





pper Missouri Power Cooperative (Upper Missouri) was organized in 1957 to serve transmission needs of rural electric cooperatives in eastern Montana and western North Dakota. Upper Missouri provides service to ten electric distribution cooperatives, five in eastern Montana and five in western North Dakota. The ten Member Systems serve 84,794 meters to farms, ranches, homes and businesses in thirty three counties, representing 53,705 square miles. Upper Missouri Power Cooperative welcomed its eleventh Member System into the cooperative, Mid-Yellowstone Electric Cooperative, in June 2015. Mid-Yellowstone, however, will not take power supply services until late 2016 or early 2017.

Upper Missouri sources power from two major power suppliers, Western Area Power Administration and Basin Electric Power Cooperative (Basin). 95.6% of the power is sourced from Basin.

Upper Missouri has seen dramatic energy sales and demand growth, now a 1038 MW system, representing 30.1% of Basin's member sales in 2015. Upper Missouri is projected to need another 658 MW of capacity in the next twenty years.

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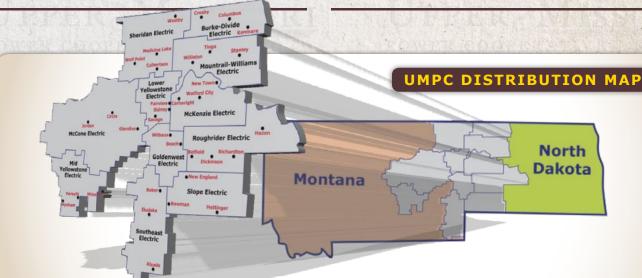
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TRAVIS THOMPSON

Upper Missouri Power Cooperative (UMPC) experienced another year of significant sales growth and program expansion. The softening of oil and gas prices reduced the number of active drilling rigs, down to 58 active rigs in December. Rigs concentrated on the highest performing area in the center of the Bakken; leaving the fringe areas in the far north, far west and far south of the UMPC territory. While the count is down, we do feel that the industry and communities are stabilized.

Enhanced technologies and associated performance results in significant growth in spite of the reduced rig counts. A typical rig can now drill a well in less than 15 days. Continued effort to collect and process flare gas drives much of the load growth in the region. Several new gas process plants and associated compression stations contributed to significant load growth.

Beyond handling growth, the Board of Trustees voted to accept a new member in June. A contiguous electric cooperative, Mid-Yellowstone Electric Cooperative headquartered in Hysham, MT applied for membership to gain power supply when their current power supply contract is fulfilled in late 2016.

In keeping with the strategic direction, the Board of Trustees authorized the sale of several substation and transmission assets to Lower Yellowstone Electric Cooperative, Roughrider Electric Cooperative, and Slope Electric Cooperative.

After a thorough study and consideration, the Board of Trustees also took action to develop its own metering program, ultimately converting all qualifying

delivery points from Western Area Power Administration owned meters to UMPC owned meters. The new meter program enables UMPC to accelerate installations, leverage installations for load monitoring, and utilize internet protocol and state of the art technology; meeting or exceeding the requirements of the Southwest Power Pool.

As an organization, we have become very concerned about future power supply. UMPC and its Member Systems extended their power supply contracts with WAPA to 2050. Later, UMPC and its member systems extended their all power requirements contracts with Basin Electric Power Cooperative to the year 2075. Later in the year, the Clean Power Plan was released by the Environmental Protection Agency. The Clean Power Plan (CPP) will have a significant impact on our power supplier, Basin. The CPP will put pressure on Basin to retire its high performing coal power plants, replacing them with wind and gas. This is of grave concern to us, as it will undoubtedly have a very negative impact on wholesale power rates. As an organization, we will be doing all we can do to mitigate the CPP and the corresponding impact on the end member consumer.

The Board of Trustees held its annual strategic discussion event in December; discussing several pressing industry issues. The Board of Trustees are pleased with the health and direction of the system, a system that is grounded in its cost of service philosophy, prepared for the future.





**CLAIRE VIGESAA** 

When considering our past year, three words came to mind...stabilized, grounded and prepared. We have come to realize that our economy is very connected to the world economy. The slowdown in exploration activity was expected, but not to the degree we've seen. However, thanks to foresight of our Member System boards and management your electric cooperatives have not over extended themselves. Power supply has been incrementally built so that power supply closely matches load growth. So, even as things have slowed, we can feel comfortable that our region and our cooperatives are stabilized...and able to catch our breath to get much needed maintenance and construction completed.

Thanks to our Board of Trustees and Member System Managers commitment, we are **grounded** in our cooperative principles and **grounded** in our commitment to our cost of service philosophy. This enabled the Board of Trustees to objectively address the addition of our new member, Mid-Yellowstone Electric Cooperative. The **grounded** perspective facilitated decision making on other issues including our power supply contract extensions, the new load monitoring and metering program and NERC compliance initiatives.

Much has changed in the UMPC world this year. One of the major events affecting UMPC was Basin & WAPA's decision to join a Regional Transmission Organization, Southwest Power Pool (SPP). This change eliminated the benefit of a long standing transmission sharing agreement (since 1972) with Montana

Dakota Utilities, the agreement we called the Interconnection and Common Use Agreement (ICCUA). With Basin's entrance to SPP and the demise of the ICCUA, UMPC and several of its Member Systems leased assets to Basin for inclusion in SPP.

The entrance to SPP required additional and enhanced metering requirements. This triggered the development of the new metering program, owned and managed by UMPC. In just a few months, UMPC went from 130 to 175 meter points.

By year end, the aggressive schedule for the implementation of the new load monitoring plan was completed. The load monitoring system provides vital information for Basin's Power Marketing department as they schedule power purchases every hour of the day, every day of the year. The system also provides data for individual Member Systems, helpful for their individual system planning and operation. Finally, Basin provides an incentive payment for quality load data that incentive is passed directly on to the Member System based on GWH sales.

UMPC's Board of Trustees voted to convert to coincidental demand billing from WAPA at year end. This conversion will simplify billing, eliminate the need to track substation load transfers and although there are winners and losers, overall it reduces the total cost of WAPA power deliveries.

Our cost of service philosophy, our commitment to high quality load data, metering and compliance has us positioned well, and **prepared** for the future. We know there are challenges ahead, but feel confident that we, our power suppliers and Member Systems are, **stabilized**, **grounded** and **prepared** us for what lies ahead.





JEREMY MAHOWALD

### LOAD MONITORING

Launched in March of 2014, the load monitoring project reached over 95% completion by the end of 2015. We spent the first few months designing our system, working with Western and Basin to achieve our project goals by utilizing technologies that were already deployed. The load monitoring system uses real-time data from Western-UMPC meters and polls data from Basin's data "historian" on a near-time basis, every 6 seconds. To get that data from the meter to Basin, a variety of economical but reliable communication paths are utilized including phone cooperative DSL, cellular, satellite and private utility networks owned by our members.

Upper Missouri's load has been dynamic because of the steady growth of our system and the load shifts that have taken place to accommodate construction of lines and substations. Having near real time data available for Basin enhances energy forecasting and marketing functions resulting in significant financial value. As our data now comes in

with high accuracy, this will carry financial benefits for Upper Missouri Member Systems as well.

### NERC COMPLIANCE

NERC Compliance activities for Upper Missouri and its Member Systems continues to evolve and grow, thanks in large part to our manager of compliance, Rick Engstrom. The challenge of moving to self- registration and moving away from Basin's compliance umbrella is a bit more daunting than anyone expected, but the process is underway and tentatively scheduled for the end of 2016. Defining of assets has been completed and Coordinated Functional Registration (CFR) documents are being generated at Basin to define roles for each entity before registering with the Midwest Reliability Organization (MRO).

The creation of an Upper Missouri Compliance
Working Group has facilitated discussion and
cooperation among Upper Missouri and the
Member Systems. This environment of cooperation
will improve the reliability for all and strengthen
the culture of compliance throughout the Upper
Missouri Member Systems. Updates to NERC
standards continually evolve, leading to continual
program standard updates. Identifying gaps or
needs and developing solutions in current programs/

processes to meet compliance evolution requires constant evaluation and updates.

### METERING

As Upper Missouri and its cooperatives went into a Regional Transmission Organization, Southwest Power Pool (SPP), with Basin (or through their leases), it was imperative our metering take place at the point of load delivery. This required the dissolution of the long-standing "pocket" metering used to measure Mountrail-Williams load where power flowed into and out of their system. In its place, 71 new meters were required; collectively we determined the best solution was for Upper Missouri and its Members Systems to develop and manage our own metering program.

Metering accuracy and performance is critical; hence Upper Missouri has committed to best practices for data integrity, accuracy, and reliability. Our program follows strict standards set forth by our power suppliers, SPP and our own commitment to quality. Having our own metering program has allowed us to utilize new technologies, improved communication paths, and integration into Basin and SPP, ultimately providing new value to the UMPC membership.



### **CONTROLLER REPORT**



**DELLA PEWONKA** 

Upper Missouri Power Cooperative's (UMPC) sales continue to increase very rapidly. Sales to UMPC's ten Member Systems totaled 7,116 GWhs in 2015, a 20% increase over 2014. UMPC's 2015 coincidental peak reached 1038 MW in December. The growth driver continues to be attributed to oil and gas exploration. Just a few years back, 2005, UMPC had a 246 MW peak and 1,445 GWh sales. Growth isn't over yet either, UMPC is projected to be a 1,750 MW system with 10,730 GWh sales by 2035.

In 2015, 95.61% of UMPC's energy was purchased from Basin Electric Power Cooperative, with the balance, 4.39%, purchased from Western Area Power Cooperative. In 2015, UMPC's purchases represented 30.1% of Basin's Member Sales.

Under UMPC's cost of service model, wholesale power costs are passed directly through to the ten Member Systems. Maintenance and replacement expense, operations expense, voltage credits, capital credit allocation and renewable energy credits are passed directly through to the Member Systems based on load allocation. Margins are budgeted to be \$750,000, and capital credits are retired on average over ten years.

UMPC took action to transfer a number of assets to its Member Systems and Basin Electric Power Cooperative in 2015. The transfers clean up lines of ownership in several facilities, providing for more clear maintenance and replacement responsibilities, including NERC Compliance responsibilities.

The cooperative is well positioned financially, both from a position of strength and of order. UMPC has healthy ratios, enabling the cooperative to access cost effective financing and return capital credits on a ten year rotation.

I am pleased to report that we have accounting and financial systems in place so that we can confidently say we are **stabilized**, **grounded** and **prepared** for the future.



# **MEMBER HIGHLIGHTS**

Upper Missouri Power Cooperative exists to aggregate load on behalf of eleven member distribution systems and to represent member systems at power supply and electric cooperative association venues. The board of trustees and staff work to facilitate discussions and positions that enable member systems to optimize their performance; ultimately providing value and reliability to the member system owner/consumer. We are proud of our member systems efforts and initiatives in providing excellent electric and community service. Here's a snapshot from each member system.



Roughrider Electric Cooperative plays integral role in the expansion/renovation of the Sakakawea Medical Center in Hazen with financial and community support. Roughrider will provide the electric service to the expanded facility."



Slope Electric Cooperative Bruce Klein, Bowman Airport Authority Manager, proudly shares the development of the new and improved airport with LaWanna Wilhelm, Slope Electric Chief of Staff. The Bowman Airport – 10 year project – is the first new-field construction of an airport in North Dakota since 1980. It's 5700 foot runway is the longest in the state for a small general aviation airport.



McKenzie Electric Cooperative energized this large Oneok 200mmcf/day Lonesome Creek Gas Plant in late 2015.



Southeast Electric Cooperative completed brand new headquarters and vehicle storage building projects. Pictured at the open house below a "wire reel" clock built by General Manager Jack Hamblin and Groundman Dave Johnstone is the Southeast office staff: Rita Williams, Vicki Fix and Robin Kuntz.



Goldenwest Electric Cooperative broke ground on its first ever 230kV tap, Beaver Hill just west of Wibaux. The 230/115/60 kV substation will serve oil development and pumping loads.



Superheroes who work in all weather conditions

and hours of the day to keep the lights on.

In 2015, the Board of Directors of **Burke-Divide Electric Cooperative** voted to establish an outpost east of Crosby.
"Burke-Divide Electric's footprint is 109 miles wide. By adding an outpost in Crosby, we hope to reduce outage response time to our members on the far west side of the system," explains Jerry King, General Manager. "This outpost will also help the Cooperative address the growth on the western side of Burke-Divide's distribution system."



Lower Yellowstone Electric Cooperative journeyman line worker, Aaron Eide, demonstrates the power of electricity during a community safety training hosted by LYREC.



Sheridan Electric Cooperative hosted the Touchstone Energy balloon for their annual meeting in October. Pictured in front of the balloon is Miss Montana Danielle Wineman.



Mid-Yellowstone Electric Cooperative voted to pursue membership at Upper Missouri, and were accepted as UMPC's newest member at the June 2015 Board of Trustees meeting. Mid-Yellowstone will begin taking power deliveries from UMPC in late 2016 or early 2017.



McCone Electric Cooperative Sub-Forman, Jordan Dasinger, suits up Jeremiah Ellington at the Garfield County Fair in Jordan, MT.

Jeremiah's parents are McCone Electric members K.J. and Sharon Ellington from Jordan.

# **2015 UMPC ACTIVITIES**

- 1. Asset Sales
  - a. Lower Yellowstone Electric Cooperative
     (LYREC) purchased UMPC's mobile
     substation and regulator in late 2015.

     LYREC is rebuilding and updating the units
     and will have them available for rental to
     neighboring member systems.



b. Slope Electric Cooperative purchased the Rhame Substation, Bowman Substation and transmission lines in late 2015. Roughrider Electric Cooperative purchased the Dickinson and South Heart Substations, the Schefield transmission line, and capacitors at Richardton and Fryburg.



- Staff and legal counsel amended the maintenance agreement with MDU in 2015 to reflect new requirements for NERC Compliance.
- 3. UMPC extended power supply contracts with both of its suppliers in 2015; extending the all power requirement contract with Basin Electric Power Cooperative until 2075 and extending its WAPA contracts to 2050. Pictured below are President Thompson and Secretary Clouse executing the WAPA contract extensions.



4. UMPC updated its website in 2015 using the Touchstone Energy Web Builder. The updated site provides pertinent information for members and guests.



5. The new UMPC load monitoring project was substantially completed in late 2015. The project





# **2015 UMPC ACTIVITIES**

provides near real time load data to member systems, valuable load information for Basin and vital data for scheduling in the Southwest Power Pool environment.

6. UMPC and its Member Systems made excellent progress in the development of their NERC compliance programs. One of the keys to the progress and success is the collaboration among the UMPC member systems and neighboring cooperatives and utilities. UMPC staff led the development of a working group of compliance staff that meet regularly to address compliance issues.

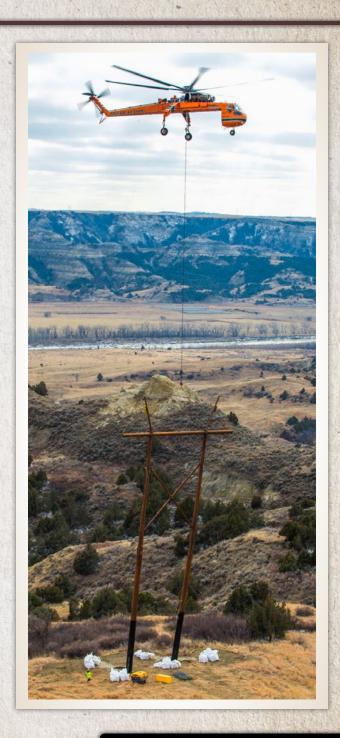


7. UMPC launched its own metering program in 2015 in response to the increasing metering requirements of the Southwest Power Pool.

More than 70 new meters were installed in 2015. Over time, UMPC will replace meters now maintained by Western Area Power Administration.



8. Basin Electric Power Cooperative completed the first leg of 345kV transmission line from Antelope Valley Station to Judson (near Williston). This large and complex construction project was vital to meet the ever increasing load requirements of the Bakken and to improve overall system reliability.



# **2015 UMPC STATISTICS**

Со-ор	Total Members	Total Meters	Miles of Line	Service Area	Coincidental -Peak Demand (MW)	GWH Sales
Burke-Divide	1,452	3,550	2,696	2,590	42	273
GoldenWest	676	1,528	1,145	1,500	7	43
Lower Yellowstone	2,446	6,829	2,106	2,253	43	268
McCone	2,515	5,267	3,831	14,400	17	73
McKenzie	4,013	12,031	4,197	4,243	358	2,361
Mid-Yellowstone	749	2,012	1,043	3,300	-	-
Mountrail-Williams	7,362	19,390	5,199	4,089	365	2,587
Roughrider	8,471	24,221	5,425	5,800	151	828
Sheridan	1,908	3,933	2,849	4,230	25	133
Slope	1,887	3,963	3,232	4,500	63	486
Southeast	942	2,070	1,719	6,800	11	64
TOTAL	32,421	84,794	33,441	53,705	1,038	7,116



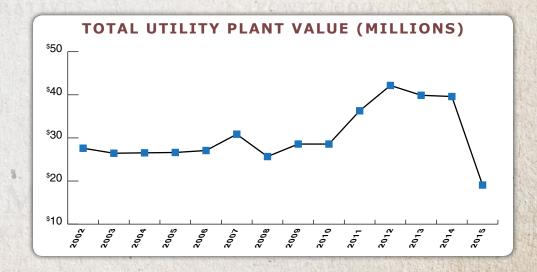
Touring Lonesome Creek Generation Station.

# ASSETS AND OTHER DEBITS

ASSETS	2015	2014
ELECTRIC PLANT		
In Service	\$19,069,568	\$39,603,313
Under construction	155,899	1,632,196
Total electric plant	19,225,467	41,235,509
Less accumulated depreciation	10,412,755	18,315,451
Electric Plant - net	8,812,712	22,920,058
OTHER PROPERTY AND INVESTMENTS		
Patronage Capital - Basin Electric	76,857,620	62,941,714
Investments in associated companies	581,781	509,706
Investment in economic development projects	442,550	442,550
Total other property and investments	77,881,951	63,893,970
CURRENT ASSETS		
Cash and cash equivalents	1,388,365	832,298
Temporary cash investments	134,920	134,824
Accounts receivable	35,445,616	33,256,835
Other receivable - plant sales	12,307,933	0
Other receivable - insurance proceeds	190,000	0
Materials and supplies	42,747	0
Prepayments	165,349	37,430
Total Current Assets	49,674,930	34,261,387
DEFERRED DEBITS		
Load monitoring/metering costs	43,918	0
Total Assets	\$136,413,511	\$121,075,415
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### LIABILITIES AND OTHER CREDITS

EQUITIES AND LIABILITIES	2015	2014
EQUITIES		
Memberships	\$5,500	\$5,000
Patronage capital	82,920,227	69,898,925
Total equities	82,925,727	69,903,925
Long-Term Debt, Less Current Maturities	17,492,571	16,604,008
CURRENT LIABILITIES		
Current maturities of long-term debt	419,447	907,932
Line of credit	0	878,282
Accounts payable - Power supply	34,184,998	31,053,989
Accounts payable - other	1,087,651	947,622
Patronage capital retirement payable	0	700,000
Accrued payroll	25,958	24,167
Other current and accrued liabilities	72,791	55,490
Total Current Liabilities	35,790,845	34,567,482
DEFERRED CREDITS		
Customer prepayments	204,368	0
Total current liabilities	\$136,413,511	\$121,075,415





# STATEMENTS OF OPERATIONS

	2015	2014
OPERATING REVENUES		的表现是是他们
Electric	364,975,215	\$301,872,772
Other	4,105,720	\$5,021,565
	\$369,080,935	\$306,894,337
OPERATING EXPENSES		
Cost of Power	365,033,170	301,901,638
Transmission - operations	104,285	520,981
Transmission - maintenance	348,073	339,492
Administrative and general	1,959,845	1,754,188
Depreciation and amortization	955,592	1,064,211
Taxes	44,252	61,517
Interest on long-term debt	784,508	791,075
Total Operating Expenses	369,229,725	306,433,102
Operating Margins Before Capital Credits	-148,790	461,235
Basin Electric capital credits	13,915,906	11,922,490
Other Cooperative Capital Credits	90,008	281,529
Total Capital Credits	14,005,914	12,204,019
Net Operating Margins	13,857,124	12,665,254
NONOPERATING MARGINS		
Interest Income	9,799	2,017
Gain on sale of plant	1,622	25,269
Compliance	185,909	
Load Monitoring	254,882	
Maintenance	287,370	
Other non-operating income	29,630	11,887
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Total non-operating margins	769,212	39,173



	369,229,725
Interest	784,508
Operations Maintenance	452,358
Taxes	44,252
Depreciation	955,592
Cost of Power	365,033,170
Administrative & General	1,959,845

