

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF SOUTHWESTERN)	
PUBLIC SERVICE COMPANY'S)	
APPLICATION FOR AUTHORIZATION TO)	
IMPLEMENT GRID MODERNIZATION)	
COMPONENTS THAT INCLUDE ADVANCED)	
METERING INFRASTRUCTURE AND)	
RECOVER THE ASSOCIATED COSTS)	
THROUGH A RIDER, ISSUANCE OF)	Case No. 21-00XXX-UT
RELATED ACCOUNTING ORDERS, AND)	
OTHER ASSOCIATED RELIEF,)	
)	
SOUTHWESTERN PUBLIC SERVICE)	
COMPANY,)	
)	
APPLICANT.)	

DIRECT TESTIMONY

of

MARK P. MOELLER

on behalf of

SOUTHWESTERN PUBLIC SERVICE COMPANY

June 4, 2021

Case No. 21-00XXX-UT
Direct Testimony
of
Mark P. Moeller

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GLOSSARY OF ACRONYMS AND DEFINED TERMS

<u>Acronym/Defined Term</u>	<u>Meaning</u>
AMI	Advanced Metering Infrastructure
Commission	New Mexico Public Regulation Commission
FAN	Field Area Network
FERC	Federal Energy Regulatory Commission
FLISR	Fault Location Isolation and Service Restoration
GMR	Grid Modernization Rider
O&M	Operation & Maintenance
Operating Company/Operating Companies	Northern States Power Company – Minnesota; Northern States Power Company – Wisconsin; PSCo; SPS
PSCo	Public Service Company of Colorado
SPS	Southwestern Public Service Company, a New Mexico corporation
Xcel Energy	Xcel Energy Inc.
XES	Xcel Energy Services

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LIST OF ATTACHMENTS

Attachment	Description
MPM-1	Annual Plant-Related Roll-Forwards by Grid Modernization Component
MPM-2	Grid Modernization Plant Additions by Component
MPM-3	Advanced Metering Infrastructure Head- End Shared Asset Charge
MPM-4	Proposed Accounting Treatment for Legacy Meters

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1 **I. WITNESS IDENTIFICATION AND QUALIFICATIONS**

2 **Q. Please state your name and business address.**

3 A. My name is Mark P. Moeller. My business address is 401 Nicollet Mall, Minneapolis,
4 Minnesota 55401.

5 **Q. On whose behalf are you testifying in this proceeding?**

6 A. I am filing testimony on behalf of Southwestern Public Service Company, a New Mexico
7 corporation (“SPS”). SPS is a wholly-owned electric utility subsidiary of Xcel Energy
8 Inc. (“Xcel Energy”).

9 **Q. By whom are you employed and in what position?**

10 A. I am employed by Xcel Energy Services Inc. (“XES”), a wholly-owned subsidiary of
11 Xcel Energy, as Director, Capital Asset Accounting.

12 **Q. Please outline your responsibilities as Director, Capital Asset Accounting.**

13 A. I lead the Capital Asset Accounting department, and I am responsible for various capital
14 asset functions associated with accounting, reporting, tax and rate proposals involving
15 depreciation for SPS and other Xcel Energy Operating Companies, including:

- 16 • the capital investment cost recovery process, which includes the development of
17 detailed actuarial analyses, the preparation of regulatory filings with the various
18 state and federal rate regulatory commissions, and the drafting of expert testimony
19 to support recovery levels in rate proceedings;

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- the accounting for and reporting on the nuclear plant decommissioning funding process, which includes the development of detailed engineering cost studies with a complete financial and economic analysis to develop detailed regulatory filings to establish the ratepayer funding level necessary to accumulate the total future decommissioning cost requirement;
- the plant asset-related ratemaking process, which supports the rate filings for all of the Xcel Energy Operating Companies' retail and wholesale jurisdictions; and
- Xcel Energy's capitalization policy, including policy development, policy interpretation, and alignment with Generally Accepted Accounting Principles and Federal Energy Regulatory Commission ("FERC") principles and requirements.

Q. Please describe your educational background.

A. I graduated from Saint John's University in Collegeville, Minnesota, with a Bachelor of Science degree in Accounting in 1989, and I received a Master of Business Administration degree from the University of Minnesota, Carlson School of Management, in 1996.

Q. Please describe your professional experience.

A. Since January 2019, I have been employed as Director, Capital Asset Accounting. Prior to this role, I served in several other financial director and manager roles at XES, including Corporate Accounting; Financial Process Governance and Performance; Financial Performance and Reporting; and Financial Controls. I led the implementation of Xcel Energy's conversion from its JDE general ledger system to an SAP general

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1 ledger system in 2016, and I previously led Xcel Energy's implementation of Sarbanes-
2 Oxley compliance processes in 2003. I have been employed at XES since April 2003.

3 **Q. Do you hold any professional licenses?**

4 A. Yes. I am a CPA certificate holder but am not an active CPA.

5 **Q. Have you testified before any regulatory authorities?**

6 A. Yes. I testified before the New Mexico Public Regulation Commission ("Commission")
7 in Case Nos. 12-00350-UT and 07-00319-UT. I have submitted pre-filed testimony in
8 several other cases before the Commission, including SPS's pending base rate case, and
9 in cases before the Public Utility Commission of Texas. More recently, I have submitted
10 pre-filed testimony on behalf of Public Service Company of Colorado ("PSCo") in
11 several FERC proceedings.

II. PURPOSE AND SUMMARY OF TESTIMONY **AND RECOMMENDATIONS**

Q. What is the purpose of your direct testimony?

A. In the first section of my testimony, I describe the categories of Grid Modernization capital assets included for cost recovery through SPS's proposed Grid Modernization Rider ("GMR") and the accounting treatment for these assets, including the applicable FERC account and associated depreciation rate or amortization period associated with each of these categories of capital assets. I also propose and support a depreciation rate of five percent to be applied to Advanced Metering Infrastructure ("AMI") meters. In the next section, I explain that PSCo owns the AMI head-end software¹ that will support SPS's Grid Modernization components and that SPS will be charged for utilizing the shared asset through an adjustment to the GMR revenue requirement. I also explain how this shared asset charge will be determined. In the final section, I support SPS's proposal to recover the undepreciated balance of meters currently in use, which I refer to as "legacy meters," that will be replaced by AMI meters. Specifically, I explain SPS's request to recover its remaining investment in the legacy meters over two years, until the AMI meters are installed, and SPS's alternative proposal to recover its remaining investment in the legacy meters through a regulatory asset that is established on January 1, 2022 and amortized over ten years.

Q. Are you sponsoring any attachments as part of your direct testimony?

A. Yes, I am sponsoring Attachments MPM-1 through MPM-4, which were prepared by me or under my direct supervision. The attachments are as follows:

¹ Mr. Remington and Mr. Nickell discuss the head-end software in their direct testimony.

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- 1 • Attachment MPM-1: which contains annual plant-related actual balances by Grid
2 Modernization component from November 1, 2019 through January 31, 2021 and
3 forecasted balances by component for February 1, 2021 through December 31,
4 2025.
- 5 • Attachment MPM-2: which lists the Grid Modernization plant additions by
6 component for 2021 through 2025.
- 7 • Attachment MPM-3: which shows the shared asset costs that are included as a
8 charge to New Mexico in the GMR.
- 9 • Attachment MPM-4: which illustrates the proposed accounting for the
10 undepreciated balance of the legacy meters through the regulatory asset.

11 **Q. What recommendations are you making in your direct testimony?**

12 **A.** I recommend that the Commission:

- 13 • approve SPS's proposed five percent depreciation rate to be applied to AMI
14 meters; and
- 15 • approve SPS's request to accelerate the depreciation of legacy meters so that SPS
16 can recover the undepreciated balance of its legacy meter assets through the GMR
17 by the time the AMI meters are installed, or, in the alternative, amortize a
18 corresponding regulatory asset over ten years.

III. DESCRIPTION OF GRID MODERNIZATION CAPITAL ASSETS AND ACCOUNTING TREATMENT

Q. What is the purpose of this section of your direct testimony?

A. This section describes the categories of Grid Modernization capital assets included for cost recovery through SPS's proposed GMR and the accounting treatment for these assets. I also propose and support a depreciation rate of five percent for AMI meters.

Q. What Grid Modernization initiatives will these capital assets support?

A. The capital assets support the following Grid Modernization components, as described in the Direct Testimonies of SPS witnesses Mr. Chad S. Nickell and Mr. Michael O. Remington: AMI, Fault Location Isolation and Service Restoration (“FLISR”), and Field Area Network (“FAN”).

Q. How does SPS plan to record the capital assets for which it seeks cost recovery through the proposed GMR in its books and records?

A. SPS has determined that most of the capital assets necessary to support the Grid Modernization components listed above are appropriately categorized with other assets recorded in established FERC accounts and subject to consistent accounting treatment, including the approved depreciation or amortization rate as applicable. While many of the components of the Grid Modernization initiative are new for SPS, the capital assets necessary to support them have similar characteristics and useful lives as compared to other categories of assets already in plant. For example, from a capital asset accounting perspective, the equipment that supports FLISR, such as reclosers,² are generally consistent with the reclosers SPS has been installing for decades. Likewise, access points

² Mr. Nickell discusses reclosers in his direct testimony.

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and repeaters used to create the FAN are similar to other network communication devices such as those used in Wi-Fi solutions in SPS's buildings. The Itron head-end software used for the AMI meters is like other software applications and includes software and hardware to communicate with field devices. These applications then communicate that information to other applications at Xcel Energy such as Customer Resource System and Meter Data Management, as described in more detail by Mr. Remington.

Further, the categories of capital assets necessary to support each of the above components will be recorded under the appropriate FERC accounts. These accounts, along with the approved depreciation or amortization rate for each account, are listed in Table MPM-1 below.

Table MPM-1

Program	Utility	FERC	FERC Account Description	Annual Depreciation Rate (1)		
				Property	Cost of Removal	Total
AMI	Electric	303	Computer Software 5 Year	20.0000%	0.0000%	20.0000%
AMI	Electric	303	Computer Software 10 Year	10.0000%	0.0000%	10.0000%
AMI	Electric	370	Meters	2.3533%	0.2353%	2.5886%
FAN	Electric	397	Communication Equipment	4.4759%	0.0000%	4.4759%
FLISR	Electric	361	Structures and Improvements	1.9601%	0.8313%	2.7913%

(1) Annual depreciation rate represents the forecast composite rate based on settled depreciation rates from Case No. 19-00170-UT.

Q. Are there any categories of grid modernization capital assets that require the creation of a new subaccount?

A. Yes. SPS is requesting that the Commission approve the application of a five percent depreciation rate to AMI meters based on their expected average service lives. SPS would create a new subaccount for these assets under FERC Account 370 - Meters.

1 **Q. Why is this proposed depreciation rate for AMI meters appropriate?**

5 Using straight line depreciation, which is the asset cost, less salvage, divided by
6 the life of the asset, SPS is requesting a five percent depreciation rate. This is illustrated
7 in the following table:

$$\begin{aligned} \text{Depreciation Rate} &= \frac{\text{Cost of Fixed Asset - Salvage Value}}{\text{Useful Life}} \\ 5\% &= \frac{\$1 - \$0}{20} \end{aligned}$$

1 **IV. ADJUSTMENTS FOR SHARED AMI HEAD-END ASSETS**

2 **Q. What is the purpose of this section of your direct testimony?**

3 A. In this section, I will describe what a shared asset is and explain how SPS will share in
4 the costs of assets constructed by PSCo. I further detail the process for recording a
5 shared asset adjustment for SPS's use of the AMI head-end and describe how this shared
6 asset cost will be determined.

7 **Q. What is a shared asset?**

8 A. Shared assets are those assets or facilities that are owned by one of the Xcel Energy
9 operating companies and used by an Xcel Energy affiliate (e.g., XES). This is different
10 from a common or allocated asset, which is developed for multiple companies with the
11 costs allocated accordingly from the outset.

12 **Q. How does Xcel Energy account for shared assets?**

13 A. The shared asset is recorded on the books of the Xcel Energy operating company that
14 owns the asset. Because the asset is owned by one of the operating companies, but used
15 by, for example, XES employees performing work for other operating companies, the
16 costs for that asset must be shared among the operating companies receiving services
17 from the XES employees using that asset. The costs that the owner incurs for these assets
18 include book depreciation, tax depreciation, related deferred taxes, removal cost
19 recovery, property taxes, and a return on investment or carrying costs.

20 **Q. How are shared asset expenses charged out to other operating companies?**

21 A. A carrying cost is calculated on the shared asset costs, a portion of which is then charged
22 to operations and maintenance ("O&M") expense on the books of other Xcel Energy

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1 subsidiaries that benefit from the asset. When this cost is charged out to the other
2 operating companies, it is recorded as a shared asset credit that reduces O&M expenses
3 for the company that owns the asset.

4 **Q. Please differentiate between accounting for a shared asset and accounting for a**
5 **common asset.**

6 A. I described the accounting for a shared asset above. In contrast, common intangible
7 assets are broken down into each operating company owner's fractional share in the
8 construction process. For the vast majority of software projects, affiliate costs are
9 allocated each month from a special allocating work order to each of the four operating
10 companies, including SPS. Charges recognized each month are allocated to the operating
11 company's construction work order based on predetermined percentages.

12 **Q. Which assets in the proposed GMR are considered shared assets?**

13 A. The AMI head-end software required to support the functionality of AMI meters is
14 owned by PSCo but will also be used in support of meters deployed across Xcel Energy's
15 other operating jurisdictions. Therefore, the AMI head-end software is a PSCo shared
16 asset.

17 **Q. How does Xcel Energy determine which assets will be shared assets versus common**
18 **assets?**

19 A. Tangible assets are always shared. Intangible assets, such as software, are typically
20 common assets, unless there is not commitment from all operating companies to use the
21 software.

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1 **Q. How will the AMI head-end software shared asset charges work?**

2 A. The AMI head-end software shared asset is recorded on the books of PSCo, the company
3 that owns the software asset. The shared asset allocation process then determines the
4 total carrying cost of the shared asset and allocates a portion of those costs to the other
5 operating companies benefiting from its use. This results in a credit back to PSCo for the
6 portion of the overall costs that are allocated to other operating companies.

7 **Q. When and how will the AMI head-end software shared asset charge be determined?**

8 A. Outside of Colorado, Xcel Energy's Northern States Power-Minnesota operating
9 company is the jurisdiction currently also utilizing the AMI head-end software, based on
10 its initial deployment of AMI meters in 2019. Current AMI meter deployments outside
11 of Colorado were in service in October of 2019, at which time the shared asset
12 adjustment started being charged. AMI meter deployments in New Mexico are
13 forecasted to begin in 2022. On a monthly basis, the shared asset costs are allocated from
14 PSCo based on actual meter deployments in each operating company. This shared asset
15 charge will continue when the GMR is rolled into base rates and until the investment is
16 fully recovered. Attachment MPM-3 illustrates the shared asset costs that are included as
17 a charge to the GMR in this proceeding.

18 **Q. How will the shared asset charge to New Mexico be determined?**

19 A. Once the transition to AMI technology has been approved, the allocation to New Mexico
20 will be calculated based on the projected meters to be deployed in each calendar year.
21 This number of meters will be divided by the total number of meters deployed across all

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the operating companies to determine the percentage allocation. Carrying cost will be calculated on the allocated asset cost.

Q. What are the expected shared asset charges to New Mexico over the time period covered by this rider?

A. Based on expected deployments in New Mexico and ongoing spend on the build out of the AMI asset, a shared asset charge will be recorded against the rider for recovery in New Mexico. A table showing projected charges and deployed meters is shown below.

Table MPM-3

	(1)	(2)	(3) = (1) / (2)	(4)	(5) = (3) X (4)
Year	Lifetime to Date Deployed New Mexico AMI Meters	Lifetime to Date Deployed Total AMI Meters	New Mexico Percentage	PSCo Shared Asset Carrying Costs	New Mexico Shared Asset Charge
2021	0	424,425	0.00%	\$10,039,708	\$0
2022	20,000	1,528,425	1.31%	9,493,326	124,224
2023	123,000	3,085,425	3.99%	12,920,038	515,055
2024	123,000	3,890,643	3.16%	22,357,158	706,806
2025	123,000	3,890,643	3.16%	27,960,925	883,965

Q. Is the shared asset charge reasonable?

A. Yes. The shared asset charge is based on use of the asset by SPS's New Mexico retail customers and is reasonable.

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1 **V. PROPOSED ACCOUNTING TREATMENT FOR ACCELERATED DEPRECIATION**
2 **OF LEGACY METERS**
3

4 **Q. What is the purpose of this section of your direct testimony?**

5 A. The purpose of this section is to support SPS's proposal to accelerate recovery of legacy
6 meters beginning in January 2022 to recover the undepreciated balance on the meters that
7 will be replaced by AMI meters and to propose a depreciation/amortization period for
8 cost recovery.

9 **Q. Will other witnesses address this topic?**

10 A. Yes. SPS witness Ruth M. Sakya explains that SPS's request to recover the remaining
11 undepreciated cost of the legacy meters balances the interests of SPS and its customers, is
12 just and reasonable, and is in the public interest.

13 **Q. Why is SPS proposing to accelerate depreciation to recover these costs?**

14 A. SPS usually recovers the cost of its meters through depreciation over the expected life of
15 these assets. The replacement of customers' existing legacy meters with AMI meters will
16 result in many of these legacy meters being taken out of service before they are fully
17 depreciated, meaning that SPS needs an alternative way to recover the remaining cost of
18 these legacy meters. One option would be to accelerate depreciation by shortening the
19 lives of the remaining legacy meters at the time AMI meters replace them, which will
20 occur over two years. Alternatively, to allow SPS to recover its remaining investment in
21 the legacy meters, SPS is recommending the Commission approve the creation of a
22 regulatory asset beginning in January 2022, when deployment of the AMI meters
23 commences, to allow costs to be recovered over ten years.

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1 **Q. Has SPS estimated the undepreciated balance remaining on the legacy meters that**
2 **will be replaced with AMI meters?**

3 A. Yes, this balance is shown in Attachment MPM-4 and it is estimated at approximately
4 \$19.5 million.

5 **Q. How did SPS determine this estimate?**

6 A. This estimate reflects the forecasted unrecovered plant balance in SPS's subledger at
7 December 31, 2021. The forecast is based on the current net book value of these assets
8 and any additional investment anticipated through that date, based on the currently
9 approved depreciation rate associated with the assets.

10 **Q. Are there any factors that could cause this estimate to be adjusted in the future?**

11 A. Yes. This amount may be subject to adjustment for a variety of reasons including but not
12 limited to: the timing of the deployment schedule, any intervening changes in the
13 Commission-approved depreciation rate associated with these meters, and any
14 replacement legacy meters that need to be installed before AMI meter deployment has
15 reached a customer.

16 **Q. When will SPS provide the final undepreciated balance for these assets?**

17 A. In its 2023 true-up filing (filed in 2024), SPS will provide the final undepreciated balance
18 for the legacy meters. At this point, all forecasted AMI meters will have been deployed
19 and thus the legacy meter asset and accumulated depreciation balances should be
20 finalized. The final amount to recover would be compared against what has been
21 previously collected through the revenue requirement to determine how much remains to
22 be collected from customers.

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1 **Q. Over what period of time does SPS propose to recover this undepreciated balance?**

2 A. SPS proposes to amortize the remaining balance over two years beginning January 1,
3 2022.

4 **Q. Why is SPS proposing this depreciation period?**

5 A. Since the legacy meters' remaining lives will be limited to the period leading up to
6 commencement of use of the AMI system, SPS is proposing to fully depreciate these
7 meters by the time installation of the AMI meters is complete.

8 **Q. What would be the rate impact of depreciating this balance over two years?**

9 A. As shown in the revenue requirement presented by SPS witness Stephanie N. Niemi, the
10 impact of depreciating this balance over two years would be approximately \$9.8M per
11 year.

12 **Q. Does SPS propose any alternative to the two-year period in the event that the two-**
13 **year period is not accepted?**

14 A. In the event that two years is determined to be too short a period of time for depreciation,
15 SPS proposes to create a regulatory asset and amortize the total remaining asset value
16 over ten years beginning January 1, 2022.

17 **Q. Why is SPS willing to utilize this longer amortization period?**

18 A. A ten-year amortization period is a viable alternative that balances between minimizing
19 rate impacts and ensuring cost recovery for these assets. This amortization period was
20 determined by taking the December 31, 2021 forecasted \$19.5 million of unrecovered
21 plant balance and dividing it by the ten-year period proposed. This level of amortization

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will provides a reasonable recovery period for both SPS and customers. This is illustrated in Table MPM-4.

Table MPM-4

Amortization period (in years)	(a)		
	28.89	2.00	10.00
Year	If we continue to depreciate normally	Amortize Reg Asset over 2 years	Amortize Reg Asset over 10 years
2022	\$ 676,200	\$ 9,767,985	\$ 1,953,597
2023	676,200	9,767,985	1,953,597
2024	676,200		1,953,597
2025	676,200		1,953,597
2026	676,200		1,953,597
2027	676,200		1,953,597
2028	676,200		1,953,597
2029	676,200		1,953,597
2030	676,200		1,953,597
2031	676,200		1,953,597
2032-2049	676,200		
2050	602,364		
Total	\$ 19,535,970	\$ 19,535,970	\$ 19,535,970

(a) Forecasted average remaining life as of 12/31/2021 based on forecasted unrecovered balance divided by annual depreciation expense

Q. Does this conclude your prefiled direct testimony?

A. Yes, it does.

VERIFICATION

On this day, June 4, 2021, I, Mark P. Moeller, swear and affirm under penalty of perjury under the law of the State of New Mexico, that my testimony contained in Direct Testimony of Mark P. Moeller is true and correct.

/s/Mark P. Moeller
MARK P. MOELLER

Annual Plant-Related Roll-Forwards by Grid Modernization Component - CWIP

Program	Item	2019	2020	2021	2022	2023	2024	2025
AMI	CWIP Beg Bal	-	40,035	642,608	1,450,498	1,634,067	1,856,028	-
AMI	CWIP Expenditures without AFUDC	39,925	585,053	781,696	5,365,020	17,940,275	1,813,325	150,000
AMI	AFUDC Debt	35	5,156	8,692	24,118	25,201	230	48
AMI	AFUDC Equity	74	12,364	17,503	54,135	60,010	590	120
AMI	CWIP Closings	-	-	-	(5,259,704)	(17,803,526)	(3,670,173)	(150,168)
AMI	CWIP End Bal	40,035	642,608	1,450,498	1,634,067	1,856,028	-	-
Program	Item	2019	2020	2021	2022	2023	2024	2025
FAN	CWIP Beg Bal	-	-	-	2,388	730,521	452,008	-
FAN	CWIP Expenditures without AFUDC	-	-	10,592	2,218,819	5,295,843	2,540,982	375,492
FAN	AFUDC Debt	-	-	9	2,423	11,704	3,696	-
FAN	AFUDC Equity	-	-	18	5,438	27,870	9,469	-
FAN	CWIP Closings	-	-	(8,231)	(1,498,546)	(5,613,931)	(3,006,155)	(375,492)
FAN	CWIP End Bal	-	-	2,388	730,521	452,008	-	-
Program	Item	2019	2020	2021	2022	2023	2024	2025
FLISR	CWIP Beg Bal	-	-	-	-	-	-	-
FLISR	CWIP Expenditures without AFUDC	-	-	-	-	2,057,918	2,421,497	500,000
FLISR	AFUDC Debt	-	-	-	-	-	-	-
FLISR	AFUDC Equity	-	-	-	-	-	-	-
FLISR	CWIP Closings	-	-	-	-	(2,057,918)	(2,421,497)	(500,000)
FLISR	CWIP End Bal	-	-	-	-	-	-	-

Southwestern Public Service Company

Annual Plant-Related Roll-Forwards by Grid Modernization Component - Plant

Program	Item	2019	2020	2021	2022	2023	2024	2025
AMI	Plant Beg Bal	-	-	-	-	5,259,704	23,063,230	26,733,403
AMI	Plant Additions	-	-	-	5,259,704	17,803,526	3,670,173	150,168
AMI	Plant End Bal	-	-	-	5,259,704	23,063,230	26,733,403	26,883,571
FAN	Plant Beg Bal	-	-	-	8,231	1,506,777	7,120,708	10,126,863
FAN	Plant Additions	-	-	8,231	1,498,546	5,613,931	3,006,155	375,492
FAN	Plant End Bal	-	-	8,231	1,506,777	7,120,708	10,126,863	10,502,355
FLISR	Plant Beg Bal	-	-	-	-	-	2,057,918	4,479,414
FLISR	Plant Additions	-	-	-	-	2,057,918	2,421,497	500,000
FLISR	Plant End Bal	-	-	-	-	2,057,918	4,479,414	4,979,414

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Annual Plant-Related Roll-Forwards by Grid Modernization Component - Accumulated Reserve (Net of RWIP)

Program	Item	2019	2020	2021	2022	2023	2024	2025
AMI	Accum Depr Beg Bal	-	-	-	-	(131,015)	(53,334)	763,514
AMI	Book Depr	-	-	-	14,347	445,395	828,464	1,098,883
AMI	Removals	-	-	-	(145,362)	(367,714)	(11,616)	-
AMI	Accum Depr End Bal	-	-	-	(131,015)	(53,334)	763,514	1,862,397
AMI	RWIP End Bal	-	-	-	-	-	-	-
AMI	Accum Depr (Net of RWIP)	-	-	-	(131,015)	(53,334)	763,514	1,862,397
Program	Item	2019	2020	2021	2022	2023	2024	2025
FAN	Accum Depr Beg Bal	-	-	-	106	13,598	201,460	557,005
FAN	Book Depr	-	-	106	13,492	187,862	355,545	468,346
FAN	Removals	-	-	-	-	-	-	-
FAN	Accum Depr End Bal	-	-	106	13,598	201,460	557,005	1,025,351
FAN	RWIP End Bal	-	-	-	-	-	-	-
FAN	Accum Depr (Net of RWIP)	-	-	106	13,598	201,460	557,005	1,025,351
Program	Item	2019	2020	2021	2022	2023	2024	2025
FLISR	Accum Depr Beg Bal	-	-	-	-	-	(13,277)	28,544
FLISR	Book Depr	-	-	-	-	28,721	91,239	125,616
FLISR	Removals	-	-	-	-	(41,998)	(49,418)	-
FLISR	Accum Depr End Bal	-	-	-	-	(13,277)	28,544	154,160
FLISR	RWIP End Bal	-	-	-	-	-	-	-
FLISR	Accum Depr (Net of RWIP)	-	-	-	-	(13,277)	28,544	154,160

Grid Modernization Plant Additions by Component

Program	WBS Level 2	WBS Level 2 Description	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025
AMI	D.0001901.011	AGIS Meter Data Mgmt (MDM) SW SPS	-	-	-	1,568,950	-
AMI	D.0001901.061	AMI-BS-SPS-Software Licenses	-	-	-	1	-
AMI	D.0001901.068	AMI-Meter-Data-Lake-BS-SW-SPS	-	-	-	371,599	-
AMI	D.0001901.074	AMI-SW-License-BS-SPS-NEW	-	-	1,035,250	1,035,250	-
AMI	D.0001901.078	AGIS - AMI Meter Projects - SPS	-	5,259,704	13,264,737	419,043	-
AMI	D.0001908.057	AGIS-BS-Cap-SW-Cont-AMI-SPS	-	-	600,607	275,329	150,168
AMI	D.0001908.071	AGIS-Dist-Capital-Line-AMI-Contin-S	-	-	2,902,932	-	-
FAN	D.0001900.300	AGIS - FAN - SPS	8,231	1,498,546	4,888,198	1,404,261	375,492
FAN	D.0001908.075	AGIS-Dist-Cap-Comm-FAN-Cont-SPS	-	-	725,733	1,601,894	-
FLISR	D.0001902.034	AGIS SPS FLISR - Install Distributi	-	-	2,057,918	2,421,497	-
FLISR	D.0001908.048	AGIS-Dist-Capital-Line-FLISR-Contin	-	-	-	-	500,000

Southwestern Public Service Company

1 Calculate Carrying Cost Ratio for PSCo AMI Headend Shared Asset by year (for actuals and forecast)

Year	PSCo Plant in Service	Accumulated Depreciation/Amortization	Net Book Value	Annual Depreciation/Amortization	Accumulated Deferred	PSCo Return On Rate Base (1) 6.53%	Total Carrying Costs	Carrying Costs Ratio
		(a)	(b)	(c) = (a) - (b)	(d)	(e)	(f) = [(beg (c) - (e)) + (end (c) - (e))/2] X 6.53%	(g) = (d) + (f) (h) = (g) / (d)
2021	\$ 67,176,579	\$ 7,281,048	\$ 59,895,530	\$ 6,777,012	\$ 5,077,816	\$ 3,262,696	\$ 10,039,708	1.4814
2022	\$ 67,936,494	\$ 14,058,060	\$ 53,878,434	\$ 6,828,185	\$ 8,766,709	\$ 2,665,141	\$ 9,493,327	1.3903
2023	\$ 67,978,467	\$ 20,886,245	\$ 47,092,222	\$ 8,377,687	\$ 10,576,348	\$ 4,542,351	\$ 12,920,038	1.5422
2024	\$ 144,168,805	\$ 29,263,933	\$ 114,904,872	\$ 14,988,747	\$ 12,298,198	\$ 7,368,411	\$ 22,357,159	1.4916
2025	\$ 183,506,070	\$ 44,252,680	\$ 139,253,390	\$ 19,924,318	\$ 16,181,305	\$ 8,036,607	\$ 27,960,925	1.4034

(1) Source: June 2020 Corporate Assumptions Memo; 2026 forecast data unavailable so return on rate base for 2025 is Beginning Net Book Value less the Beginning Accumulated Deferred multiplied by the Return on Rate Base Percentage.

2 Forecasted Shared Asset Debit

Multiply the forecasted depreciation expense for the PSCo AMI Headend Shared Asset by the respective annual carrying cost ratio in step 1. That amount is multiplied by the forecasted jurisdictional meter deployment split (see below table) to determine the forecasted shared asset debit for SPS-NM.

Forecasted meter deployment split

Operating Company-

Jurisdiction	2021	2022	2023	2024	2025
NSPM-MN,ND,SD	3.90%	37.07%	40.82%	41.63%	41.63%
NSPW-WI,MI	0.00%	0.00%	3.63%	6.98%	6.98%
PSCo	96.10%	61.62%	46.86%	41.14%	41.14%
SPS-TX	0.00%	0.00%	4.70%	7.09%	7.09%
SPS-NM	0.00%	1.31%	3.99%	3.16%	3.16%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
SPS-NM %	0.00%	1.31%	3.99%	3.16%	3.16%
	2021	2022	2023	2024	2025

(i)

Forecasted Shared Asset Debit to New Mexico

(j) = (d) X (h) X (i)

883,965

706,806

515,055

124,224

-

Options for SPS-NM Electric 370 Meter Recovery				
Regulatory Asset Calculation				
As of Date	Estimated Ending Plant Balance	NMPC Approved Cost of Removal (10%)	Estimated Ending Accumulated Depreciation	
12/31/2021	\$ 26,284,967 (a)	\$ 2,628,497 (b) = (a) X 10%	\$ 9,377,494 (c)	
		Regulatory Asset	\$ 19,535,970 (d) = (a) + (b) - (c)	
Amortization Expense - 2 Year Amortization Period				
Year	Amortization		Year	Amortization
2022	\$ 9,767,985 (e) = (d) / 2		2022	\$ 1,953,597 (f) = (d) / 10
2023	\$ 9,767,985 (e) = (d) / 2		2023	\$ 1,953,597 (f) = (d) / 10
Total	\$ 19,535,970		Total	\$ 19,535,970
Amortization Expense - 10 Year Amortization Period				
Year	Amortization		Year	Amortization
2022	\$ 1,953,597 (f) = (d) / 10		2022	\$ 1,953,597 (f) = (d) / 10
2023	\$ 1,953,597 (f) = (d) / 10		2023	\$ 1,953,597 (f) = (d) / 10
2024	\$ 1,953,597 (f) = (d) / 10		2024	\$ 1,953,597 (f) = (d) / 10
2025	\$ 1,953,597 (f) = (d) / 10		2025	\$ 1,953,597 (f) = (d) / 10
2026	\$ 1,953,597 (f) = (d) / 10		2026	\$ 1,953,597 (f) = (d) / 10
2027	\$ 1,953,597 (f) = (d) / 10		2027	\$ 1,953,597 (f) = (d) / 10
2028	\$ 1,953,597 (f) = (d) / 10		2028	\$ 1,953,597 (f) = (d) / 10
2029	\$ 1,953,597 (f) = (d) / 10		2029	\$ 1,953,597 (f) = (d) / 10
2030	\$ 1,953,597 (f) = (d) / 10		2030	\$ 1,953,597 (f) = (d) / 10
2031	\$ 1,953,597 (f) = (d) / 10		2031	\$ 1,953,597 (f) = (d) / 10
Total	\$ 19,535,970		Total	\$ 19,535,970