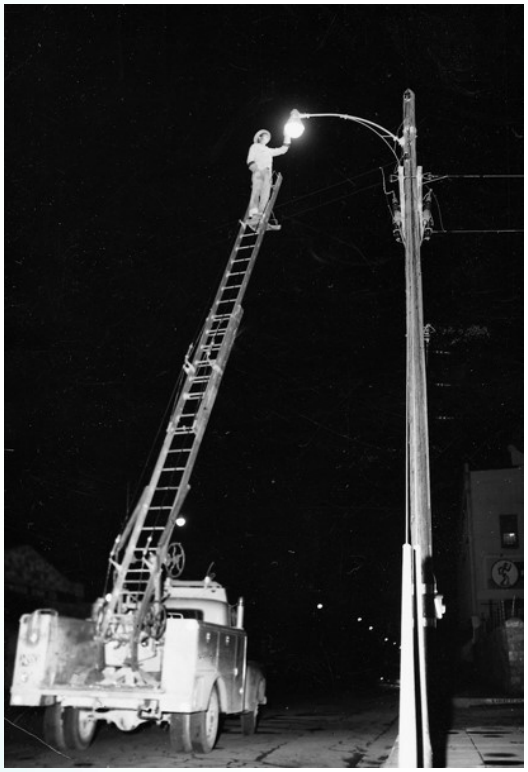
UA Summit®
May 10 - 12, 2022 | New Orleans, LA
How El Paso Electric got in "GEAR"

History of El Paso Electric



El Paso Electric (EPE) first began serving its customers on August 30, 1901 as the **El Paso Electric Railway Company**.

By 1925, the Company's core business had evolved to producing and distributing electricity. That year, the company changed its name to **the El Paso Electric Company** and began serving southern New Mexico.

By November 1929, the company's first power plant was built, the Rio Grande Power Plant.

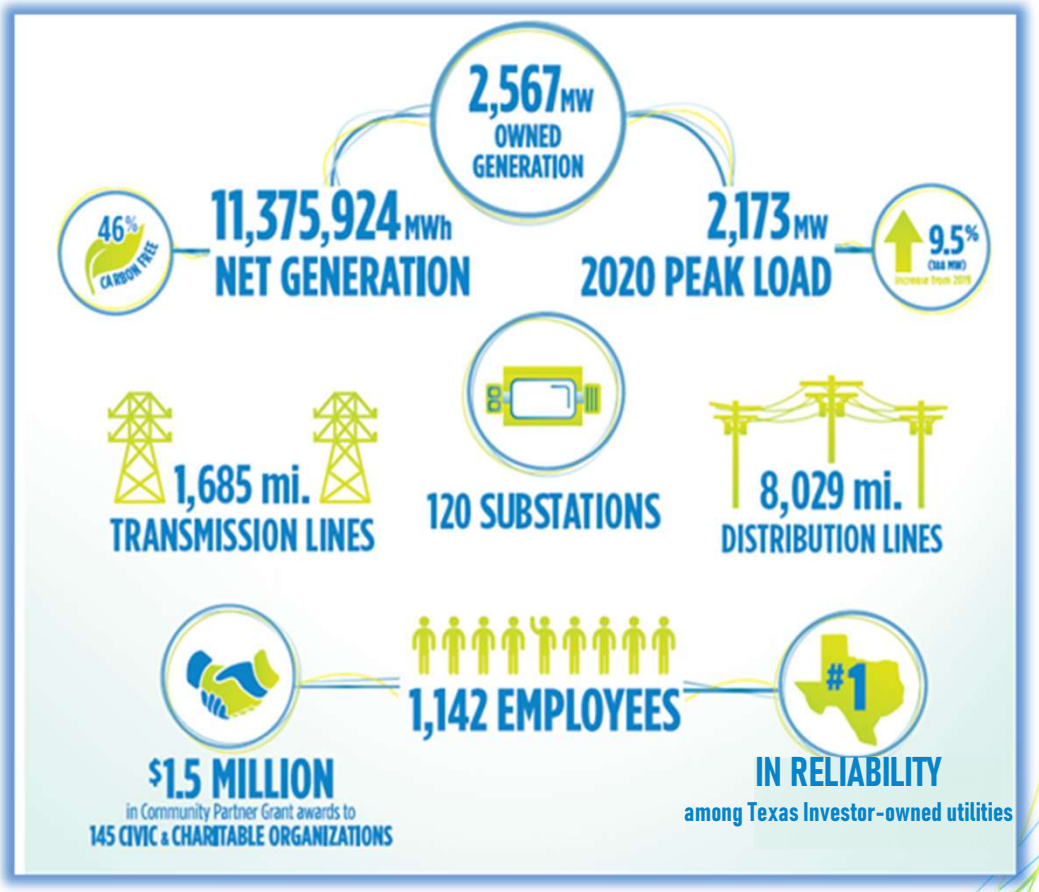
The Electric Company
El Paso Electric

El Paso Electric Today

El Paso Electric is a regulated, vertically integrated electric utility providing **generation**, **transmission** and **distribution service**.

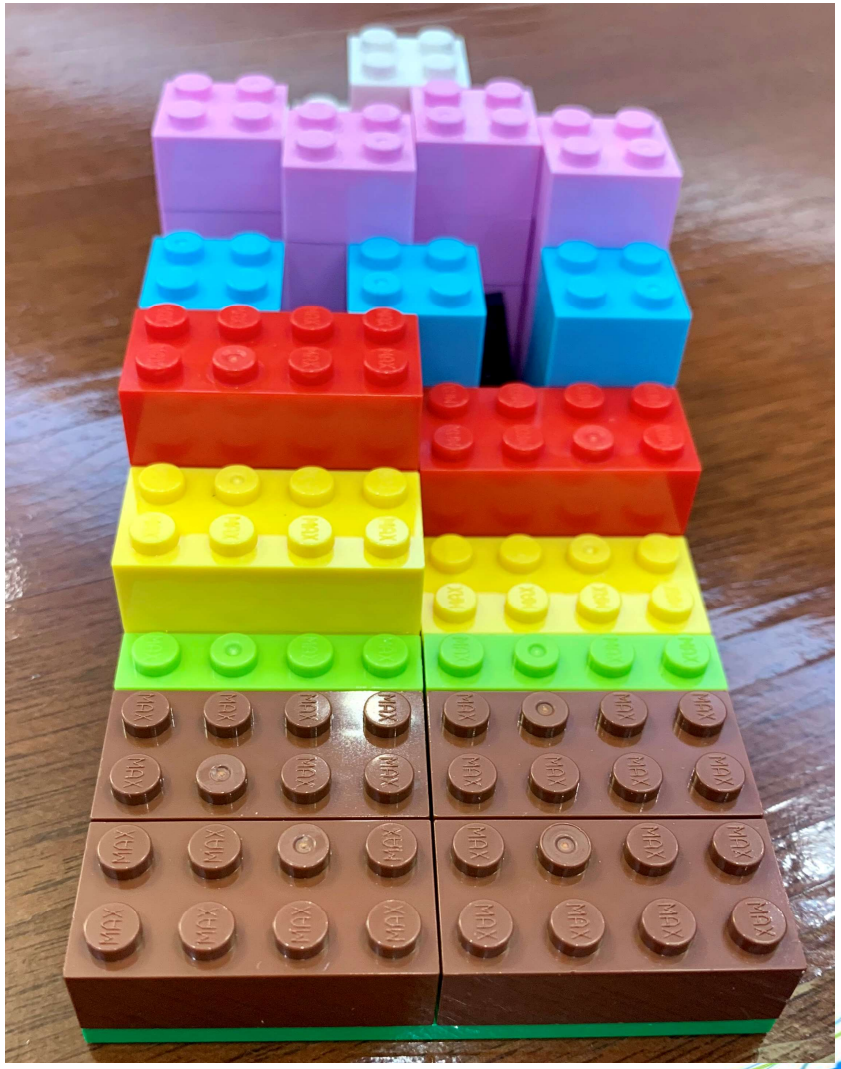
El Paso Electric

El Paso Electric Today



The Electric Company
El Paso Electric

The Electric Company
El Paso Electric



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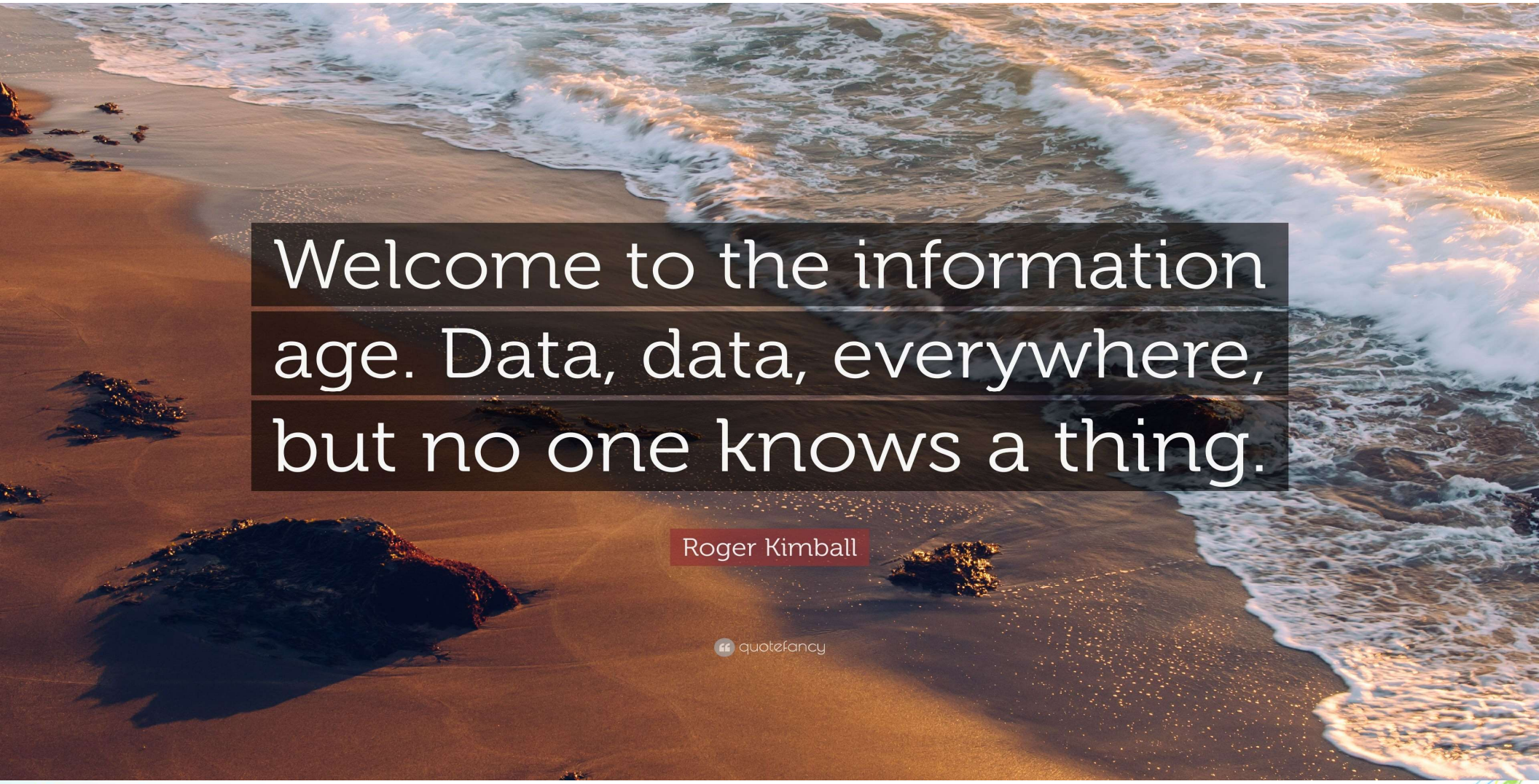
El Paso Electric

Enterprise Analytics

Call to Action

- **Use the Local Generation Dashboard**
  - Ask questions to the plants about data you find/see in GEAR
- **ELT Support**
  - Continue the advancement of Data Analytics throughout the EPE enterprise.



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El Paso Electric

Project Goals

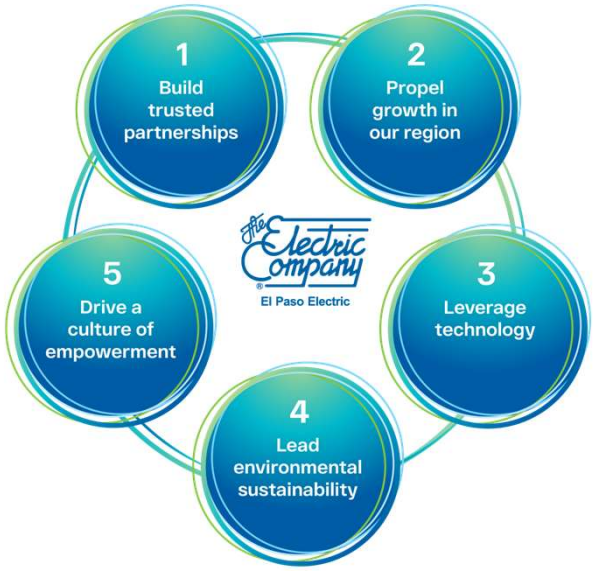
"In God we trust, all others bring data."

- Demonstrate what is possible with data
- Enhance Situational Awareness
- Provide Insight to Executives and Power Generation Management
- Support Data Driven Decision making
- Garner a win with Executive Leadership Team

Strategic Plan Alignment

- Build a Trusted Partnership with Customers and Community
- Drive a Work Culture of Empowerment, Accountability, and Inclusion
- Lead Environmental Sustainability

- Leverage Technology & Data to Drive Efficiency and Security



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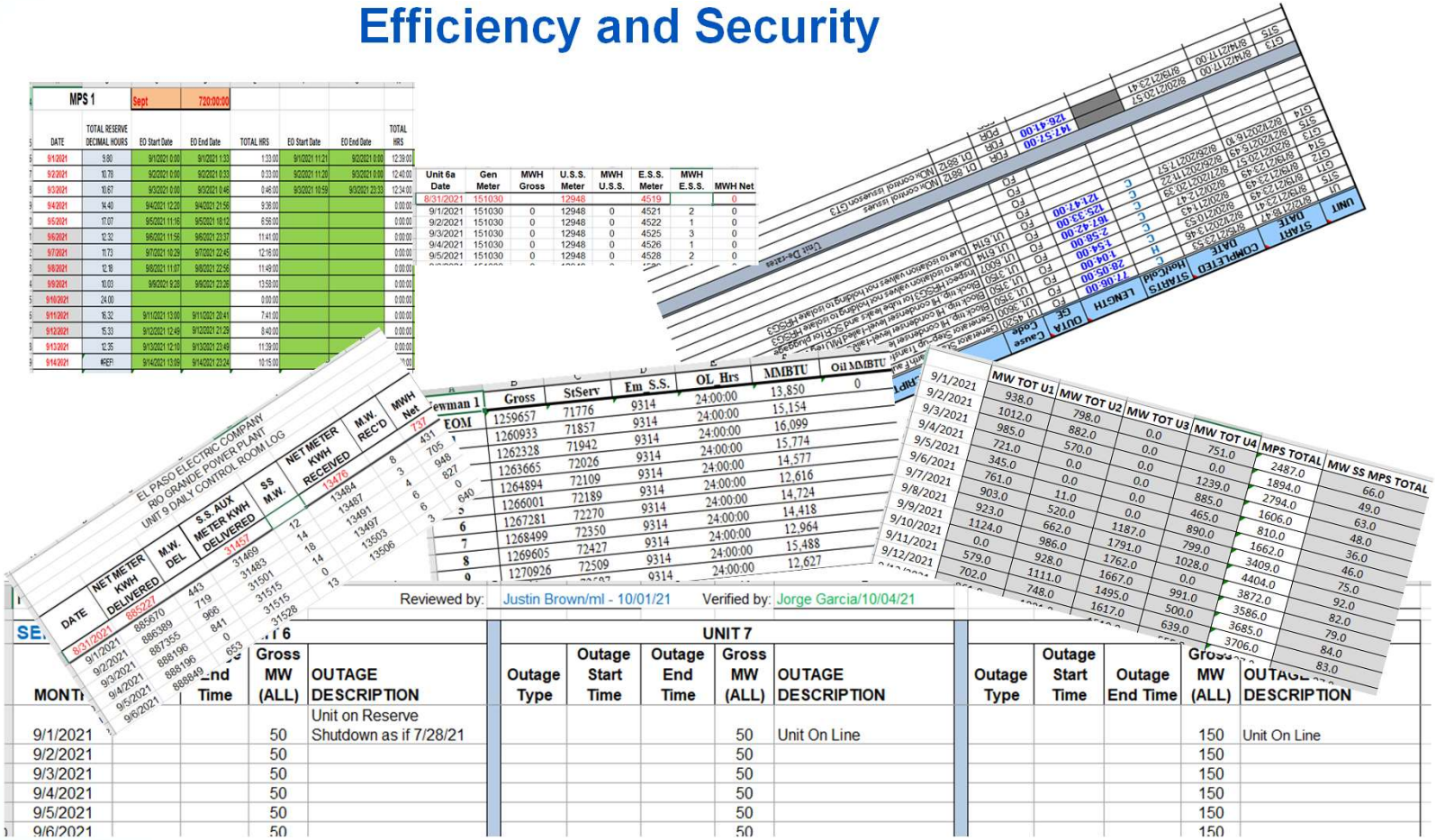
Leverage Technology & Data to Drive Efficiency and Security



MPS 1	Sept	720:00:00

DATE	TOTAL RESERVE DECIMAL HOURS	EO Start Date	EO End Date	TOTAL HRS	EO Start Date	EO End Date	TOTAL HRS
9/1/2021	9.80	9/1/2021 0:00	9/1/2021 1:33	1:33:00	9/1/2021 11:21	9/2/2021 0:00	12:39:00
9/2/2021	10.78	9/2/2021 0:00	9/2/2021 0:33	0:33:00	9/2/2021 11:20	9/2/2021 0:00	12:40:00
9/3/2021	10.67	9/3/2021 0:00	9/3/2021 0:46	0:46:00	9/3/2021 10:59	9/3/2021 23:33	12:34:00
9/4/2021	14.40	9/4/2021 12:23	9/4/2021 21:56	9:36:00			0:00:00
9/5/2021	17.07	9/5/2021 11:16	9/5/2021 18:12	6:56:00			0:00:00
9/6/2021	12.32	9/6/2021 11:56	9/6/2021 23:37	11:41:00			0:00:00
9/7/2021	11.73	9/7/2021 10:29	9/7/2021 22:45	12:16:00			0:00:00
9/8/2021	12.18	9/8/2021 11:07	9/8/2021 22:56	11:49:00			0:00:00
9/9/2021	10.03	9/9/2021 9:28	9/9/2021 23:28	13:59:00			0:00:00
9/10/2021	24.00			0:00:00			0:00:00
9/11/2021	16.32	9/11/2021 13:00	9/11/2021 20:41	7:41:00			0:00:00
9/12/2021	15.33	9/12/2021 12:49	9/12/2021 21:29	8:40:00			0:00:00
9/13/2021	12.35	9/13/2021 12:10	9/13/2021 23:49	11:39:00			0:00:00
9/14/2021	#REF!	9/14/2021 13:09	9/14/2021 23:24	10:15:00			0:00:00

Unit 6a Date	Gen Meter	MWH Gross	U.S.S. Meter	MWH U.S.S.	E.S.S. Meter	MWH E.S.S.	MWH Net
8/31/2021	151030		12948		4519		0
9/1/2021	151030	0	12948	0	4521	2	0
9/2/2021	151030	0	12948	0	4522	1	0
9/3/2021	151030	0	12948	0	4525	3	0
9/4/2021	151030	0	12948	0	4526	1	0
9/5/2021	151030	0	12948	0	4528	2	0

EL PASO ELECTRIC COMPANY
RIO GRANDE POWER PLANT
UNIT 9 DAILY CONTROL ROOM LOG

DATE	NET METER KWH DELIVERED	M.W. DEL.	S.S. AUX METER KWH DELIVERED	SS M.W.	NET METER KWH RECEIVED	M.W. REC'D	MWH Net
8/31/2021	685227		31457		13476		737
9/1/2021	885670	443	31469	12	13484	8	431
9/2/2021	886389	719	31483	14	13487	3	705
9/3/2021	887355	966	31501	18	13491	4	948
9/4/2021	888196	841	31515	14	13497	6	827
9/5/2021	888849	0	31515	0	13503	6	0
9/6/2021		653	31528	13	13506	3	640

Gross	StServ	Em S.S.	OL Hrs	MMBTU	Oil MMBTU
1259657	71776	9314	24:00:00	13,850	0
1260933	71857	9314	24:00:00	15,154	
1262328	71942	9314	24:00:00	16,099	
1263665	72026	9314	24:00:00	15,774	
1264894	72109	9314	24:00:00	14,577	
1266001	72189	9314	24:00:00	12,616	
1267281	72270	9314	24:00:00	14,724	
1268499	72350	9314	24:00:00	14,418	
1269605	72427	9314	24:00:00	12,964	
1270926	72509	9314	24:00:00	15,488	
				12,627	

	MW TOT U1	MW TOT U2	MW TOT U3	MW TOT U4	MPS TOTAL	MW SS MPS TOTAL
9/1/2021	938.0	798.0	0.0	751.0	2487.0	66.0
9/2/2021	1012.0	882.0	0.0	0.0	1894.0	49.0
9/3/2021	985.0	570.0	0.0	0.0	2794.0	63.0
9/4/2021	721.0	0.0	0.0	1239.0	1606.0	48.0
9/5/2021	345.0	0.0	0.0	0.0	810.0	36.0
9/6/2021	761.0	0.0	0.0	885.0	1662.0	46.0
9/7/2021	903.0	11.0	0.0	465.0	3409.0	75.0
9/8/2021	923.0	520.0	0.0	890.0	4404.0	92.0
9/9/2021	1124.0	662.0	1187.0	799.0	3872.0	82.0
9/10/2021	0.0	986.0	1791.0	1028.0	3586.0	79.0
9/11/2021	579.0	928.0	1762.0	0.0	3685.0	84.0
9/12/2021	702.0	1111.0	1667.0	991.0	3706.0	83.0
		748.0	1495.0	500.0		
			1617.0	639.0		

Reviewed by: Justin Brown/ml - 10/01/21 Verified by: Jorge Garcia/10/04/21

MONTH	UNIT 6 Outage Type	Outage Start Time	Outage End Time	Gross MW (ALL)	OUTAGE DESCRIPTION	UNIT 7 Outage Type	Outage Start Time	Outage End Time	Gross MW (ALL)	OUTAGE DESCRIPTION	Outage Type	Outage Start Time	Outage End Time	Gross MW (ALL)	OUTAGE DESCRIPTION
9/1/2021				50	Unit on Reserve Shutdown as if 7/28/21				50	Unit On Line				150	Unit On Line
9/2/2021				50					50					150	
9/3/2021				50					50					150	
9/4/2021				50					50					150	
9/5/2021				50					50					150	
9/6/2021				50					50					150	

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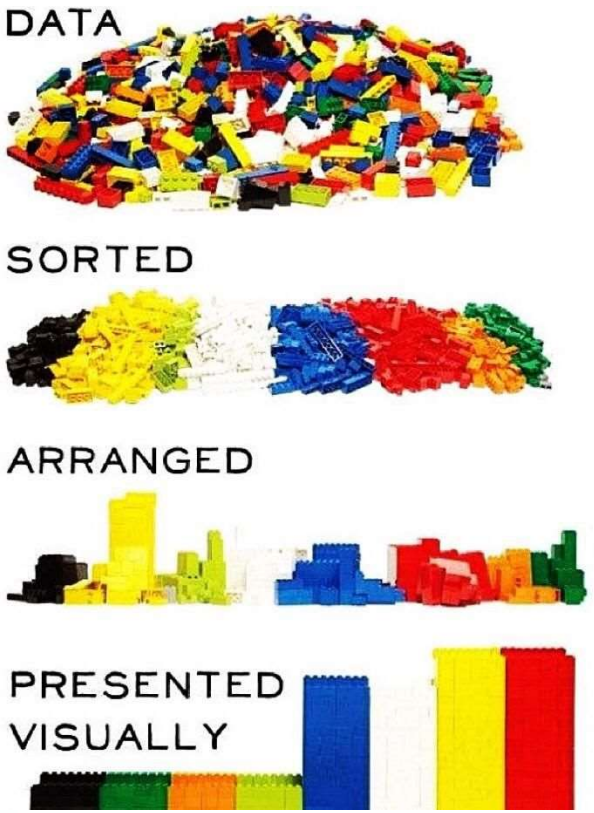
El Paso Electric

GEAR- Overview



Key Performance Indicators System

Welcome EPECAD\AARZAG1

Home ▾ EAF ▾ Uploads ▾ Failed Starts Safety ▾ PM Compliance/ PMCM T & D ▾ Reports ▾ Catalogs ▾ Admin ▾

EAF Dashboard

Filter

Plant: Event Type: Clear

Search:

Unit	Max Capacity	Derate Amount	Current Status	Online	Derate	Inactive	Outage	Reserve	Event Date	MW Unit is Good	Outage Type	Description	PSSAvr	Estimated Date of Return	AGC
Copper	69.00		Reserve												
Montana 1	93.00		Reserve												
Montana 2	93.00		Reserve												
Montana 3	93.00		Outage												
Montana 4	93.00		Online												
Newman 1	78.00	28.00	Derate												

EAF Target
REFRESHED: 9:19:50 AM
94.17%
92.00%
0.00% 100.00%

EFOR
REFRESHED: 9:19:50 AM
3.53%
0.00% 5.00%

Actuals vs Budget O&M 2021
REFRESHED: YESTERDAY, 7:25:01 ...
40.6M
43.7M
0M 60M

Actuals vs Budget Capital 20...
REFRESHED: YESTERDAY, 7:25:01 ...
47.3M
$44.8M
$0M 70M

Number of Safety Incidents
REFRESHED: 9:19:50 AM
5
0
Rio Newman

Available Capacity
REFRESHED: 9:17:43 AM
1666

Peak Demand
REFRESHED: 9:17:43 AM
1002

Major Outages in the Next 60 Days

Unit Name	Task Name	Start	Finish	Duration(Days)
Newman 1	SUMMER PREP	11/27/21	12/17/21	20
Newman 4GT1	Combustor Inspection	10/30/21	11/19/21	20
Newman 4GT2	Combustor Inspection	10/30/21	11/19/21	20
Newman 4ST	SUMMER PREP	10/30/21	11/19/21	20
Rio Grande 8	Major Inspection - HP/IP/LP Turbine & Valve Inspection	11/13/21	02/11/22	90
Total				**170**

Total Gallons
REFRESHED: 9:03:01 AM
1,449M

Number or Exceedance
REFRESHED: 9:19:50 AM
36

Number of Forced Outages
REFRESHED: 9:19:50 AM
144

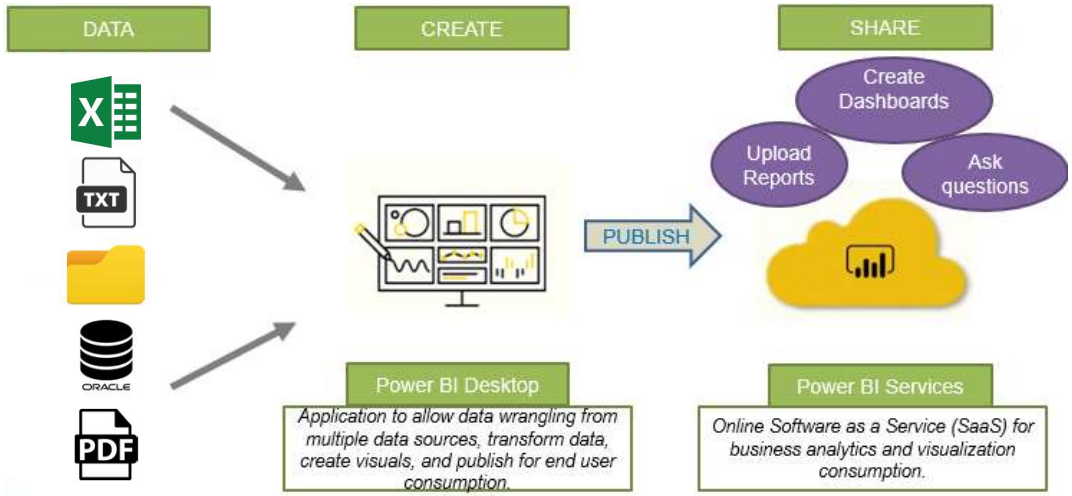
Number of Failed Starts
REFRESHED: 9:19:50 AM
6

Gas Comparison Variance
STILL PENDING VERIFICATION
41.81

The Electric Company
El Paso Electric

Strategic Plan Alignment

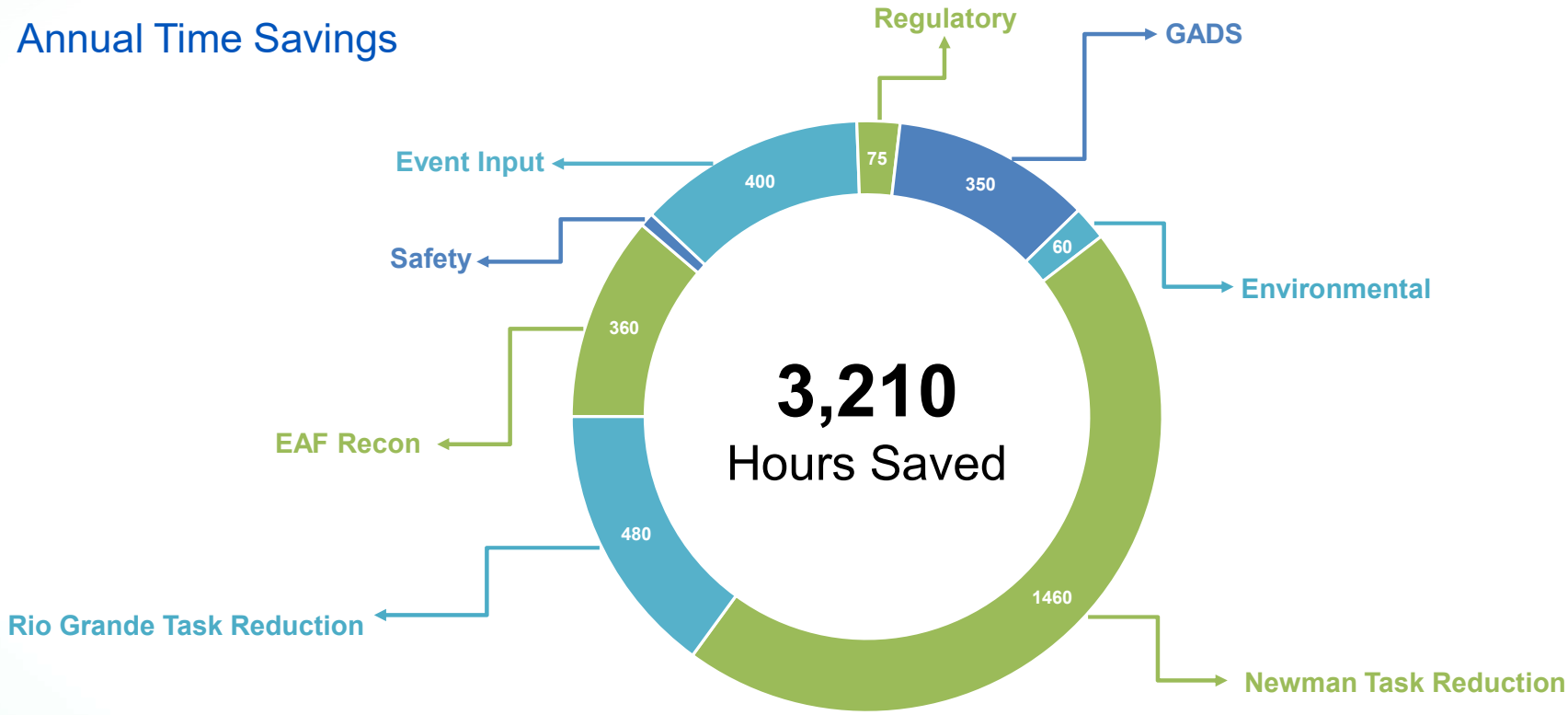
Leverage Technology & Data to Drive Efficiency and Security



El Paso Electric

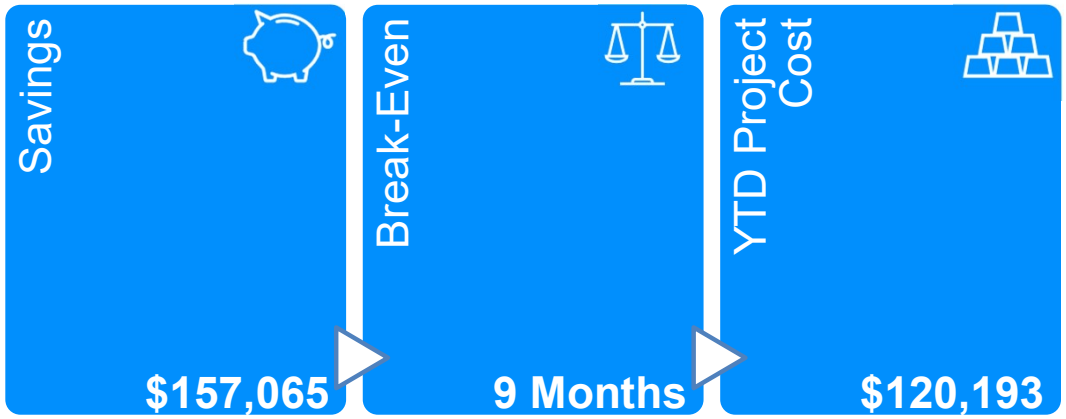
GEAR

Annual Time Savings



GEAR

Annual EPE Win!



GEAR

Dashboard Concept to Reality

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El Paso Electric

GEAR

Dashboard Concept to Reality

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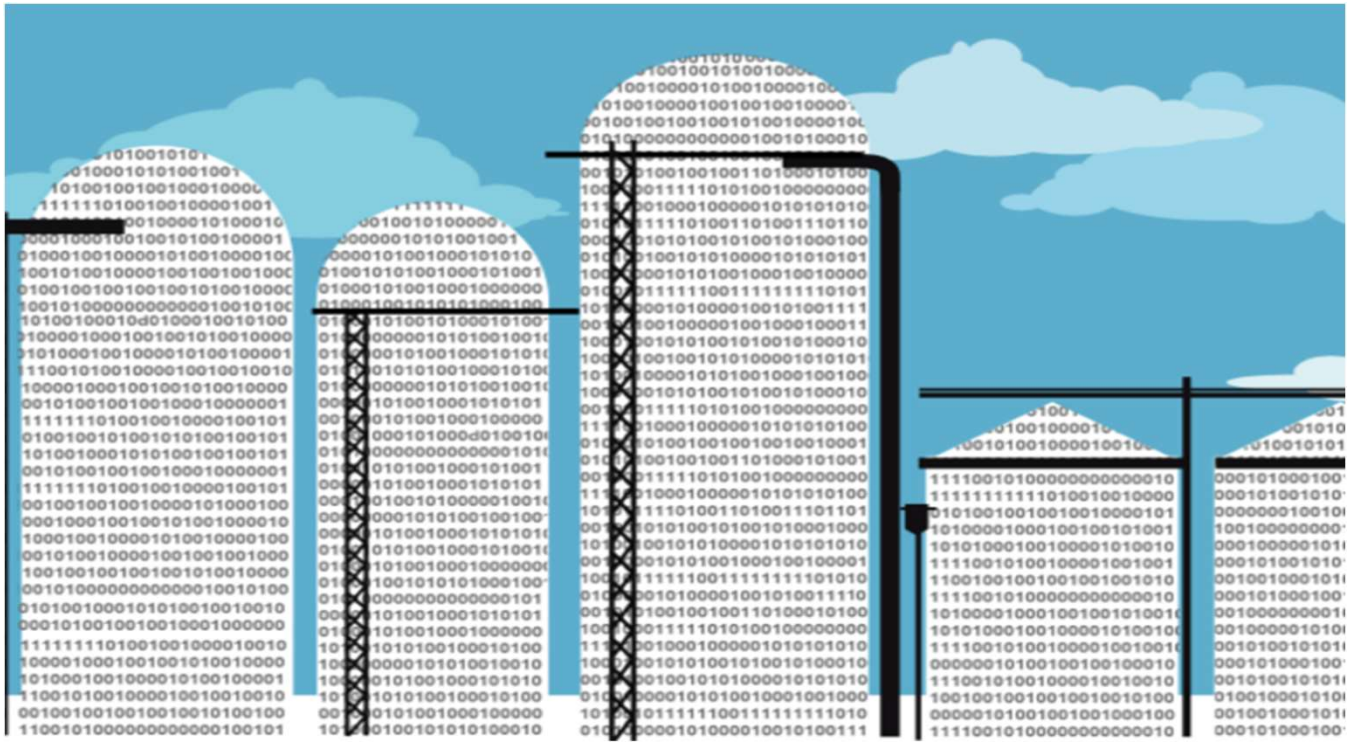
Leveraging the Data

The Electric Company
El Paso Electric

Leveraging Data and Eliminating Data Silos



The Electric Company
El Paso Electric

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Ask a question about your data

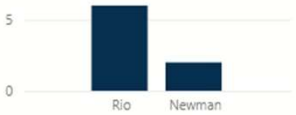
EAF Target
REFRESHED: 2:15:11 PM

EFOR
REFRESHED: 2:15:11 PM

Actuals vs Budget O&M 2021
REFRESHED: OCT 28, 2021, 7:25:01...

Actuals vs Budget Capital 20...
REFRESHED: OCT 28, 2021, 7:25:01...

Number of Safety Incidents
REFRESHED: 2:15:11 PM



Available Capacity
REFRESHED: 2:13:14 PM

1580

Peak Demand
REFRESHED: 2:13:14 PM

1051

Major Outages in the Next 60 Days

Unit Name	Task Name	Start	Finish	Duration(Days)
Newman 1	SUMMER PREP	11/27/21	12/17/21	20
Rio Grande 8	Major Inspection - HP/IP/LP Turbine & Valve Inspection	11/13/21	02/11/22	90
Total				**110**

Total Gallons
REFRESHED: 2:07:46 PM

1,449M

Number or Exceedance
REFRESHED: 2:15:11 PM

34

Number of Forced Outages
REFRESHED: 2:15:11 PM

144

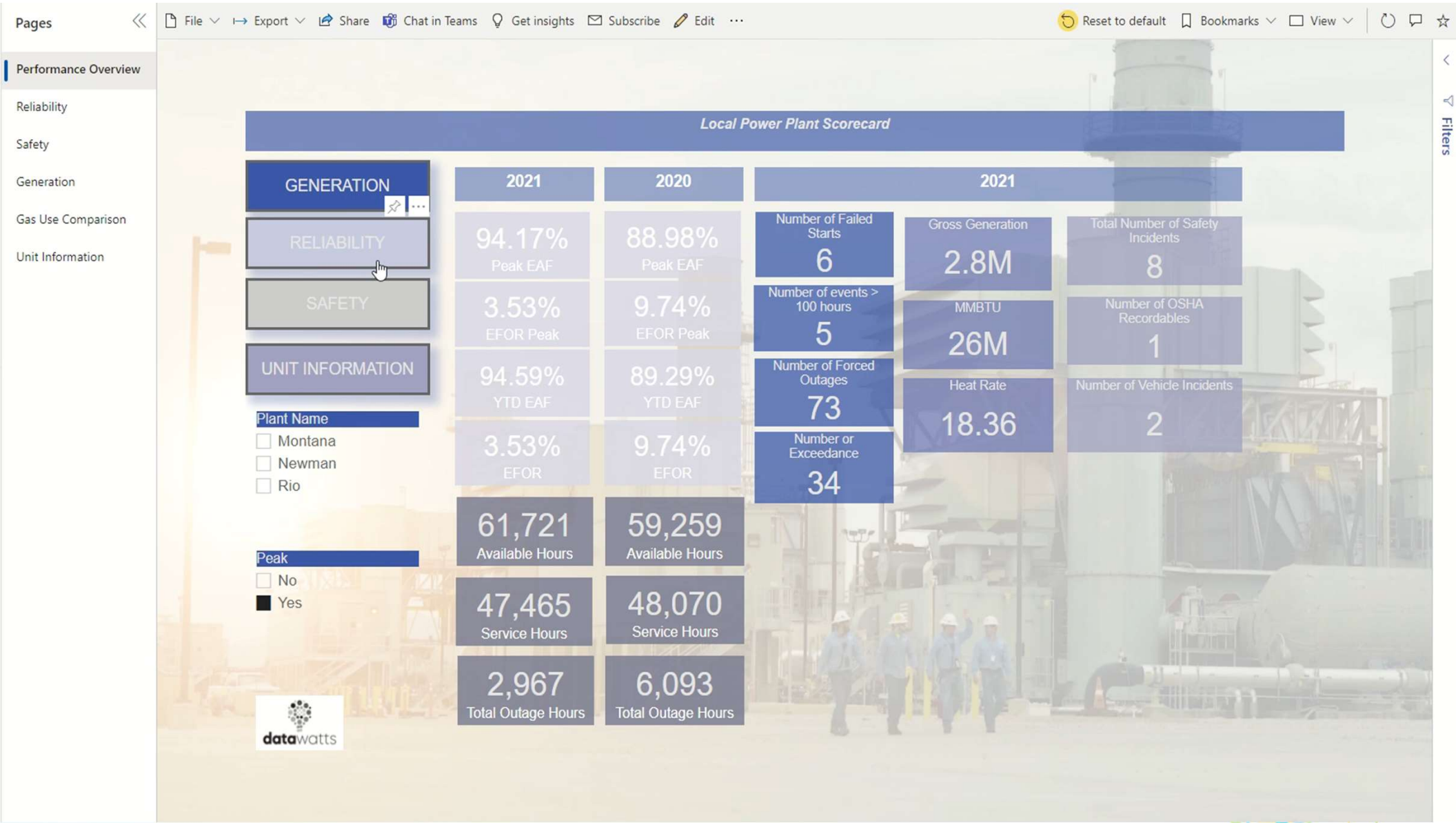
Number of Failed Starts
REFRESHED: 2:15:11 PM

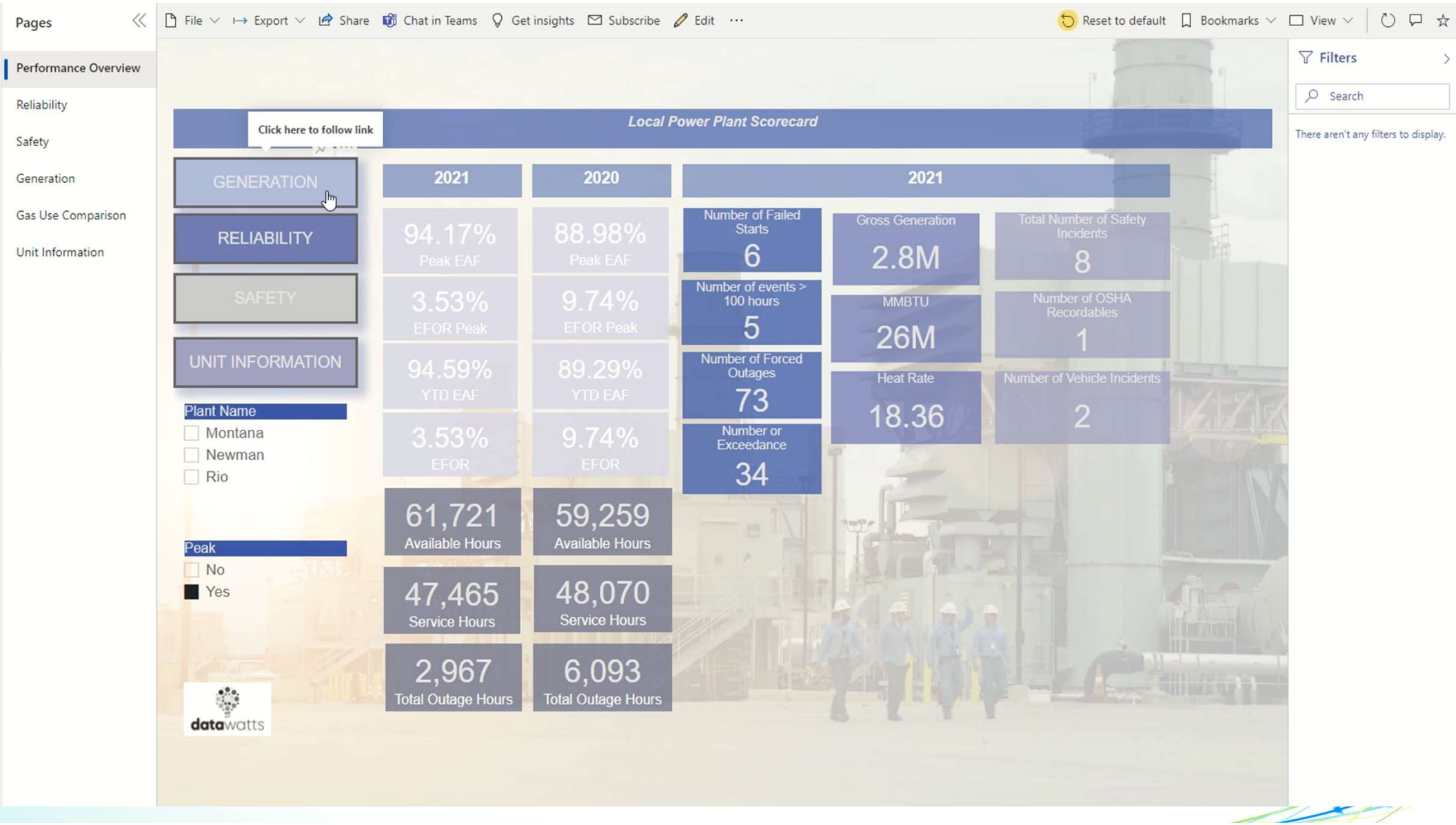
6

Gas Comparison Variance
STILL PENDING VERIFICATION

46.71

4-48a0-b754-40484262dc9b/reports/.../ReportSectioneb578928fe3e4269d0c1


Pages
Performance Overview
Reliability
Safety
Generation
Gas Use Comparison
Unit Information
File
Export
Share
Chat in Teams
Get insights
Subscribe
Edit
Reset to default
Bookmarks
View
Filters
Local Power Plant Scorecard
GENERATION
RELIABILITY
SAFETY
UNIT INFORMATION
Plant Name
Montana
Newman
Rio
Peak
No
Yes
2021
2020
94.17%
Peak EAF
88.98%
Peak EAF
3.53%
EFOR Peak
9.74%
EFOR Peak
94.59%
YTD EAF
89.29%
YTD EAF
3.53%
EFOR
9.74%
EFOR
61,721
Available Hours
59,259
Available Hours
47,465
Service Hours
48,070
Service Hours
2,967
Total Outage Hours
6,093
Total Outage Hours
2021
Number of Failed Starts
6
Number of events > 100 hours
5
Number of Forced Outages
73
Number or Exceedance
34
Gross Generation
2.8M
MMBTU
26M
Heat Rate
18.36
Total Number of Safety Incidents
8
Number of OSHA Recordables
1
Number of Vehicle Incidents
2
datawatts


Pages
Performance Overview
Reliability
Safety
Generation
Gas Use Comparison
Unit Information
File
Export
Share
Chat in Teams
Get insights
Subscribe
Edit
Reset to default
Bookmarks
View
Filters
Search
There aren't any filters to display.
Local Power Plant Scorecard
Click here to follow link
GENERATION
RELIABILITY
SAFETY
UNIT INFORMATION
Plant Name
Montana
Newman
Rio
Peak
No
Yes
2021
2020
94.17%
Peak EAF
88.98%
Peak EAF
3.53%
EFOR Peak
9.74%
EFOR Peak
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YTD EAF
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datawatts

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Actuals vs Budget O&M 2021
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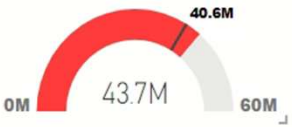

Actuals vs Budget Capital 20...
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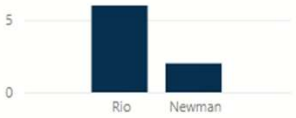
Number of Safety Incidents
REFRESHED: 2:15:11 PM



Available Capacity
REFRESHED: 2:13:14 PM

1580

Peak Demand
REFRESHED: 2:13:14 PM

1051

Major Outages in the Next 60 Days

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Total				**110**

Total Gallons
REFRESHED: 2:07:46 PM

1,449M

Number or Exceedance
REFRESHED: 2:15:11 PM

34

Number of Forced Outages
REFRESHED: 2:15:11 PM

144

Number of Failed Starts
REFRESHED: 2:15:11 PM

6

Gas Comparison Variance
STILL PENDING VERIFICATION

46.71

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EFOR
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Number of Safety Incidents
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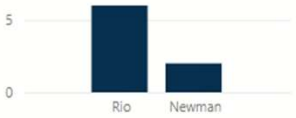

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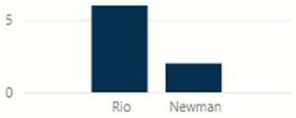
Number of Safety Incidents
REFRESHED: 2:15:11 PM



Available Capacity
REFRESHED: 2:13:14 PM

1580

Peak Demand
REFRESHED: 2:13:14 PM

1051

Major Outages in the Next 60 Days

Unit Name	Task Name	Start	Finish	Duration(Days)
Newman 1	SUMMER PREP	11/27/21	12/17/21	20
Rio Grande 8	Major Inspection - HP/IP/LP Turbine & Valve Inspection	11/13/21	02/11/22	90
Total				**110**

Total Gallons
REFRESHED: 2:07:46 PM

1,449M

Number or Exceedance
REFRESHED: 2:15:11 PM

34

Number of Forced Outages
REFRESHED: 2:15:11 PM

144

Number of Failed Starts
REFRESHED: 2:15:11 PM

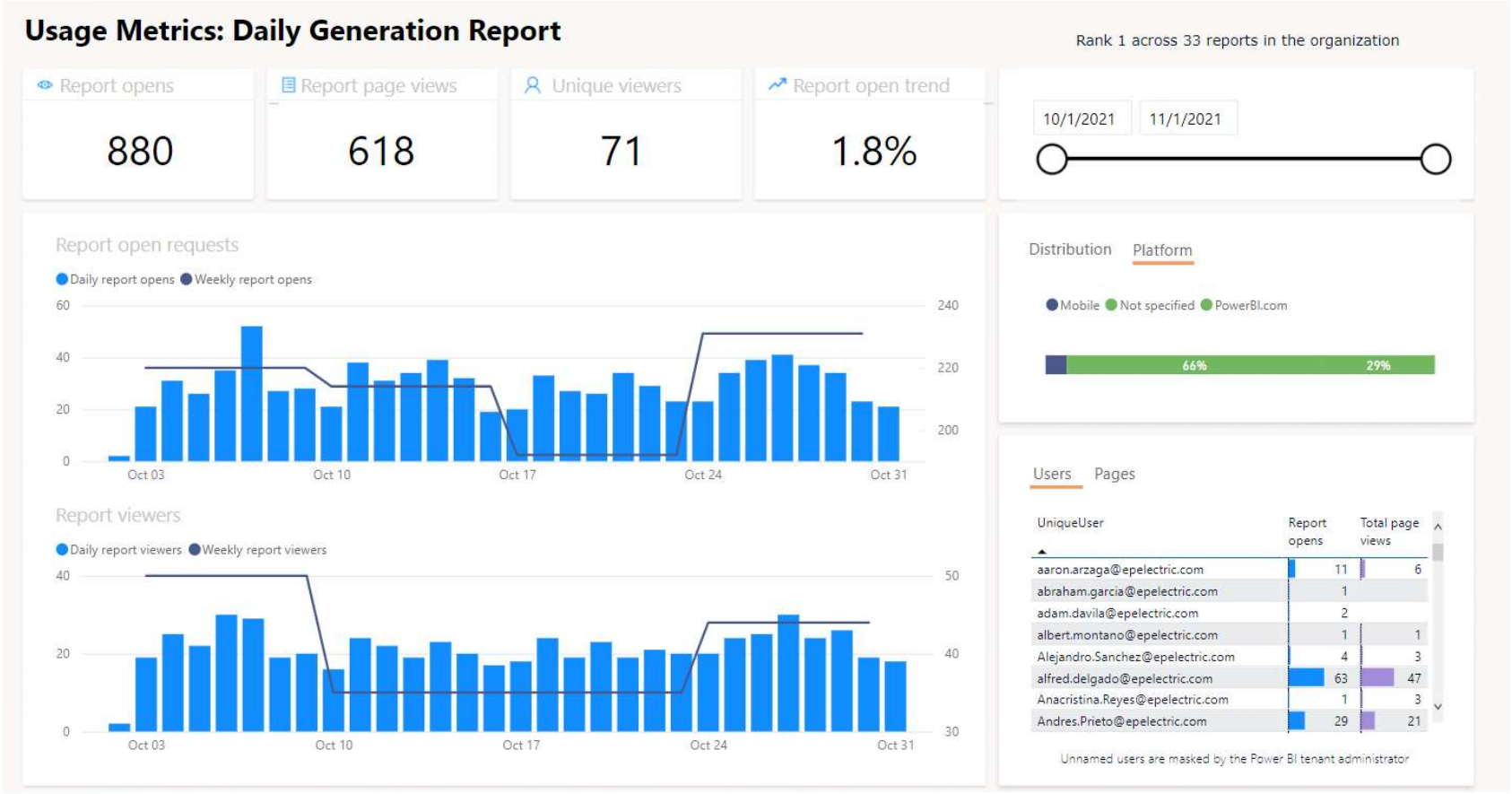
6

Gas Comparison Variance
STILL PENDING VERIFICATION

46.71

80-8a24-48a0-b754-40484262dc9b/reports/d8e5fc88-6a56-4b45-b0ee-d40bc1082b0e/ReportSection

Measuring Success



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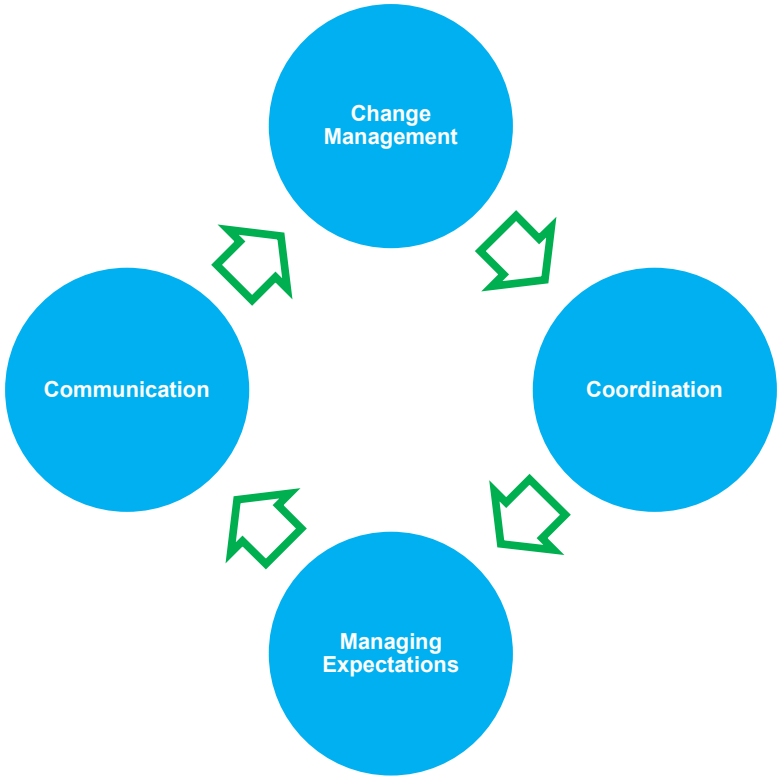
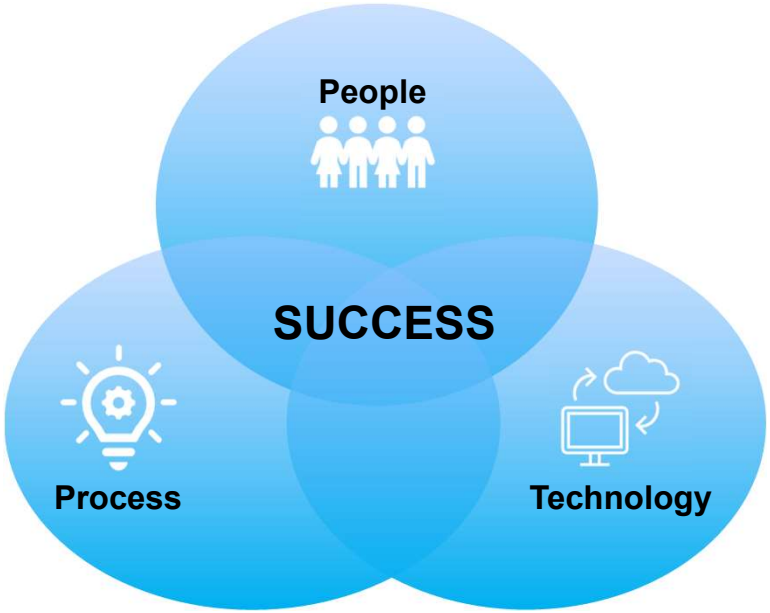
GEAR

Lessons Learned



Enterprise Analytics

Enterprise Analytics Accomplishments



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Project Successes

Enterprise Advanced Analytics Department

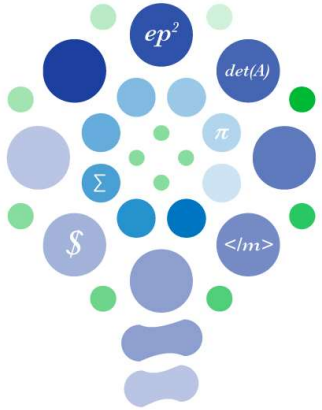
- **Got the win we wanted with our Executive Team!**
- **Support for additional personnel**
- **Creation of dashboard for Executive Leadership Team**
- **Exposure to departments throughout EPE**
  - Resulting in more demand
- **Dashboard presentation to Senior Leadership Team**
- **Dashboard presentation in company wide townhall**
- **It may take you years and tears, but you will get there!**

Enterprise Advanced Analytics

Where are we going next?

- **ELT Dashboard**
- **Supply Chain KPI Visualization**
- **E-Bill Adoption Propensity Model**
- **Forensic Audit Visualization**
- **Customer Survey Results Analysis**

Questions?



datawatts

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THANKS FOR ATTENDING

Please fill out an evaluation form and drop it in the collection basket located at the back of the room.

To learn about membership in the Utility Analytics Institute, please visit
www.utilityanalytics.com