substation Capacity –** Perhaps the most critical system components to meet future demands are the City's substations. Rocky Mountain Power (RMP) conveys power through transmission lines (owned and operated by RMP) to the City. To take the power from RMP, the City must have a number of substations to transform the voltage from the transmission level to the distribution level and send it through distribution lines to individual customers. The Lehi level of service performance standards for substations is that the system should be designed with the ability to lose one critical piece of infrastructure and still meet peak loads. This criterion is often called "N-1", where "N" represents the total number of substations and the "-1" represents losing the largest substation. This performance standard assures the City will be able to continue to meet demands even if one substation is damaged or needs to be taken offline for maintenance.
- **Distribution Line Capacity –** From the substation to the customer, power is conveyed through a system of distribution lines. While many of these distribution lines are project level improvements (i.e. installed by developers for individual projects), larger lines serving multiple developments are generally installed by the City and are considered system level improvements. City performance standards for distribution lines are to limit the maximum current in each distribution line to no more than 90% of its listed peak capacity. This minimizes the potential of exceeding line capacity as the result of unexpected fluctuations in system load.
- **Power Factor –** The power factor is the ratio of the real power flowing to loads in the system, to the apparent power in the system. It is reported as a dimensionless number between -1 and 1. Real power is the capacity of the system for performing work in a particular time. Apparent power is the product of current and voltage in the system. For Lehi City, a minimum power factor of 0.95 is the expected level of service based on contractual guidelines from Rocky Mountain Power. Maintaining a minimum power factor is desirable because it reduces the amount of apparent power needed to support system loads, which in turn extends the capacity of system facilities. In the recent past, Lehi City's power factor has been below 0.95 because of recent growth in the City. To address this, the City completed a project to install power factor correction capacitors, which brought the power factor back up to 0.95. With the completion of these improvements, the existing level of service for the power factor can be defined as 0.95.

- **Internal Generation and Peak Shaving –** As noted above, much of the City's power is currently purchased from market resources. To minimize purchase of market power during the most expensive periods of demand, the City recently completed an internal power generation project. This allows the City to shave its peak power loads by turning on its internal generation facilities during peak period. Current City capacity is 6.9 MW (7.26 MVA). The City has future plans to expand this generation capacity. But until then, the available capacity will be used by both existing and future development.
- **Operations Building –** The City recently replaced its operations building. This building houses staff and equipment required to operate the system. The old building had a total square footage of 12,240 SF and was adequate to serve system needs through about 2015 (97.7 MVA of demand). This equated to a level of service of 125 SF per MVA of demand. The new building has 47,384 SF of space. Based on the same level of service as observed for the previous building, it is expected that this building will be able to serve a system with a demand of about 378 MVA. This should be adequate to meet City needs for the next 20 to 30 years.

UNIT OF DEMAND

Power capacity is generally evaluated based on peak instantaneous demand. For most customers, and for the system as a whole, peak loads occur during the afternoons of the summer months when cooling loads are at their greatest. Peak demands are measured in units of real power (watts) or apparent power (volt-amps). Apparent power can be converted to real power by multiplying by the power factor. While the peak instantaneous demand will vary depending on service size and type, the average peak coincidental apparent power for residential services (100 amp) is 5.0 kVA.

EXISTING LEVEL OF SERVICE SUMMARY

Based on the several issues discussed, overall existing level of service can be summarized as follows:

Table 2-1
Power System Existing Level of Service

Component	Level of Service
Substation Capacity	"N-1" Redundancy
Distribution Lines	90% Listed Peak Capacity
Power Factor	0.95
Internal Generation	7.26 MVA available for existing and future
Operations Building	125 SF per MVA of system demand
Peak Coincidental Demand	5.0 kVA per 100 amp residential service

SECTION 3
PROPOSED LEVEL OF SERVICE (11-36a-302(1)(a)(ii))

The proposed level of service is the performance standard used to evaluate system needs in the future. The Impact Fee Act indicates that the proposed level of service may:

1. diminish or equal the existing level of service; or
2. exceed the existing level of service if, independent of the use of impact fees, the City implements and maintains the means to increase the level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service.

The proposed level of service for the various power performance standards can be described as follows:

- **Substation Capacity –** No changes to the existing level of service performance standards for substation capacity are proposed. Future capacity requirements for redundancy will be as proposed above.
- **Distribution Line Capacity –** No change to the existing level of service performance standard for substation capacity is proposed.
- **Power Factor –** With the completion of the City's power factor project, the power factor is now 0.95. It is expected that the power factor will continue to be maintained at this level moving forward.
- **Internal Generation and Peak Shaving –** While the City may ultimately develop additional internal power generation capacity to minimize purchase of market power during the most expensive periods of demand, no specific plans exist in the immediate future. Thus, it has been assumed that the City will keep its existing level of service and that available generation capacity will be split between all users within the planning window.
- **Operations Building –** No changes are proposed to the level of service for that described above. Level of service will continue at 125 SF per MVA of demand.
- **Peak Coincidental Demand –** The peak coincidental demand for a 100 amp residential service is expected to continue at 5.0 kVA.

FUTURE LEVEL OF SERVICE SUMMARY

Based on the several issues discussed, overall future level of service can be summarized as follows:

Table 3-1
Power System Future Level of Service

Component	Level of Service
Substation Capacity	"N-1" Redundancy
Distribution Lines	90% Listed Peak Capacity
Power Factor	0.95
Internal Generation	7.26 MVA available for existing and future
Operations Building	125 SF per MVA of system demand
Peak Coincidental Demand	5.0 kVA per 100 amp residential service

SECTION 4
EXCESS CAPACITY TO ACCOMMODATE FUTURE GROWTH (11-36a-302(1)(a)(iii))

Projected future growth will be met through a combination of available excess capacity in existing facilities and construction of additional capacity in new facilities.

EXISTING POWER INFRASTRUCTURE

Existing power facilities in which capacity exists for future development are listed in Table 4-1. Table 4-1 is a summary of existing Lehi City substations (including appurtenances and any distribution lines immediately associated with the lift station). Use of substation capacity will be analyzed on a first in, first out basis. In other words, capacity is sold to future users in the order that it has been built. Because of this, it is necessary to divide existing capacity into two groups – capacity built before 2013 and capacity built afterwords. Capacity built before 2013 is already being completely used by existing customers and has no excess capacity available for future growth. Conversely, only a portion of the capacity constructed after 2013 is currently being used. Thus, there is significant excess capacity in this group of improvements that can be used by future growth.

Table 4-1
Summary of Existing Substation Capacities

Substation	Capacity (MVA)
Pre-2013	
Traverse Mountain	44.8
Bull River	32.5
Carter[1]	12.5
Ashton	44.8
Total	**134.6**
Reliable Capacity ("N-1" Criterion)	**89.8**
2013-2018	
Bull River Upgrade	12.3
New Murdock/Littlefield Substation	66
New Spring Creek Substation	33
New Northwest/Westside Substation	33
Total	**278.9**
Reliable Capacity ("N-1" Criterion)	**212.9**

[1] -Limited by transmission line capacity. Once converted to 138kV, potential substation capacity is 37 MVA.

As noted in the table, one of the substations (Carter) is limited by current draw on existing transmission lines. As part of the recommended improvements to be discussed later, the City is planning to convert this substation to a higher voltage. Once this occurs, the existing transmission lines will be capable of supporting higher power loads at this substation.

Table 4-2 is a summary of existing Lehi City system level distribution lines of relevance to the impact fee facility plan. This includes three recently constructed distribution lines that have limited existing demands and are expected to see major increases in use as a result of future growth. All other system level distribution lines in the City are expected to see more distributed growth and have been grouped into a single category for simplicity.

Table 4-2
Summary of Existing System Level Distribution Lines

Distribution Line	Capacity (MVA)
2100 North	11.66
SR-92	11.66
Thanksgiving Point	23.32
Other System Level Distribution Lines	190.76

EXISTING DEMAND AND DETERMINATION OF EXCESS CAPACITY

Existing system capacity has been calculated for each component of the system as follows:

Substations

Existing power demand in the City based on observed peak day power loads is 113.7 MVA. As discussed above, this demand more than consumes the available capacity in substations built before 2013 of 89.8 MVA. Substation facilities built subsequent to 2013 added 123.1 MVA of additional capacity and upgrades to the Carter Substation (as will be discussed subsequently) are expected to add another 24.5 MVA. If use of capacity is proportionally divided between these several sources, projected use of the existing 123.1 MVA of existing substation capacity (post 2013) by future growth is summarized in Table 4-3. Details regarding future growth are included in Section 5.

Table 4-3
Utilization Rate of Existing Substations (Post 2013) by Future Growth

Type of Demand	Demand (MVA)	Percent Use of Capacity
Existing Demand	23.87	19.39%
Growth in Existing Demands[1]	2.80	2.28%
10-Year Growth	58.23	47.30%
Growth Beyond 10-Years	38.20	31.03%
Total Existing Capacity (Post 2013)	123.1	

[1] Total growth in existing demands is 3.50 MVA. The amount included in this table represents only that portion of growth in existing demand to be satisfied by existing substations. The remainder to be satisfied through capacity in new facilities as shown in Table 6-3. Growth in existing demands will not be recovered through impact fees. See Section 5.

Distribution Lines

Each distribution line generally serves a limited area of the system. To calculate the percentage of existing capacity to be used by future growth in existing distribution lines, existing and future demands were examined in the service area for each distribution line. The method used to calculate excess capacity available for use by future development is as follows:

- **Calculate Demand –** The peak demand on each distribution line was estimated for both existing and future development scenarios based on projected growth distribution. The maximum capacity of each distribution line was also calculated.
- **Identify Available Capacity –** The available capacity in the distribution line was defined as the difference between existing demands and the distribution line's maximum capacity.
- **Calculate Percent of Excess Capacity Used in Remaining Facilities –** Where the future demand was less than the capacity of the distribution line, the percent of excess capacity being used in each distribution line was calculated by dividing the growth in use in the distribution line (future needs less existing needs) by the maximum capacity of the distribution line. Where the future demand was more than the capacity of the distribution line, the percent of excess capacity being used in each distribution line was calculated by dividing the available remaining capacity in the distribution line by total capacity.

Based on the method described above, the calculated percentage of existing capacity used by growth during the 10-year planning window is summarized in Table 4-4.

Table 4-4
Proportionate Share Analysis for Distribution Lines

Distribution Line	Capacity (MVA)	Capacity Used by Existing Demand (MVA)	Capacity Used by Growth in Existing Demands[1] (MVA)	Capacity Used by 10-Year Growth (MVA)	Capacity Used by Growth Beyond 10-Years (MVA)	Percent Used by 10-Year Growth
2100 North	11.66	2.890	0.403	8.367	0.000	71.8%
SR-92	11.66	0.678	0.144	2.993	7.845	25.7%
Thanksgiving Point	23.32	11.539	0.541	11.239	0	48.2%
Other System Level	190.760	98.560	2.407	50.005	39.788	26.2%

[1] Growth in existing demands will not be recovered through impact fees. See Section 5.

Other Facilities

Other facilities within the power system that will provide capacity to future users include the City's internal generation project and new operations building. Based on the level of service defined previously, available capacity for use by future growth is summarized in Table 4-5.

Table 4-5
Proportionate Share Analysis for Other Power Facilities

Facility	Capacity (MVA)	Capacity Used by Existing Demand (MVA)	Capacity Used by Growth in Existing Demands[1] (MVA)	Capacity Used by 10-Year Growth (MVA)	Capacity Used by Growth Beyond 10-Years (MVA)	Percent Used by 10-Year Growth
Internal Generation	7.26	4.35	0.13	2.78	0.00	38.26%
Operations Building	378.19	113.67	3.50	72.60	188.42	19.20%

[1] Growth in existing demands will not be recovered through impact fees. See Section 5.

SECTION 5
DEMANDS PLACED ON FACILITIES
BY NEW DEVELOPMENT (11-36a-302(1)(a)(iv))

Growth and new development in Lehi City was discussed in detail in a technical memorandum prepared by BC&A dated April 18, 2014. Since that time, additional information has been used to update existing population and developed commercial space through 2018. A summary of the projections for future residential and private non residential growth is contained in the table below. Private non residential growth includes all non public and non residential uses; such as business, churches, offices, retail, medical facilities, etc.

Table 5-1
Projected 10-Year Residential and Non-Residential Growth

	2010	2018	2028
Census & BEBR Derived Population	47,746	63,930	
GOPB Population Projections			84,279
Lehi Private Non Residential Space (kSF)	4,709	8,666	16,588

*Source: US Census, BEBR, Utah Governor's Office of Planning and Budget, Lehi City Planning Department

CONVERSION OF GROWTH PROJECTIONS TO POWER DEMANDS

Residential and employment population projections can be converted to power consumption by relating each component of growth to historic power usage. For this utility, this is slightly complicated by the fact that historic power usage has been changing over the last several years. While demand for most other utilities has held constant or even decreased (on a per capita basis), demand for power has steadily increased over the last decade. Since 2000, peak power use per customer has increased an average of 1.39 percent per year. This increase in demand is similar to increases reported by Rocky Mountain Power and other power providers in the region. It is suspected that demands are increasing because of increased loads associated with central air, increased lighting, and more and larger personnel electronics in homes and offices.

While per capita demands are expected to continue to increase in the future, it appears that this trend is beginning to slow. Observed increases in demand have only average 0.81 percent when measured over the last 10 years and only 0.42 percent when measured over the last 5. With this in mind, projections of demand have been based on the assumption that new construction will maintain the same level of per customer consumption as observed in the last couple of years. For existing construction, it has been assumed that per customer demands will continue to increase until they reach the same level of per customer consumption as for future users by the planning window. This functionally results in the same level of service for both types of users for the planning window. It is recommended that the City continue to track trends in per customer consumption over the next several years to update this plan as necessary.

Using this approach, projected 10-year growth in power demand was estimated and is contained in Table 5-2.

Table 5-2
Projected 10-Year Growth in Power Demand

Development Type	Power Demand (MVA)
Existing Development	113.67
Growth in Demand from Existing Development	3.50
10-year Growth	72.60
Total Demand	**189.77**

SECTION 6
INFRASTRUCTURE REQUIRED TO MEET DEMANDS OF NEW DEVELOPMENT (11-36a-302(1)(a)(v))

To satisfy the requirements of state law, demand placed upon existing system facilities by future development was projected using the process outlined below. These steps were completed as part of this plan's development.

1. **Existing Demand** – The demand of existing development was estimated based on historic power use records.
2. **Existing Capacity** – The capacities of the existing system facilities were estimated based on system performance standards and information provided on existing facility characteristics by the City.
3. **Existing Deficiencies** – Existing deficiencies in the system were looked for by comparing defined levels of service against calculated capacities.
4. **Future Demand** - The demand that future development will place on the system was estimated based on development projections as discussed in Section 5.
5. **Future Deficiencies** - Future deficiencies in the power system were identified by comparing existing capacity against projected demands at the end of the planning window.
6. **Recommended Improvements** – Needed system improvements were identified to add needed capacity for future demand.

The steps listed above describe the "demands placed upon existing public facilities by new development activity at the proposed level of service; and… the means by which the political subdivision or private entity will meet those growth demands" (Section 11-36a-302-1.a of the Utah Code).

INFRASTRUCTURE NEEDS FOR POWER

Because the City has been actively completing needed power projects over the last several years, there is only one recommended project in the planning window for the Lehi power system.

- **Additional Substation Capacity –** To meet future projected growth in demand, one project is proposed:
  - ***Conversion of Carter Substation* –** This project will convert the existing Carter substation from 46 kV to 138kV service. The purpose of this conversion is to reduce current draw on RMP's transmission lines, which will allow the capacity of the substation to be increased from 12.5 MVA to 37 MVA. Expected completion of this project is 2019.

  It will be noted that the proposed project timing above is slightly different from what was identified in the City's most recent Power System Master Plan. This is the result of changes in growth and development patterns that have occurred since the master plan.

Completion of this projects will increase the City's substation reliable capacity to 237.4 MVA. This represents an increase in capacity of 24.5 MVA.

10-YEAR IMPROVEMENT PLAN

Only infrastructure to be constructed within a 10-year horizon will be considered in the calculation of these impact fees to avoid uncertainty surrounding improvements further into the future. Table 6-1 and 6-2 summarize the projects that will need to be constructed within the next 10 years as identified above.

Table 6-1
Summary of Future Power Infrastructure Costs

Project	Construction Year	Project Expense 2018 Dollars
Conversion of Carter Substation	2019	$2,492,400
Total Future Power Improvements		**$2,492,400**

PROJECT COST ATTRIBUTABLE TO 10 YEAR GROWTH

To satisfy the requirements of state law, Table 6-2 provides a breakdown of the capital facility projects and the percentage of the project costs attributed to future users. As defined in Section 11-36-304, the impact fee facilities plan should only include "the proportionate share of the costs of public facilities [that] are reasonably related to the new development activity."

Table 6-2
Proportionate Share Analysis for Power Facilities

Facility	New Reliable Capacity (MVA)	Capacity used by Existing Demand	Capacity Used by Growth in Existing Demand[1]	Capacity Used by 10-Year Growth	Capacity Used by Growth Beyond 10-Years	Percent Used by 10-Year Growth
Conversion of Carter Substation	24.50	0	0.69	14.38	9.43	58.68%

[1] Growth in existing demand will not be recovered through impact fees.

Included in the tables is a breakdown of capacity associated with growth through the next 10 years and for growth beyond 10 years. A challenge with power infrastructure is that it cannot be added at the exact increment needed for the planning window. As a result, the improvements proposed in the impact fee facility plan may include capacity for growth beyond the 10-year planning window. To accurately evaluate the cost of providing service for growth during the next ten years, added consideration was given to evaluating how much of each facility will be used in the next 10 years.

BASIS OF CONSTRUCTION COST ESTIMATES

The estimated costs of construction for the Carter Substation Project are based on the cost estimate contained in the City's existing Power System Master Plan (NEI, 2013) updated to 2018 dollars.

SECTION 7
ADDITIONAL CONSIDERATIONS

MANNER OF FINANCING (11-36a-302(2))

The City may fund the infrastructure identified in this IFFP through a combination of different revenue sources.

Federal and State Grants and Donations

Impact fees cannot reimburse costs funded or expected to be funded through federal grants and other funds that the City has received for capital improvements without an obligation to repay. Grants and donations are not currently contemplated in this analysis. If grants become available for constructing facilities, impact fees will need to be recalculated and an appropriate credit given. Any existing infrastructure funded through past grants will be removed from the system value during the impact fee analysis.

Bonds

None of the costs contained in this IFFP include the cost of bonding. The cost of bonding required to finance impact fee eligible improvements identified in the IFPP may be added to the calculation of the impact fee. This will be considered in the impact fee analysis.

Interfund Loans

Because infrastructure must generally be built ahead of growth, there often arise situations in which projects must be funded ahead of expected impact fee revenues. In some cases, the solution to this issue will be bonding. In others, funds from existing user rate revenue will be loaned to the impact fee fund to complete initial construction of the project and will be reimbursed later as impact fees are received. Consideration of potential inter-fund loans will be included in the impact fee analysis and should be considered in subsequent accounting of impact fee expenditures.

Impact Fees

It is recommended that impact fees be used to fund growth-related capital projects as they help to maintain the proposed level of service and prevent existing users from subsidizing the capital needs for new growth. Based on this IFFP, an impact fee analysis will be able to calculate a fair and legal fee that new growth should pay to fund the portion of the existing and new facilities that will benefit new development.

Developer Dedications and Exactions

Developer exactions are not the same as grants. Developer exactions may be considered in the inventory of current and future power infrastructure. If a developer constructs a facility or dedicates land within the development, the value of the dedication is credited against that particular developer's impact fee liability.

If the value of the dedication/exaction is less than the development's impact fee liability, the developer will owe the balance of the liability to the City. If the value of the improvements dedicated is worth more than the development's impact fee liability, the City must reimburse the difference to the developer from impact fee revenues collected from other developments.

It should be emphasized that the concept of impact fee credits pertains to system level improvements only. For project level improvement (i.e. projects not identified in the impact fee facility plan), developers will be responsible for the construction of the improvements without credit against the impact fee.

No developer dedications are expected for power infrastructure.

NECESSITY OF IMPROVEMENTS TO MAINTAIN LEVEL OF SERVICE (11-36a-302(3))

According to State statute, impact fees cannot be used to correct deficiencies in the system and must be necessary to maintain the proposed level of service established for all users. Only those projects or portions of projects that are required to maintain the proposed level of service for future growth have been included in this IFFP. This will result in an equitable fee as future users will not be expected to fund any portion of the projects that will benefit existing residents.

SCHOOL RELATED INFRASTRUCTURE (11-36a-302(2))

As part of the noticing and data collection process for this plan, information was gathered regarding future school district and charter school development. Where the City is aware of the planned location of a school, required public facilities to serve the school have been included in the impact fee analysis.

NOTICING AND ADOPTION REQUIREMENTS (11-36a-502)

The Impact Fees Act requires that entities must publish a notice of intent to prepare or modify any IFFP. If an entity prepares an independent IFFP rather than include a capital facilities element in the general plan, the actual IFFP must be adopted by enactment. Before the IFFP can be adopted, a reasonable notice of the public hearing must be published in a local newspaper at least 10 days before the actual hearing. A copy of the proposed IFFP must be made available in each public library within the City during the 10-day noticing period for public review and inspection. Utah Code requires that the City must post a copy of the ordinance in at least three places. These places may include the City offices and the public libraries within the City's jurisdiction. Following the 10-day noticing period, a public hearing will be held, after which the City may adopt, amend and adopt, or reject the proposed IFFP.

SECTION 8
IMPACT FEE CERTIFICATION (11-36a-306(1))

This report has been prepared in accordance with Utah Code Title 11 Chapter 36a (the "Impact Fees Act"), which prescribes the laws pertaining to Utah municipal capital facilities plans and impact fee analyses. The accuracy of this report relies upon the planning, engineering, and other source data, which was provided by the City and their designees.

In accordance with Utah Code Annotated, 11-36a-306(1), Bowen Collins & Associates, makes the following certification:

I certify that this impact fee facility plan:

1. Includes only the cost 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. cost of 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 every relevant respect with the Impact Fees Act.

Dated: July 23, 2018

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