

ADDING MOTOR MEASUREMENTS

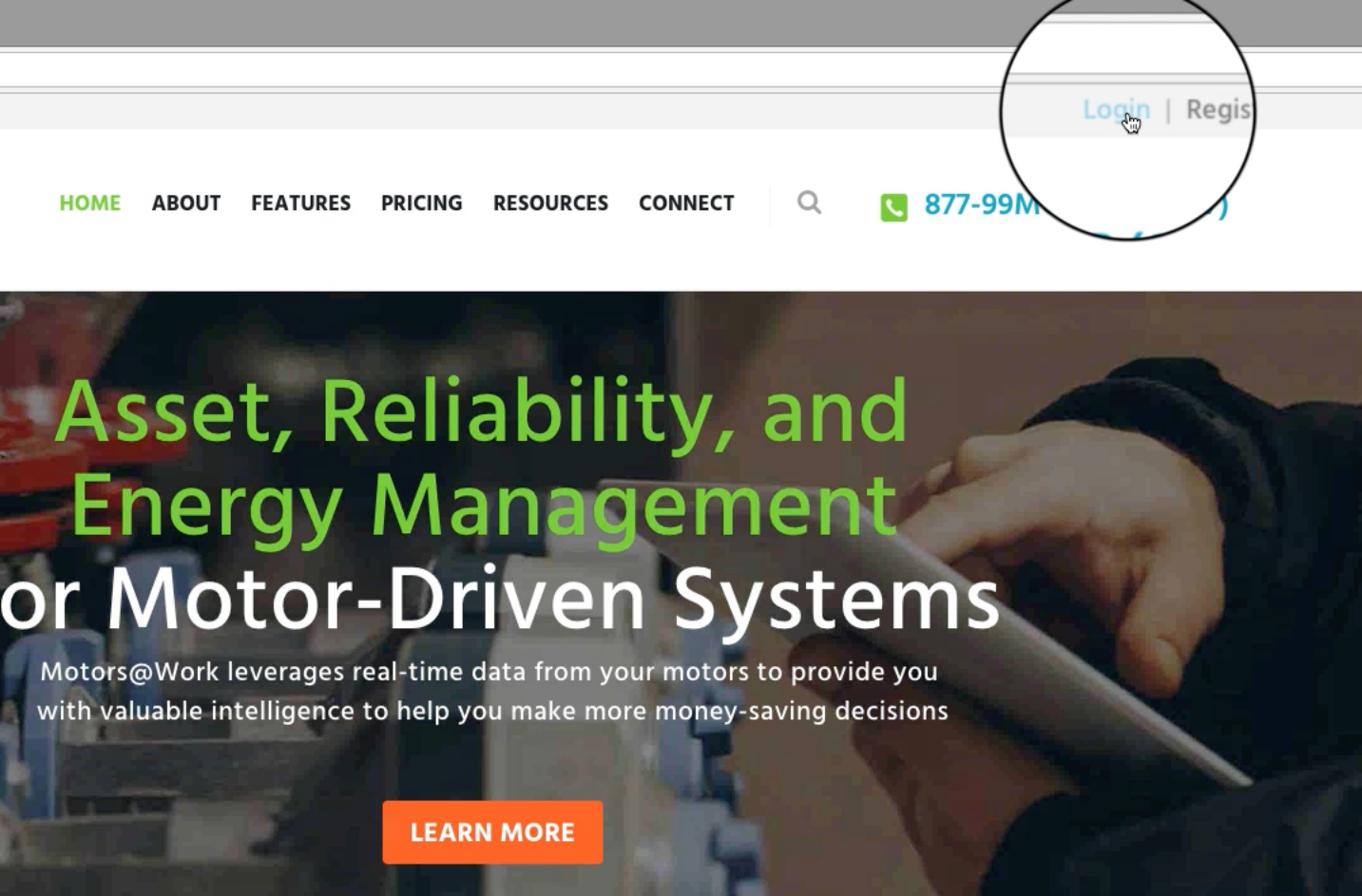
A QUICK-START GUIDE



MOTORSE@WORK



LOG INTO MOTORS@WORK



1. Open your browser & go to www.motorsatwork.com
2. Select [Login](#) in the upper right corner of the website

ASSET, RELIABILITY AND ENERGY MANAGEMENT FOR MOTOR-DRIVEN SYSTEMS

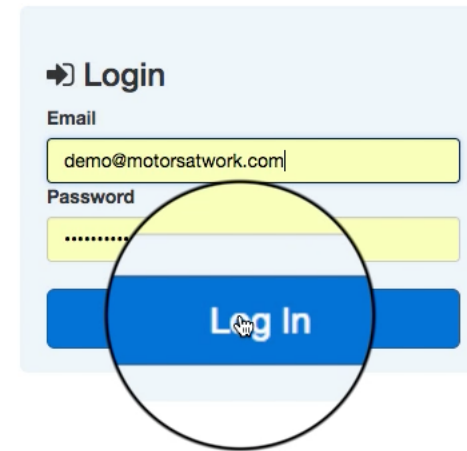


Reliability Management



Energy Management

3. Enter your **Email** and **Password** in the appropriate fields
4. Click the **Log In** button

A screenshot of a web application's login interface. It features a light blue background with the heading "Login" and a right-pointing arrow. Below the heading are two input fields: "Email" containing "demo@motorsatwork.com" and "Password" containing a masked password ".....". A blue "Log In" button is positioned below the fields, with a mouse cursor hovering over it. A black circle highlights the "Log In" button.



ADD MEASUREMENT (SHORTCUT)

Motors@Work - Efficiency for ...

Secure https://app.motorsatwork.com/dashboard

Search criteria

Mayberry Waterworks Overview

Asset Management Reliability Management Energy Management

Asset Performance

Energy Opportunities Total, all facilities

Asset	Score	Payback period	Cost to replace
CALVANDER PS PU	96.57 ✔	0.04 years	\$1,474.85
Yemassee Test M	N/A	0.2 years	\$3,082.30
BLOWER BLD #1 A	N/A	0.21 years	\$6,148.35
-NA-	N/A	0.21 years	\$3,082.30
#2	N/A	0.35 years	\$2,573.35
...		< 2 years	

Total, payback under 2.00 years **\$ 331439.55**

Reliability Opportunities Total, all facilities

Asset	Score	Life remaining	Cost to replace
Yemassee Test M	N/A	0 years	\$3,082.30
2 Water Pump Mo	2.6 ⚠	0 years	\$9,285.90
CALVANDER PS PU	2.6 ⚠	0 years	\$1,474.85
BLOWER BLD #1 A	2.6 ⚠	0 years	\$6,148.35
CALVANDER PS PU	2.6 ⚠	0 years	\$1,526.20
...			

Total, less than 5 years remaining life **\$21517.6**

Notifications

New, asset only

- ⚠ New measurement shows, BLOWER BLD #1 AIR COMPRESSOR MOTOR: Operating Temperature Exceeds Maximum Measured: 70.00. over the maximum.
[Review BLOWER BLD #1 AIR COMPRESSOR MOTOR Measurements](#)
- ⚠ New measurement shows, BLOWER BLD #1 AIR COMPRESSOR MOTOR: Ambient Temperature High Measured: 0.00. under the maximum.
[Review BLOWER BLD #1 AIR COMPRESSOR MOTOR Measurements](#)
- ⚠ New measurement shows, BLOWER BLD #1 AIR COMPRESSOR MOTOR: [HIGH] Motor Load exceeds service factor: 159.46
[Review BLOWER BLD #1 AIR COMPRESSOR MOTOR Measurements](#)

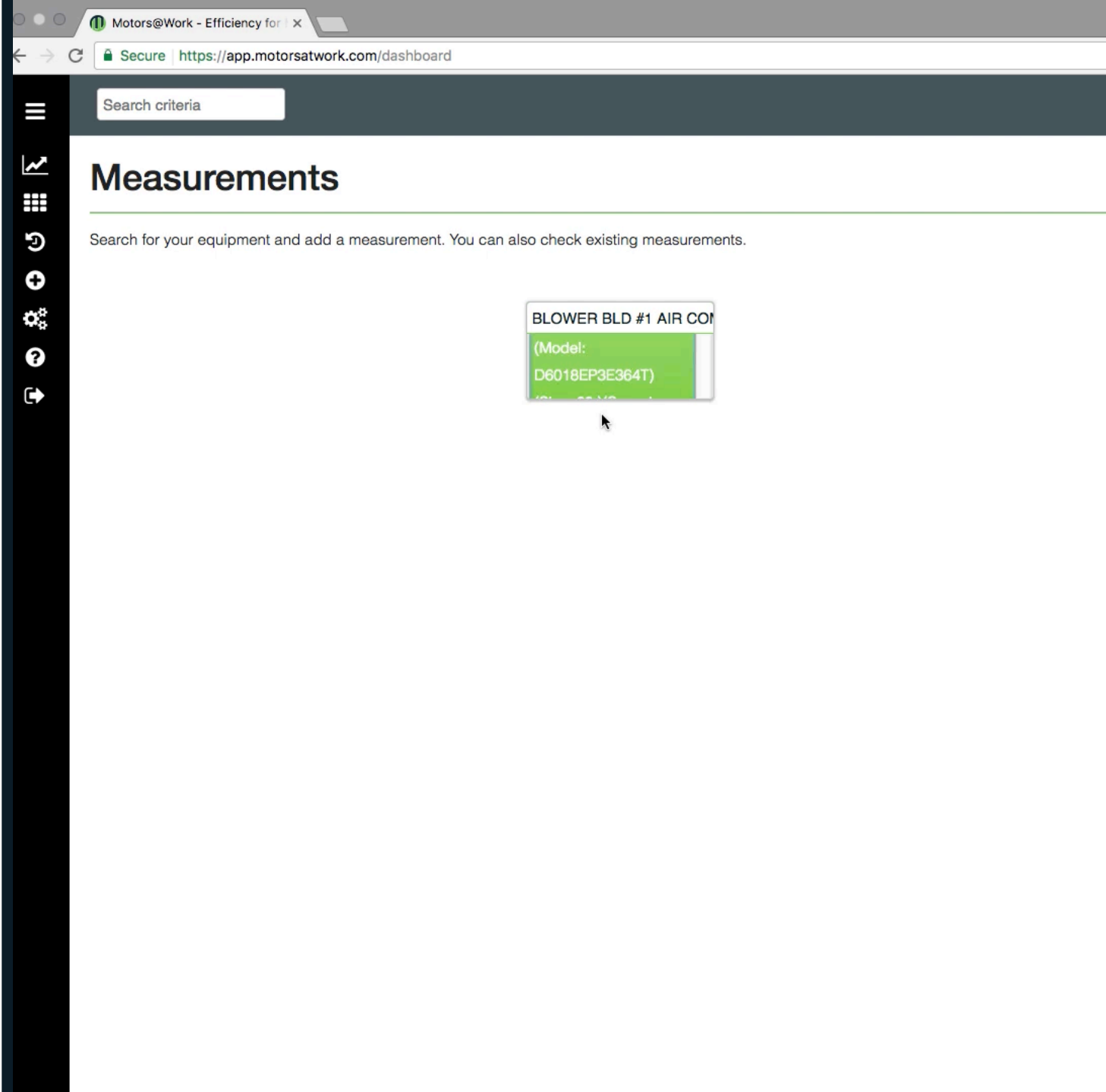
My KPIs

Total, all facilities

Metric	July 2017	Previous 12 months
Average age of assets	15.26 years	
Depreciation ratio	0 %	
Energy Performance	1523.72 kWh/mg	
Total utility bill	\$ 240439.62	
Equipment effectiveness	0 %	
Replacement needed	\$ 331439.55	

1. Select the **+** [Measurement icon] from the navigation bar

2. Search for the name of the motor you're measuring and select it from the list of suggested assets



Motors@Work - Efficiency for

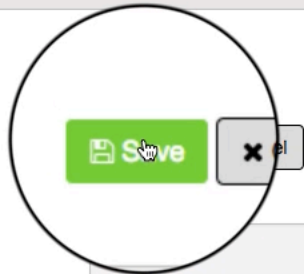
Secure | <https://app.motorsatwork.com/dashboard>

Search criteria

Measurements

Search for your equipment and add a measurement. You can also check existing measurements.

BLOWER BLD #1 AIR COM
(Model: D6018EP3E364T)



Motor Measurement

Measurement Date *

08/07/2017 08:59:33 AM

Measurement Type:

Submeter

Voltage AB:

461.00

Voltage BC:

472.00

Voltage CA:

453.00

Current A:

100.00

Current B:

118.00

Current C:

126.00

Power Factor (%):

Measured Speed (RPM):

Power Draw (kW):

THD (%):

Insulation Resistance (MegOhms):


Vibration (in/sec):

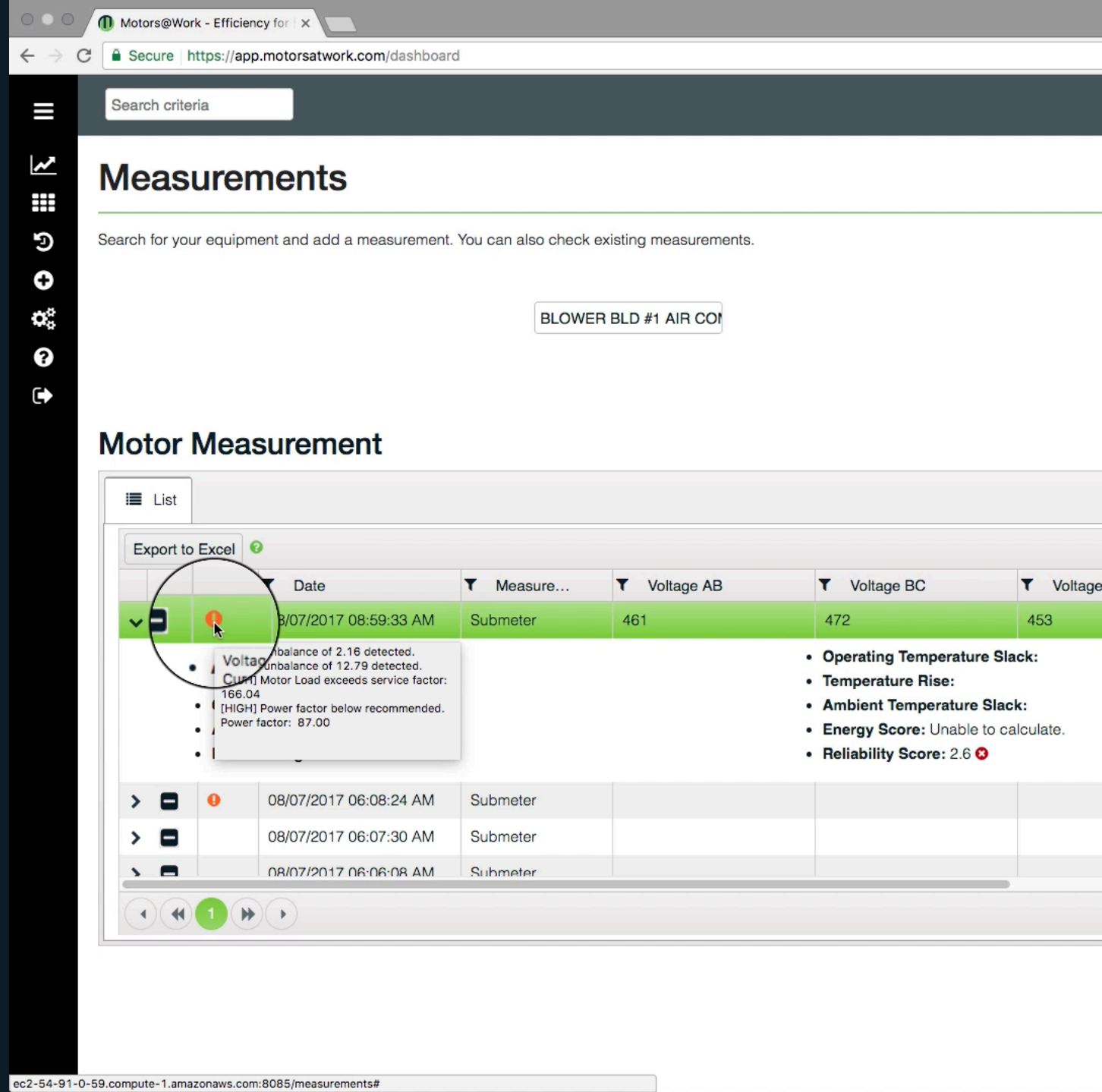
Surge/Motor Circuit (%):

Motor Temperature:

Ambient Temperature:

3. Enter your measurements; to calculate motor load and efficiency, enter, at a minimum, **Power draw (kW)** or three phases' **Current & Voltage**
4. Click **Update** to create the motor measurement record

5. Click the > [caret] to expand your measurement and see Motors@Work's analysis
6. If present, hover over the  [Warning icon] to read your notifications



Search criteria

Measurements


Search for your equipment and add a measurement. You can also check existing measurements.

BLOWER BLD #1 AIR COM

Motor Measurement


List

Export to Excel

	Date	Measure...	Voltage AB	Voltage BC	Voltage
	08/07/2017 08:59:33 AM	Submeter	461	472	453
>	08/07/2017 06:08:24 AM	Submeter			
>	08/07/2017 06:07:30 AM	Submeter			
>	08/07/2017 06:06:08 AM	Submeter			

Voltage Unbalance

- Voltage unbalance of 2.16 detected.
- Current unbalance of 12.79 detected.
- [HIGH] Motor Load exceeds service factor: 166.04
- [HIGH] Power factor below recommended. Power factor: 87.00

- **Operating Temperature Slack:**
- **Temperature Rise:**
- **Ambient Temperature Slack:**
- **Energy Score:** Unable to calculate.
- **Reliability Score:** 2.6 



ADD MEASUREMENT TO MOTOR RECORD

Motors@Work - Efficiency for X

ec2-54- https://app.motorsatwork.com/dashboard

Search criteria

Yberry Waterworks Overview

Asset Management Reliability Management Energy Management

Asset Performance

Energy Opportunities Total, all facilities

Asset	Score	Payback period	Cost to replace
CALVANDER PS PU	96.57 ✔	0.04 years	\$1,474.85
Yemassee Test M	N/A	0.2 years	\$3,082.30
-NA-	N/A	0.21 years	\$3,082.30
#2	N/A	0.35 years	\$2,573.35
MOTOR - 10947 -	N/A	0.83 years	\$2,115.75
...		< 2 years	

Total, payback under 2.00 years **\$ 328544.45**

Reliability Opportunities Total, all facilities

Asset	Score	Life remaining	Cost to replace
Yemassee Test M	N/A	0 years	\$3,082.30
2 Water Pump Mo	2.6 ✘	0 years	\$9,285.90
CALVANDER PS PU	2.6 ✘	0 years	\$1,474.85
CALVANDER PS PU	2.6 ✘	0 years	\$1,526.20
...			

Total, less than 5 years remaining life **\$15369.25**

Notifications

New, asset only

- New measurement shows, #2: [HIGH] Motor Load exceeds service factor: 652.50
[Review #2 Measurements](#)
- New measurement shows, Finished Water MOTOR - 10116 - RSL PUMP MOTOR #1, 50-RSLM-1: [HIGH] Motor Load exceeds service factor: 135.21
[Review Finished Water MOTOR - 10116 - RSL PUMP MOTOR #1, 50-RSLM-1 Measurements](#)
- New measurement shows, Finished Water MOTOR - 10116 - RSL PUMP MOTOR #1, 50-RSLM-1: Motor operating at sub-optimal motor load. Measured: 15.91

My KPIs

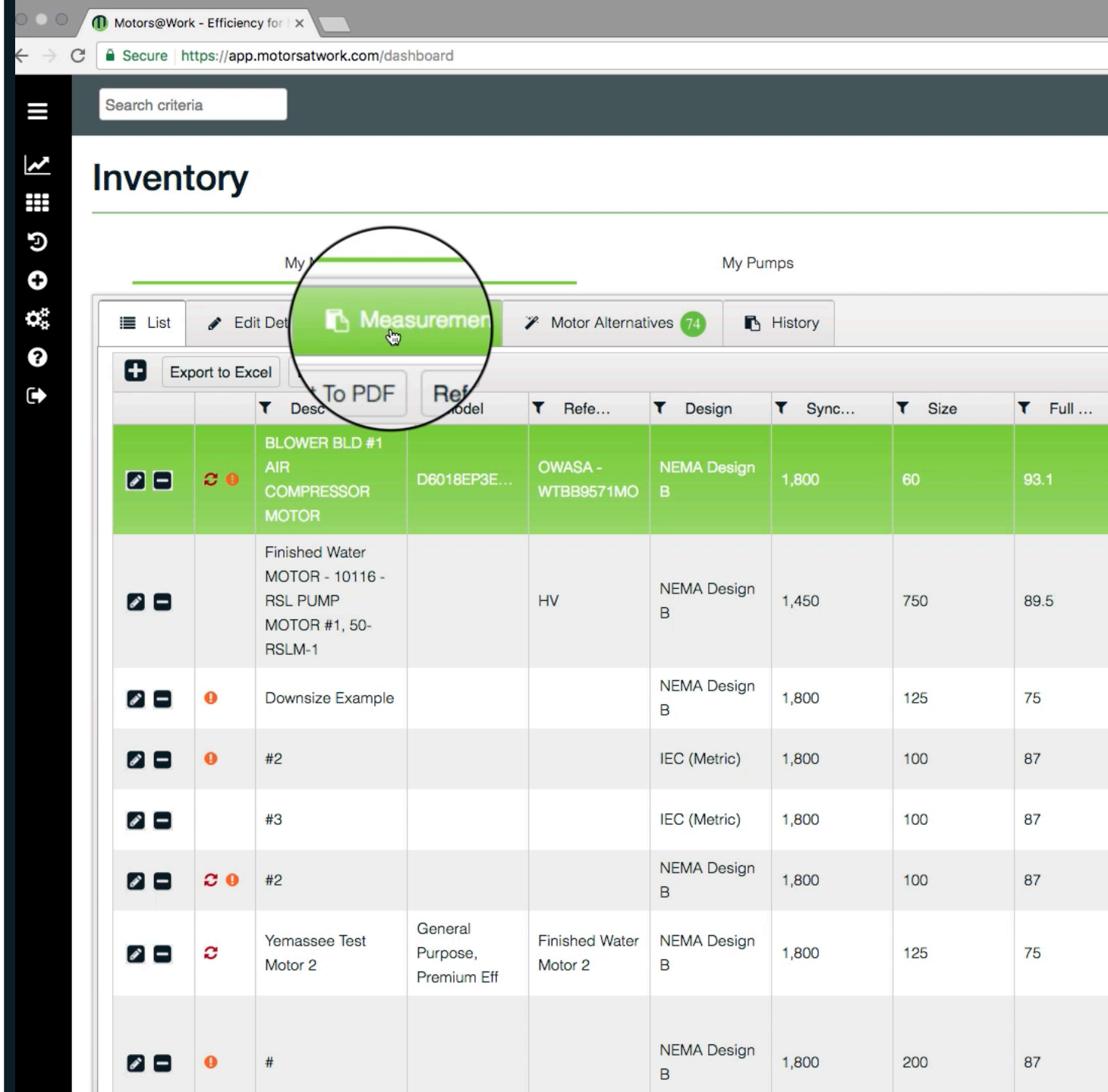
Total, all facilities

Metric	July 2017	Previous 12 months
Average age of assets	15.26 years	
Depreciation ratio	0 %	
Energy Performance	1523.72 kWh/mg	
Total utility bill	\$ 240439.62	
Equipment effectiveness	0 %	
Replacement needed	\$ 328544.45	

1. Click the [Inventory icon] in the left navigation bar
2. By default, you'll land on the **My Motors** screen

3. Select the name of the motor you're measuring

4. Click on the **Measurements** tab



The screenshot shows the Motors@Work web application dashboard. The browser address bar displays "Secure https://app.motorsatwork.com/dashboard". The page title is "Inventory". A search criteria input field is visible at the top. Below the search bar, there are tabs for "List", "Edit Details", "Measurements", "Motor Alternatives (74)", and "History". The "Measurements" tab is highlighted with a red circle. Below the tabs, there are buttons for "Export to Excel", "To PDF", and "Ref". The main content is a table with columns: Desc, Model, Refe..., Design, Sync..., Size, and Full ... The table contains several rows of motor data.

	Desc	Model	Refe...	Design	Sync...	Size	Full ...
	BLOWER BLD #1 AIR COMPRESSOR MOTOR	D6018EP3E...	OWASA - WTBB9571MO	NEMA Design B	1,800	60	93.1
	Finished Water MOTOR - 10116 - RSL PUMP MOTOR #1, 50-RSLM-1		HV	NEMA Design B	1,450	750	89.5
	Downsize Example			NEMA Design B	1,800	125	75
	#2			IEC (Metric)	1,800	100	87
	#3			IEC (Metric)	1,800	100	87
	#2			NEMA Design B	1,800	100	87
	Yemassee Test Motor 2	General Purpose, Premium Eff	Finished Water Motor 2	NEMA Design B	1,800	125	75
	#			NEMA Design B	1,800	200	87

Motors@Work - Efficiency for x


Secure https://app.motorsatwork.com/dashboard







Search criteria

Inventory

My Motors ? My Pumps

Edit Details Measurements ? Motor Alternatives 74 History

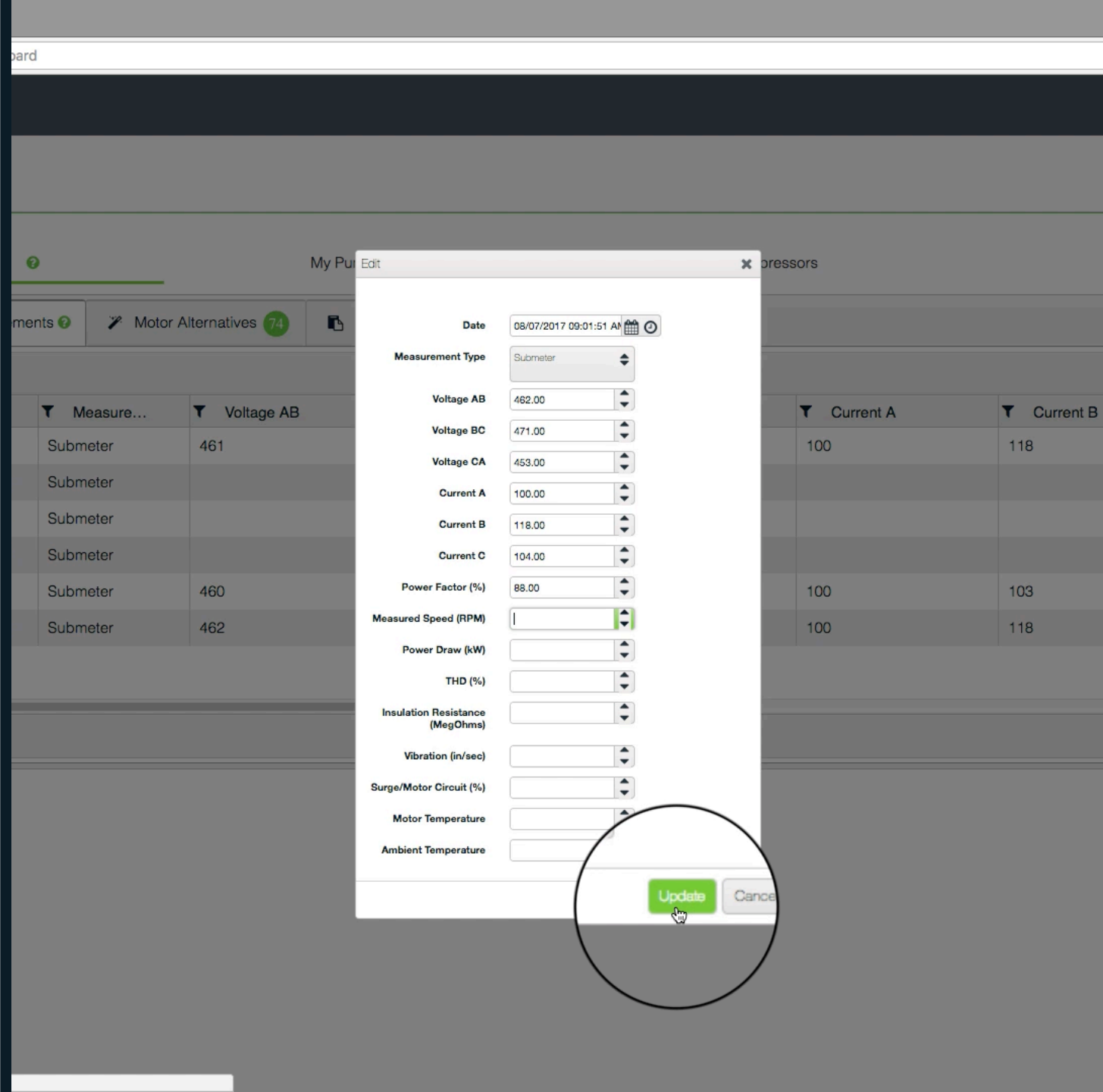
 Export Excel

	Date	Measure...	Voltage AB	Voltage BC	Voltage
	08/07/2017 08:59:33 AM	Submeter	461	472	453
	08/07/2017 06:08:24 AM	Submeter			
	08/07/2017 06:07:30 AM	Submeter			
	08/07/2017 06:06:08 AM	Submeter			
 	08/06/2017 02:05:09 PM	Submeter	460	480	500

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- To add a new measurement, click the  [Add icon]

6. Enter your measurements; to calculate motor load and efficiency, enter, at a minimum, **Power draw (kW)** or three phases' **Current & Voltage**
7. Click **Update** to create the motor measurement record



Motors@Work - Efficiency for ...

Secure https://app.motorsatwork.com/dashboard

Search criteria

Inventory

My Motors ? My Pumps

List Edit Details Measurements ? Motor Alternatives 79 History

			Measure...	Voltage AB	Voltage BC	Voltage
		08/07/2017 09:01:51 AM	Submeter	462	471	453
<p>of 1.95 detected.</p> <p>Voltage un... and exceeds service factor:</p> <p>[HIGH] M... factor below recommended.</p> <p>157.2 for: 88.00</p> <ul style="list-style-type: none"> Rated Voltage Deviation: 0.43 			<ul style="list-style-type: none"> Operating Temperature Slack: Temperature Rise: Ambient Temperature Slack: Energy Score: Unable to calculate. Reliability Score: 2.6 			
>		08/07/2017 08:59:33 AM	Submeter	461	472	453
>		08/07/2017 06:08:24 AM	Submeter			
>		08/07/2017 06:07:20 AM	Submeter			

1

- Click the > [caret] to expand your measurement and see Motors@Work's analysis
- If present, hover over the [Warning icon] to read your notifications



Get an unexpected result?

Need more help?

Motors@Work's online [Help Library](#) contains the latest tips & tricks — just click the  [[Help icon](#)].