



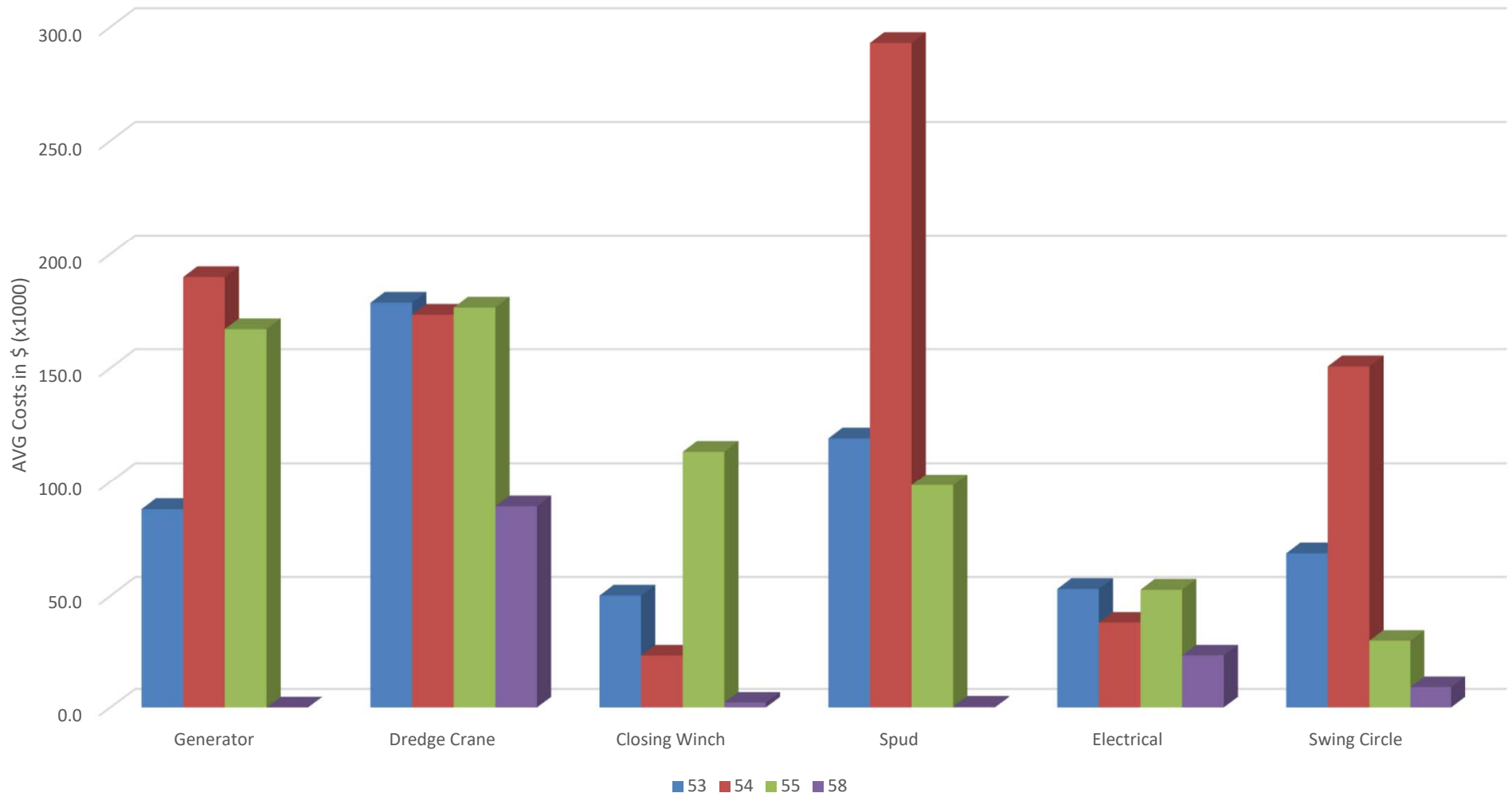
# MECHANICAL DIVISION

MECHANICAL DIVISION MAINTENANCE ITEMS			
Viewpoint Coding	Description	NS System Group	ELECTRONIC DELAY LOG (EDL) - CATEGORY: Subcategories
GENERATOR/MG SET (MULTI SYSTEM)	Motor, engine, MG set (multi system), gear, shaft, bearing, generator, drives, piping, exhaust	GENERATORS/MG SET (MULTI SYSTEM)	<b>MAIN / AUX GENERATORS:</b> Auxiliary Generator, Main Generator, Main Generator Engine
BOOM: CLAMSHELL	Motor, engine, gear, shaft, bearing, winch, brake, drum, fairlead, sheave, boom, heel pin, gantry, boom guard	DREDGE CRANE	<b>CRANE BOOM:</b> Boom, Gantry Sheaves, Gantry Structure, Winch, Wires
SWING CIRCLE: (Bucket)	Winch, motor, gear, shaft, bearing, brake, drives, drum, fairlead, swing sheave, swing circle, bull gear, pinions	CRANE BUCKET	<b>CRANE SWING:</b> Drive, Motor, Gearbox, Rollers
SPUD: WINCH / FRAME / XMAS TREE	Winch, motor, gear, shaft, bearing, brakes, drives, fairlead, sheave, spud frame, gate, wear plate, spud, Xmas tree, carriage, carriage rails, walking machinery, idler connection, cylinder, collar	SPUDS	<b>SPUD SYSTEM:</b> Sheaves, Winch, Structure, Wires, Walking Mechanism
WINCH: MAIN HOIST / CLOSE & HOLD	Motor, engine, gear, shaft, bearing, brake, drive, drum, fairlead, sheave, "A" frame (for anchor barge)	DREDGE CRANE	<b>DECK WINCH:</b> Fairleads, Winch <b>MAIN HOIST:</b> Closer, Closer Wire, Holder, Holder Wire
ELECTRICAL / AUTOMATION	Switchgear, MCC, panels, ups unit, wiring, lighting fixtures, transformer, alarm system, automation, controls, closed circuit TV	ELECTRICAL	<b>ELECTRICAL / ELECTRONICS:</b> MCC, Switch Gear, PLC, Transformers



# MECHANICAL DIVISION

AVG Annual Maint Costs (Jan '15 - Mar '20)

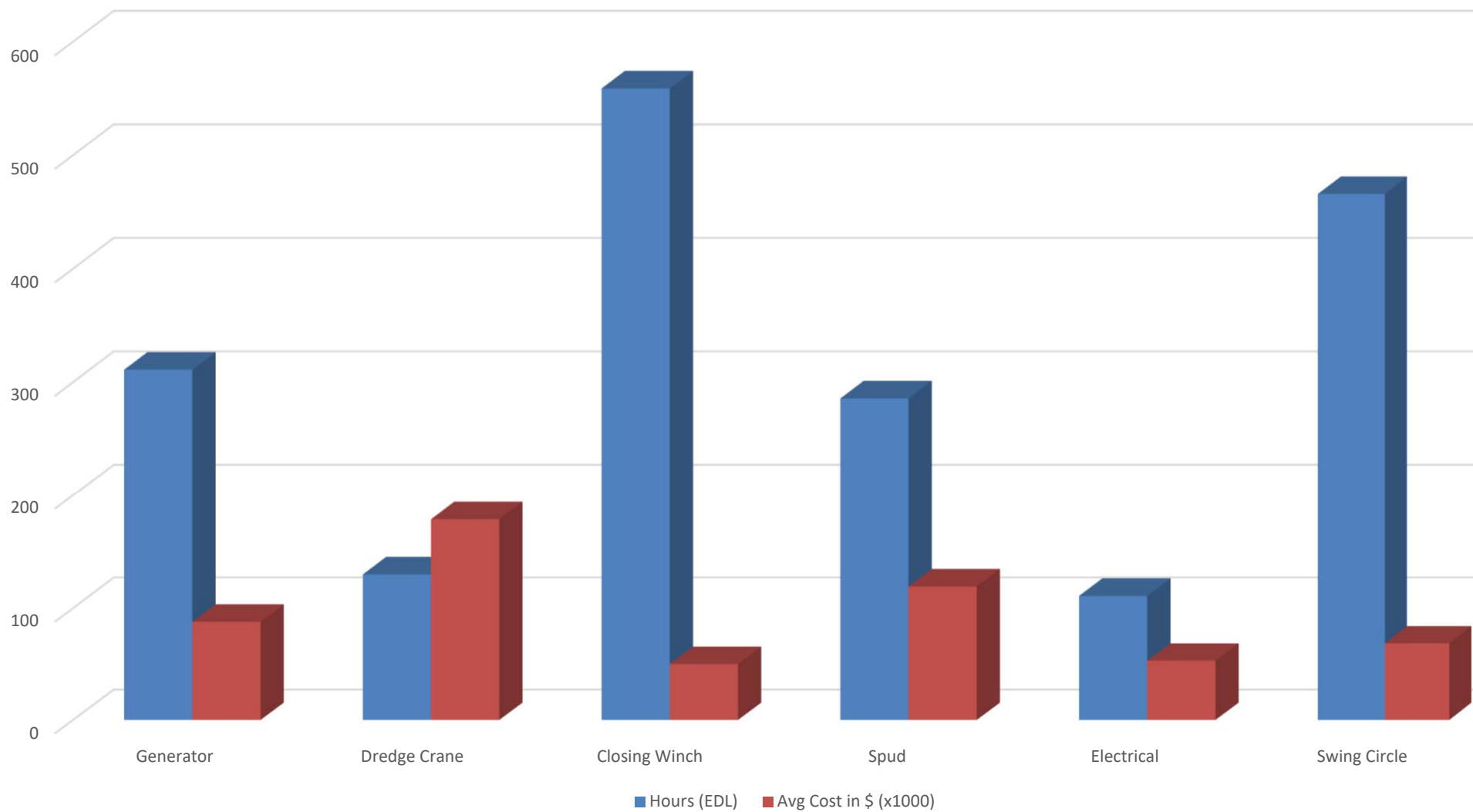


	Generator	Dredge Crane	Closing Winch	Spud	Electrical	Swing Circle
53	87.9	178.6	50.1	119.2	53.0	68.6
54	189.9	173.4	23.3	293.0	38.1	150.7
55	167.1	176.5	113.3	98.5	52.7	30.0
58	0.0	89.1	2.2	0.4	23.4	9.2



# GL-53

Total Delay Hours (Oct '18 - Sep '20)  
VS  
AVG Annual Maint Costs (Jan '15 - Mar '20)

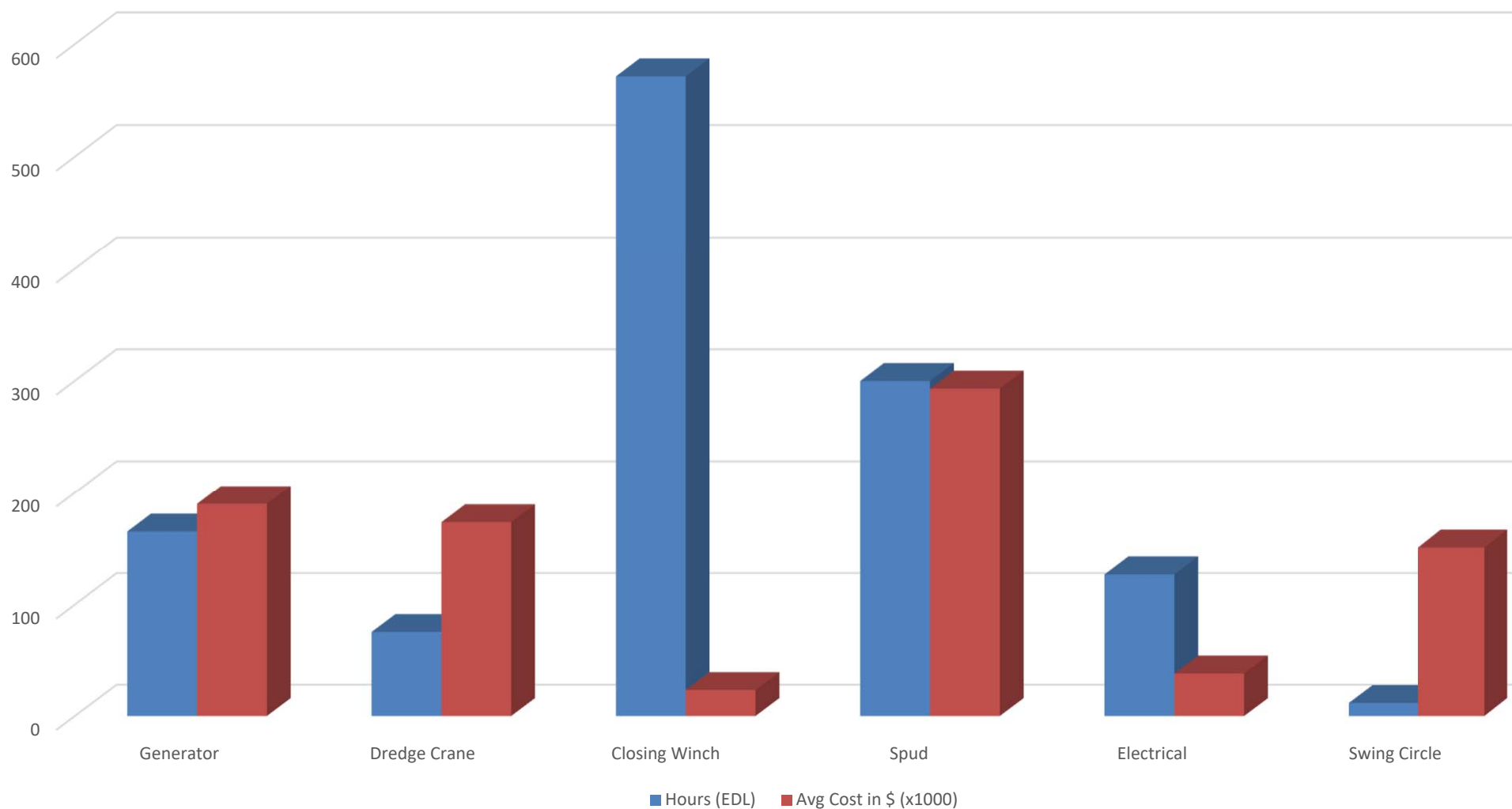


	Generator	Dredge Crane	Closing Winch	Spud	Electrical	Swing Circle
Hours (EDL)	311	130	559	286	111	466
Avg Cost in \$ (x1000)	87.9	178.6	50.1	119.2	53.0	68.6



# GL-54

Total Delay Hours (Feb '17 - Sep '20)  
VS  
AVG Annual Maint Costs (Jan '15 - Mar '20)

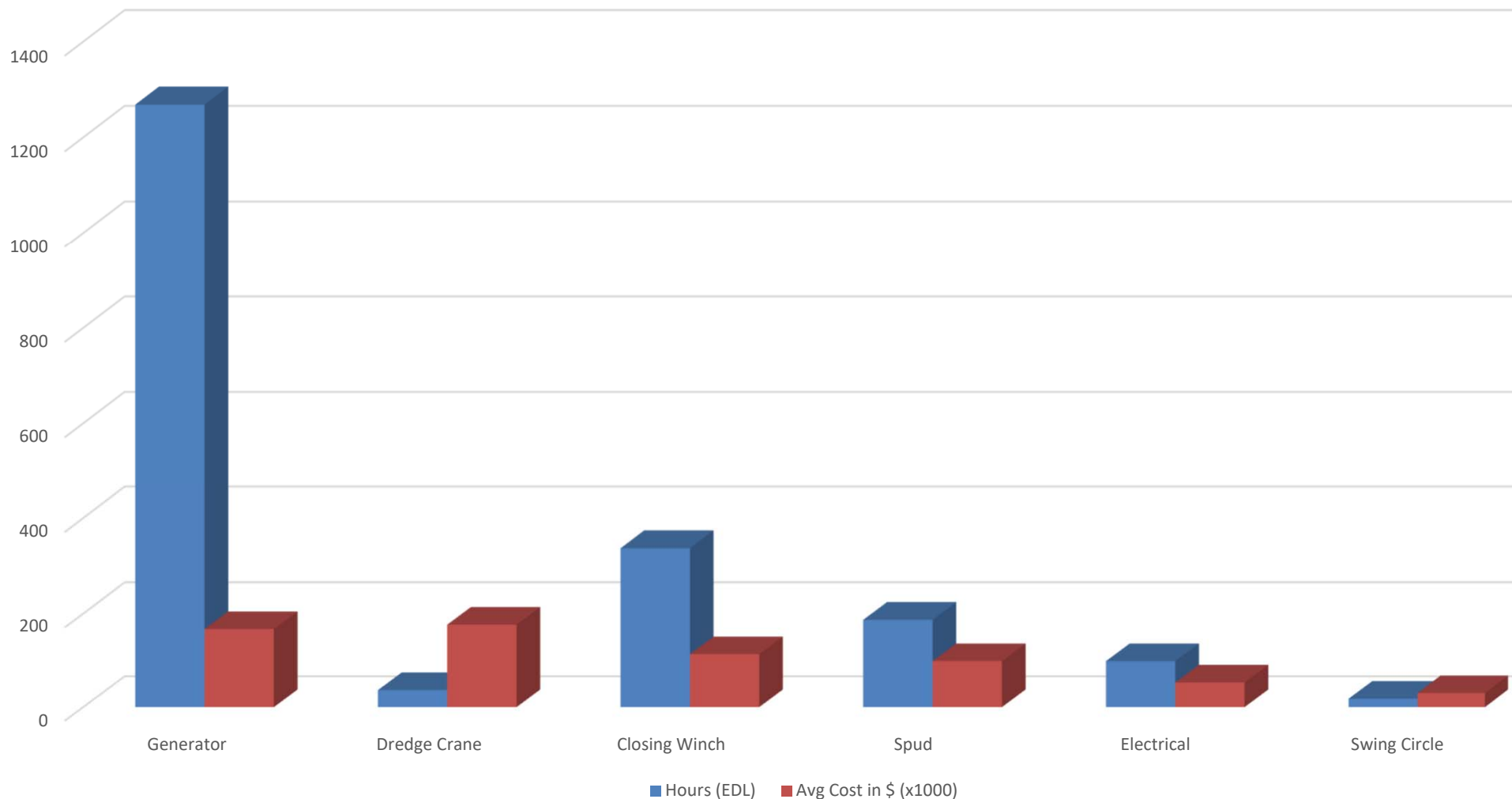


	Generator	Dredge Crane	Closing Winch	Spud	Electrical	Swing Circle
Hours (EDL)	165	75	571	300	127	12
Avg Cost in \$ (x1000)	189.9	173.4	23.3	293.0	38.1	150.7



# GL-55

Total Delay Hours (Mar '17 - Sep '20)  
VS  
AVG Annual Maint Costs (Jan '15 - Mar '20)

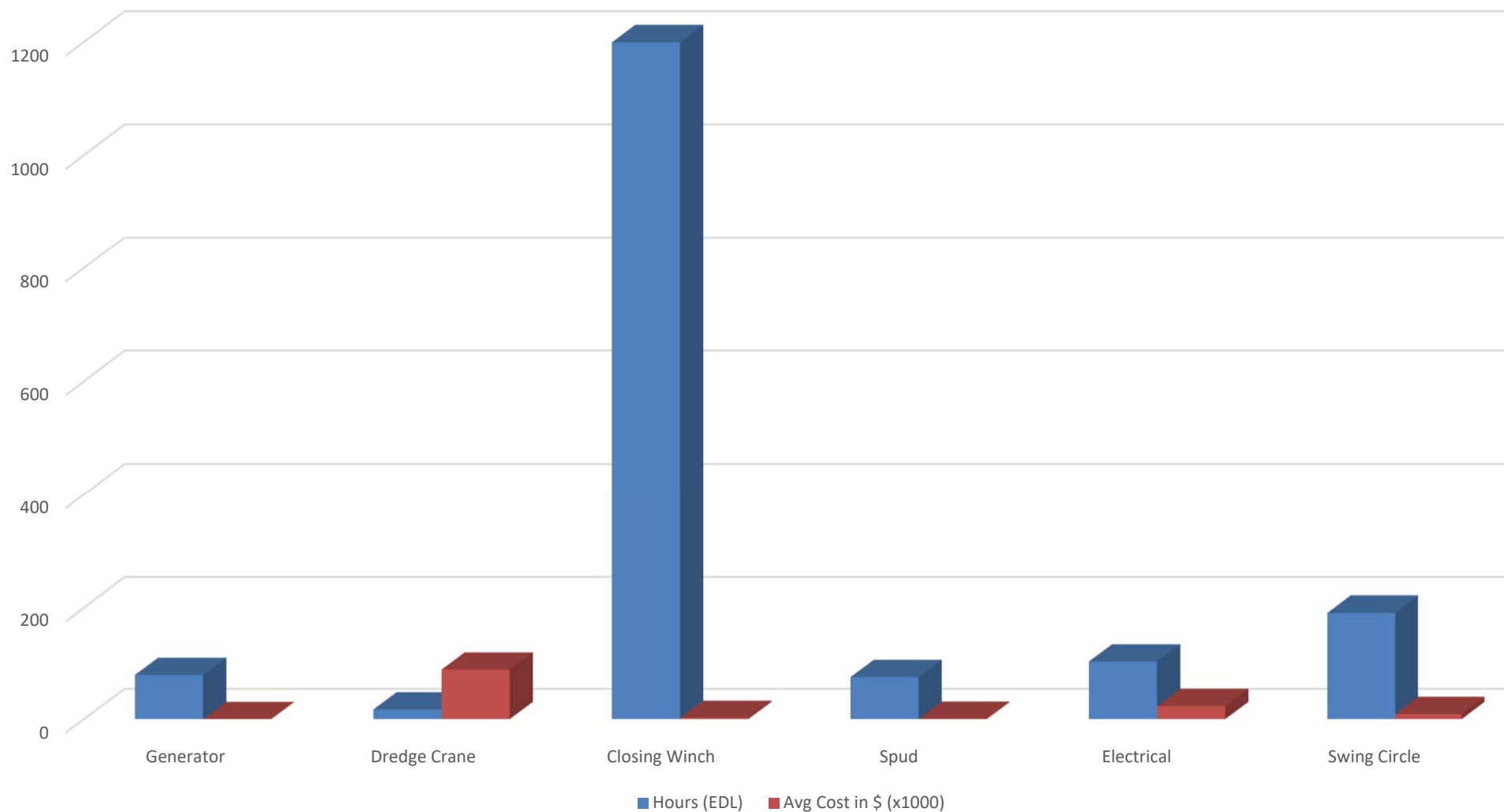


	Generator	Dredge Crane	Closing Winch	Spud	Electrical	Swing Circle
Hours (EDL)	1268	36	337	187	98	18
Avg Cost in \$ (x1000)	167.1	176.5	113.3	98.5	52.7	30.0



# GL-58

Total Delay Hours (May '19 - Sep '20)  
VS  
AVG Annual Maint Costs (Jan '15 - Mar '20)



	Generator	Dredge Crane	Closing Winch	Spud	Electrical	Swing Circle
Hours (EDL)	80	17	1199	76	104	191
Avg Cost in \$ (x1000)	0.0	89.1	2.2	0.4	23.4	9.2



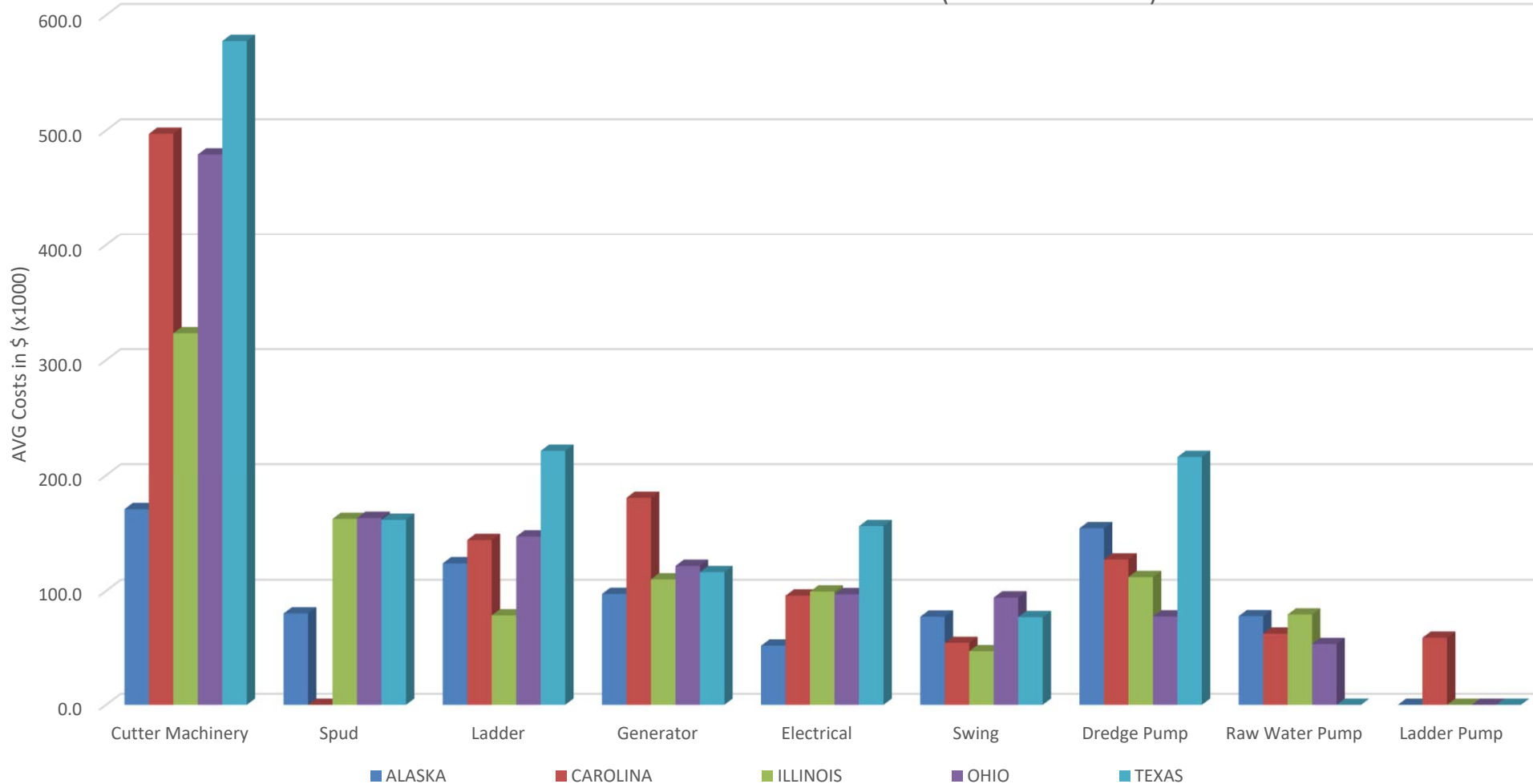
# HYDRAULIC DIVISION

HYDRAULIC DIVISION MAINTENANCE ITEMS			
Viewpoint Coding	Description	NS System Group	ELECTRONIC DELAY LOG (EDL) - CATEGORY: Subcategories
GENERATOR/MG SET (MULTI SYSTEM)	Motor, engine, MG set (multi system), gear, shaft, bearing, generator, drives, piping, exhaust	GENERATORS/MG SET (MULTI SYSTEM)	<b>GENERATORS:</b> Auxiliary Generator, Main Generator Engine, Main Generator
PUMP DRIVE: DREDGE	Motor, engine, gear, clutch, couplings, shaft, bearing, drives, piping, exhaust	PUMP, DREDGE	<b>MAIN PUMP:</b> Bearing, Shaft, Engine, Motor, Gear Box, Gland Seal, Packing, Stuffing Box, Pump Leak, Pump Rebuild
PUMP DRIVE: LADDER / SNORKEL / DRAGARM	Motor, engine, gear, clutch, couplings, shaft, bearing, drives, piping	PUMP, LADDER	<b>LADDER PUMP:</b> Bearing, Shaft, Gear Box, Gland Seal, Motor, Engine, Packing, Stuffing Box, Pump Leak, Pump Rebuild, SCR Drive, Shaft
CUTTER MACHINERY	Motor, gear, shaft, bearing, drives, piping, coupling, canister & canister machinery	CUTTER MACHINERY	<b>CUTTER:</b> Bearing, Shaft, Canister, Gear Box, Motor, SCR Drive, MG Set
PUMP: GEN SER WATER/ GLAND SEAL / VALVE FLUSHING / LOOP COOLING / RAW WATER	Motor, engine, gear, shaft, bearing, pump, drives, piping, strainers	RAW WATER / GLAND SEAL / VALVE FLUSHING / LOOP COOLING / COOLING WATER	<b>AUXILIARY:</b> Water - Potable or Raw
LADDER	Winch, motor, gear, shaft, bearing, brake, drives, sheaves & blocks, "A" frame, ladder structure, ladder trunnion, cutter tooth platform	LADDER	<b>LADDER:</b> Ladder Structure, Ladder Winch, SCR Drive, Sheave, Block, Wire
SWING: (Cutter)	Winch, motor, gear, shaft, bearing, brake, drives, drum, fairlead, swing sheave	SWING HYD	<b>SWING:</b> SCR Drive, Sheaves, Wire, Winch System
SPUD: WINCH / FRAME / XMAS TREE	Winch, motor, gear, shaft, bearing, brakes, drives, fairlead, sheave, spud frame, gate, wear plate, spud, Xmas tree, carriage, carriage rails, walking machinery, idler connection, cylinder, collar	SPUDS	<b>SPUD / XMAS TREE:</b> SCR Drive, Setting Spud, Sheaves, Tree Structure, Walking Spud, Winch, Hoist, Wire
ELECTRICAL / AUTOMATION	Switchgear, MCC, panels, ups unit, wiring, lighting fixtures, transformer, alarm system, automation, controls, closed circuit TV	ELECTRICAL	<b>ELECTRICAL:</b> MCC, Switch Gear, PLC, Automation, Transformer



# HYDRAULIC DIVISION

AVG Annual Maint Costs (Jan '15 - Mar '20)



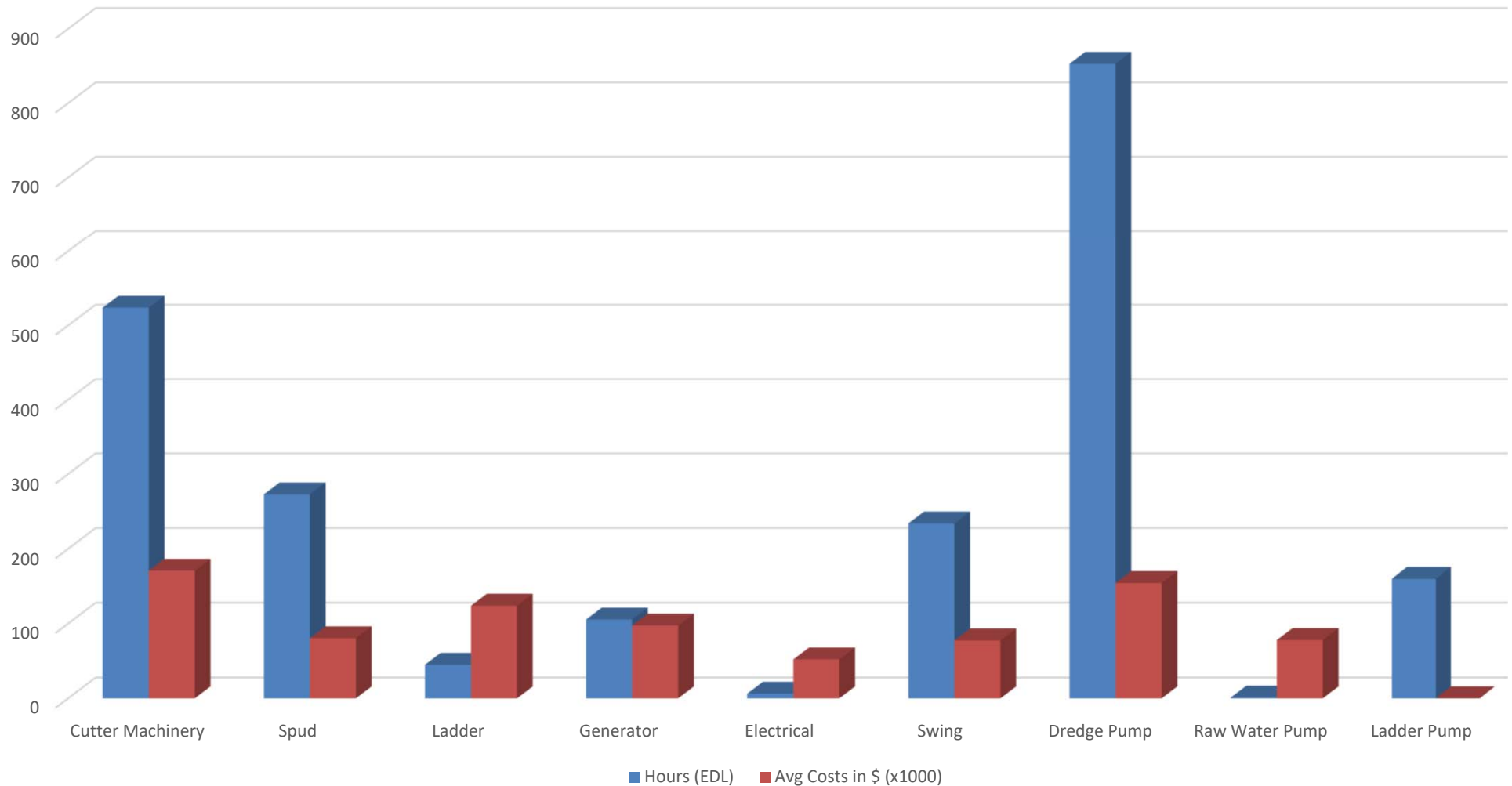
	Cutter Machinery	Spud	Ladder	Generator	Electrical	Swing	Dredge Pump	Raw Water Pump	Ladder Pump
ALASKA	170.7	80.3	123.9	97.4	52.0	77.4	154.2	77.9	0.0
CAROLINA	497.1	0.0	144.1	180.6	95.9	54.4	127.2	62.5	58.9
ILLINOIS	323.3	162.3	78.6	110.0	99.4	47.1	112.0	79.4	0.0
OHIO	479.1	163.1	147.0	121.6	97.1	94.2	77.6	53.4	0.0
TEXAS	577.6	161.5	221.2	116.2	156.0	77.0	215.9	0.0	0.0





# ALASKA

Total Delay Hours (Nov '16 – Sep '20)  
vs  
AVG Annual Maint Costs (Jan '15 – Mar '20)

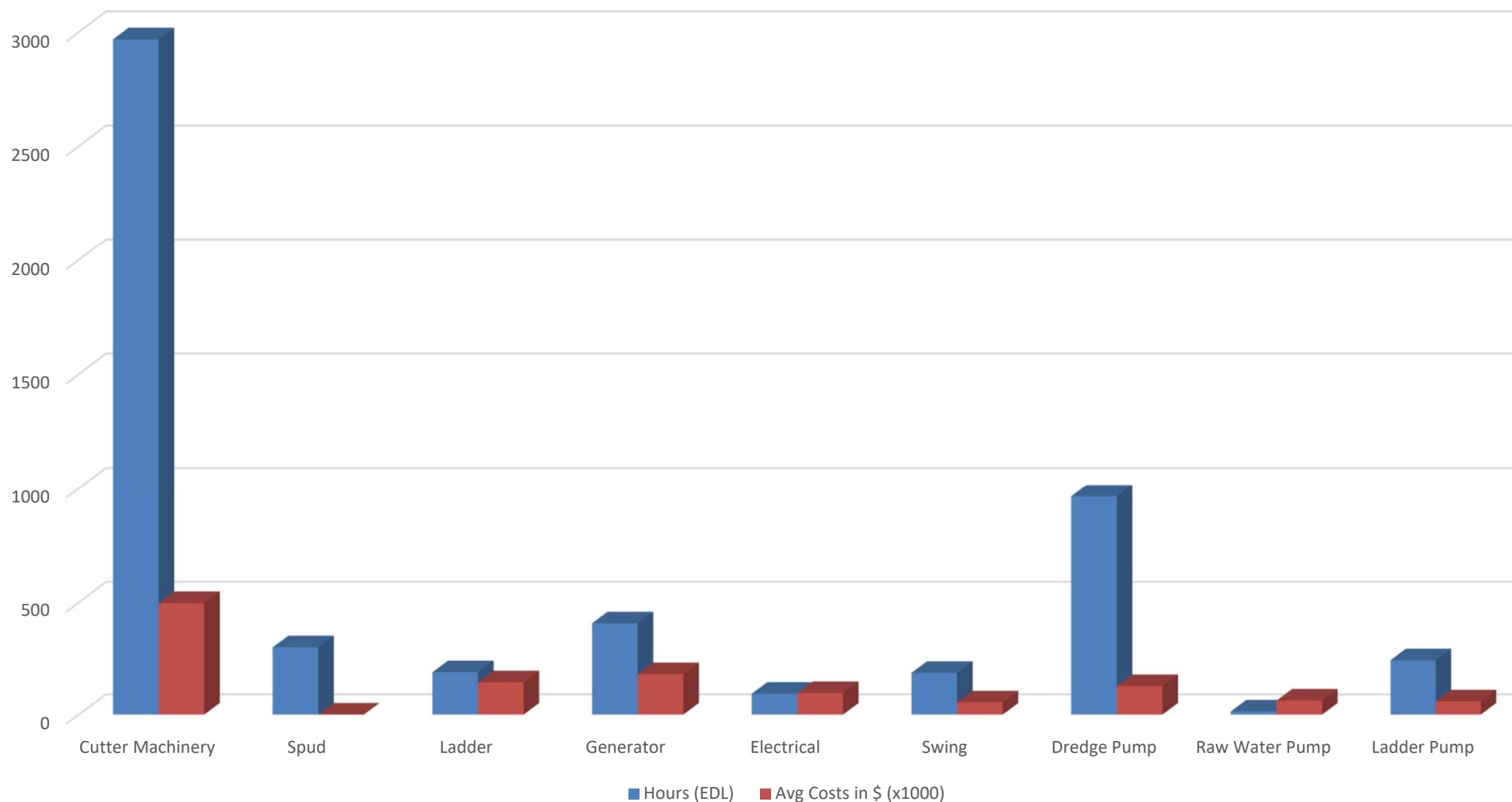


	Cutter Machinery	Spud	Ladder	Generator	Electrical	Swing	Dredge Pump	Raw Water Pump	Ladder Pump
Hours (EDL)	524	273	45	105	6	234	853	1	160
Avg Costs in \$ (x1000)	170.7	80.3	123.9	97.4	52.0	77.4	154.2	77.9	0.0



# CAROLINA

Total Delay Hours (May '16 – Sep '20)  
VS  
AVG Annual Maint Costs (Jan '15 – Mar '20)

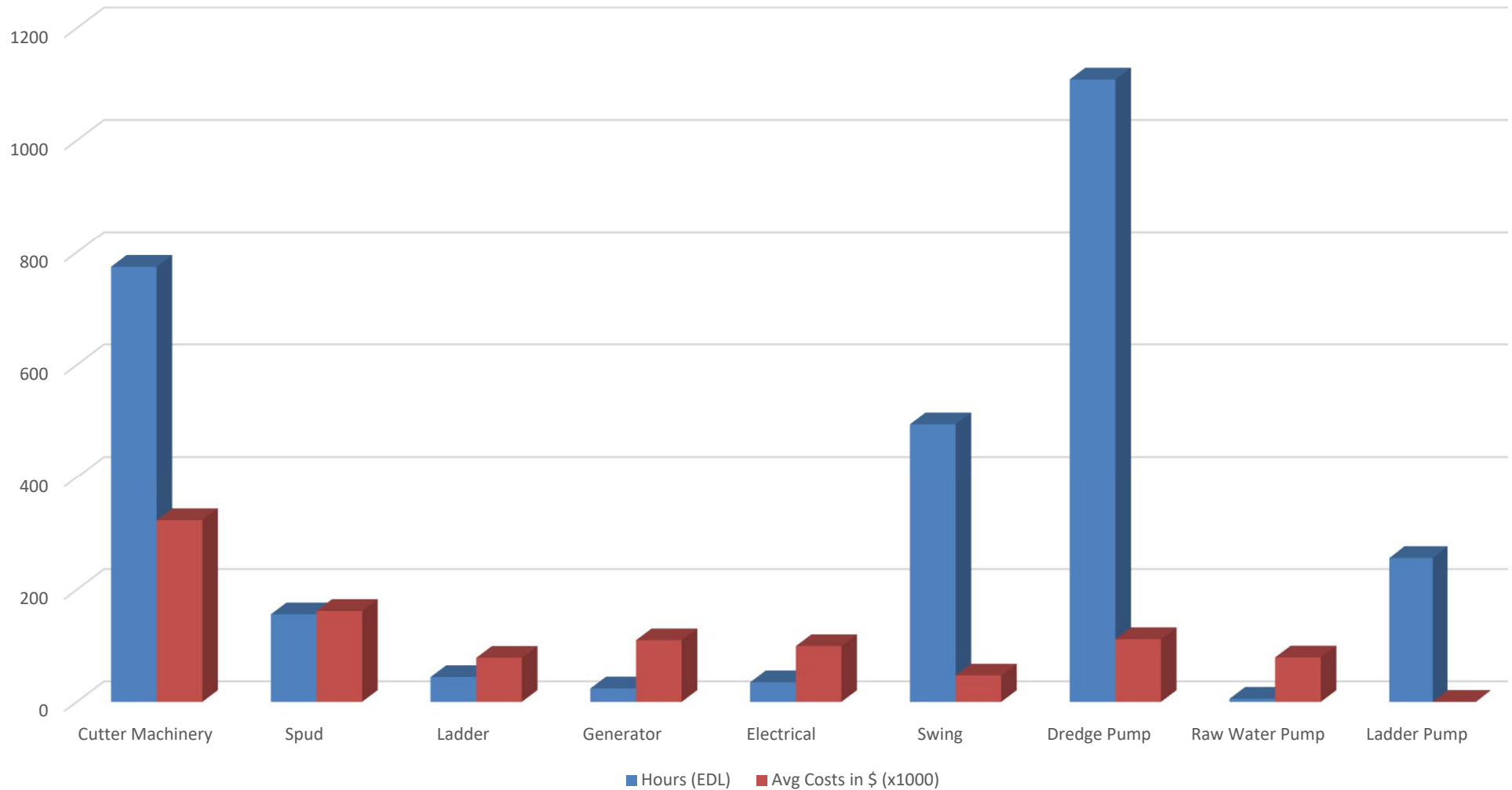


	Cutter Machinery	Spud	Ladder	Generator	Electrical	Swing	Dredge Pump	Raw Water Pump	Ladder Pump
Hours (EDL)	2968	301	189	408	93	186	964	14	243
Avg Costs in \$ (x1000)	497.1	0.0	144.1	180.6	95.9	54.4	127.2	62.5	58.9



# ILLINOIS

Total Delay Hours (Jan '17 – Sep '20)  
vs  
AVG Annual Maint Costs (Jan '15 – Mar '20)

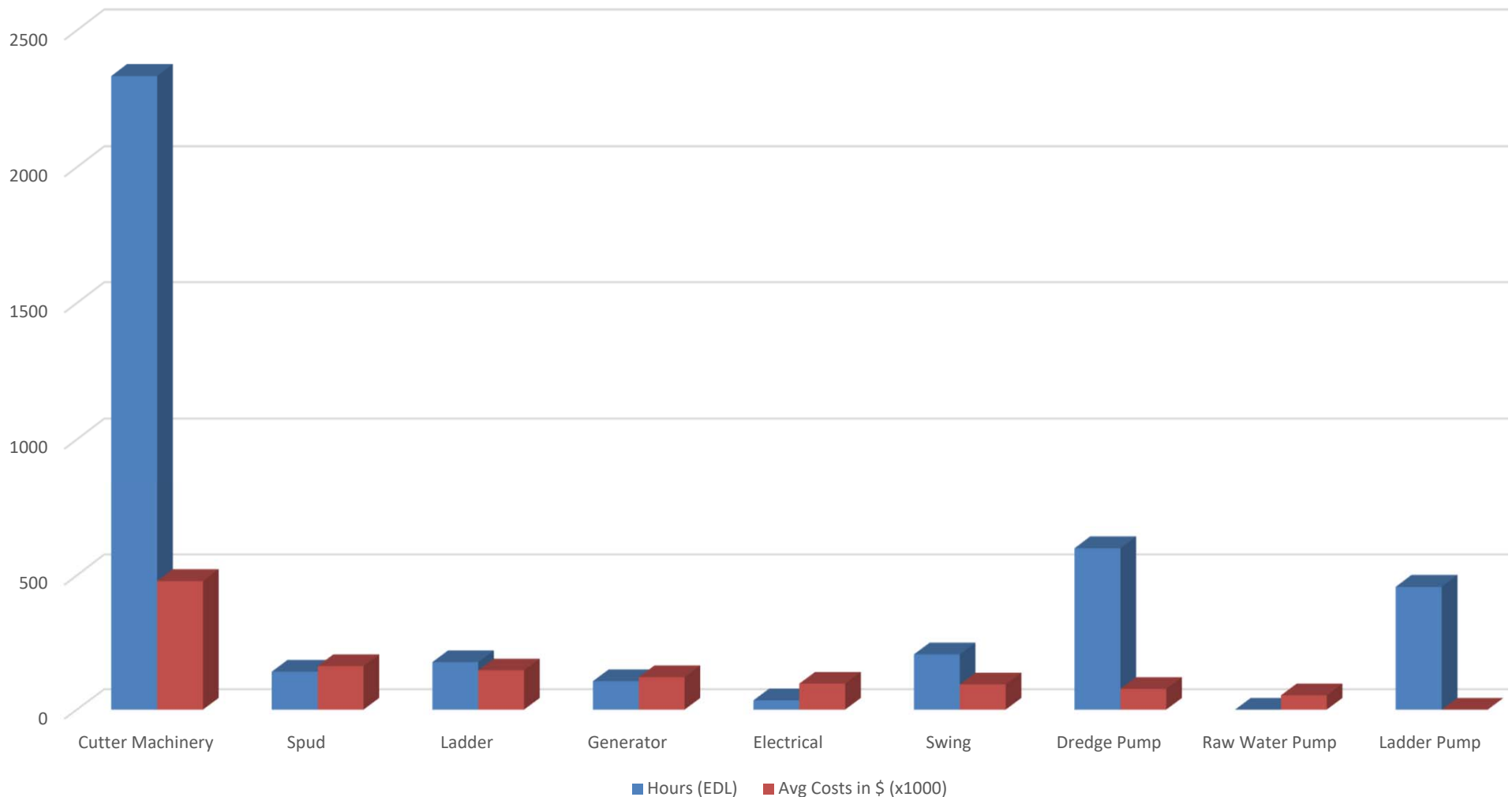


	Cutter Machinery	Spud	Ladder	Generator	Electrical	Swing	Dredge Pump	Raw Water Pump	Ladder Pump
Hours (EDL)	774	156	44	24	35	495	1109	6	256
Avg Costs in \$ (x1000)	323.3	162.3	78.6	110.0	99.4	47.1	112.0	79.4	0.0



# OHIO

Total Delay Hours (Apr '16 – Sep '20)  
VS  
AVG Annual Maint Costs (Jan '15 – Mar '20)

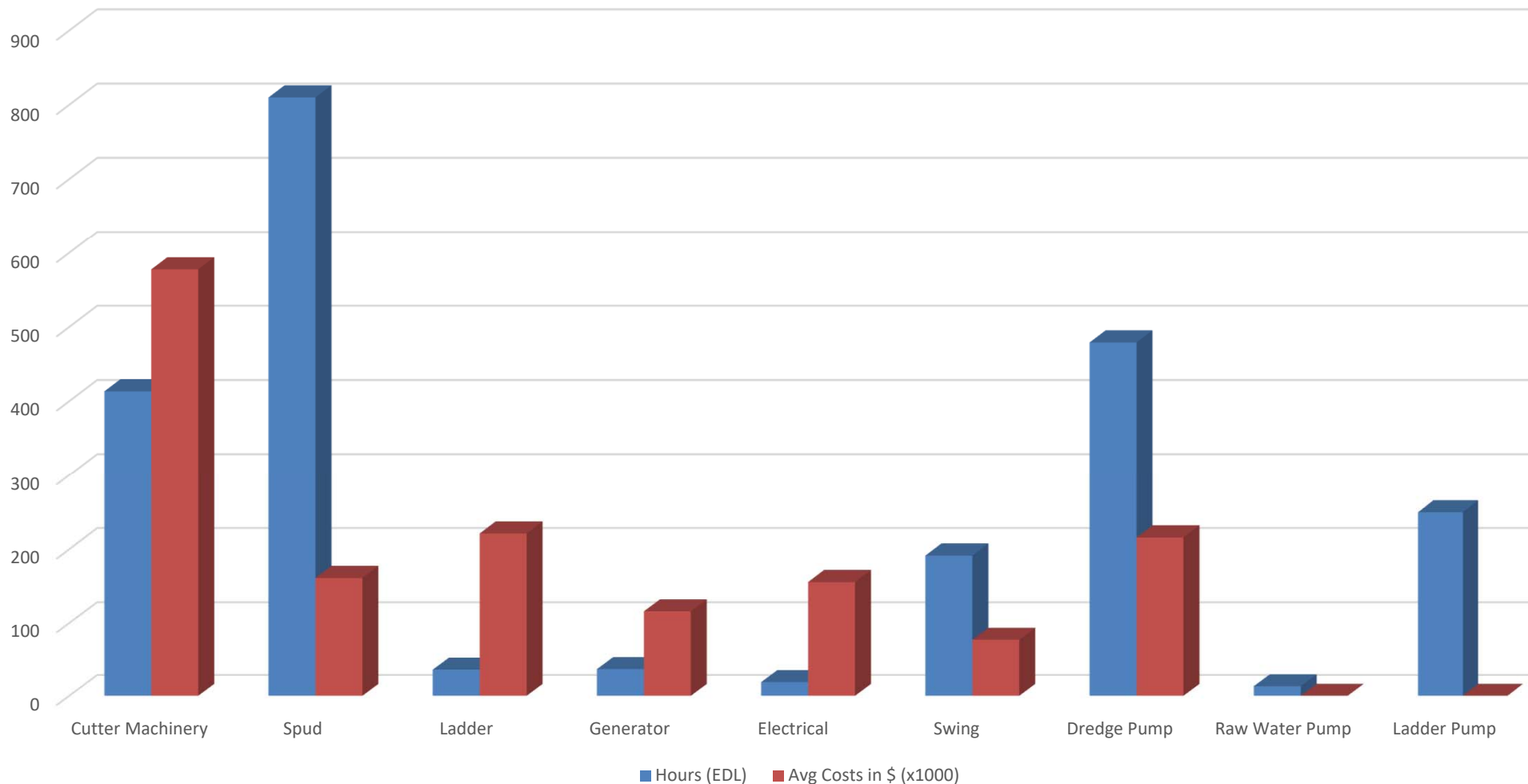


	Cutter Machinery	Spud	Ladder	Generator	Electrical	Swing	Dredge Pump	Raw Water Pump	Ladder Pump
Hours (EDL)	2333	142	178	106	35	207	599	0	458
Avg Costs in \$ (x1000)	479.1	163.1	147.0	121.6	97.1	94.2	77.6	53.4	0.0



# TEXAS

Total Delay Hours (May '17 – Sep '20)  
vs  
AVG Annual Maint Costs (Jan '15 – Mar '20)



	Cutter Machinery	Spud	Ladder	Generator	Electrical	Swing	Dredge Pump	Raw Water Pump	Ladder Pump
Hours (EDL)	413	810	36	37	19	192	479	13	250
Avg Costs in \$ (x1000)	577.6	161.5	221.2	116.2	156.0	77.0	215.9	0.0	0.0



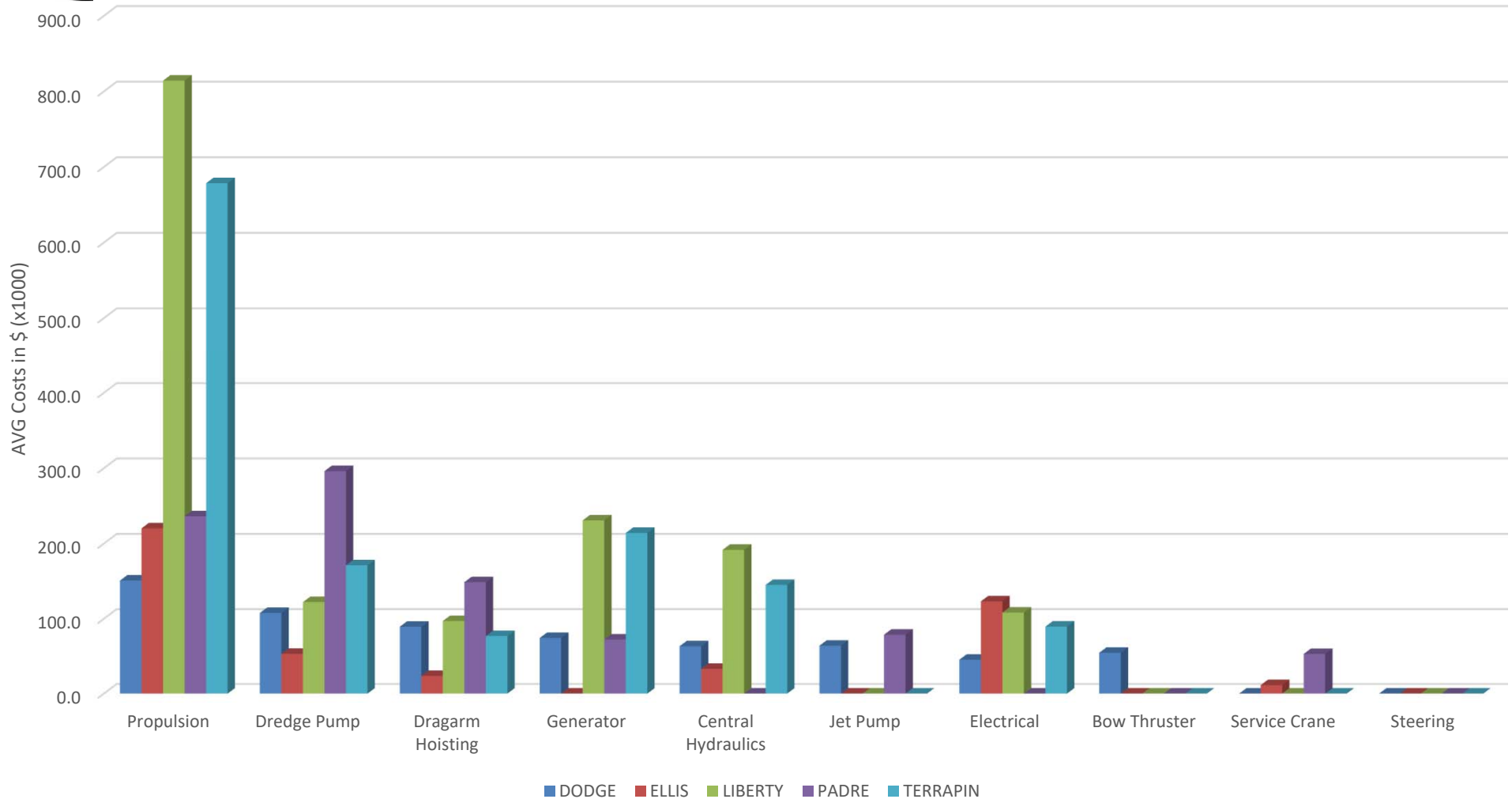
# HOPPER DIVISION

HOPPER DIVISION MAINTENANCE ITEMS			
Viewpoint Coding	Description	NS System Group	ELECTRONIC DELAY LOG (EDL) - CATEGORY: Subcategories
PROPULSION	Motor, engine, gear, shaft, bearing, propeller, drives, piping, kort nozzle, exhaust	PROPULSION	<b>MAIN ENGINE/PROPULSION:</b> Clutch, Gearbox, Governor, Heat Exchanger, Prelube Pump, Propeller, Seal, Service Water Pipe, Tail Shaft, Tail Shaft Bearings, Other
STEERING	Rudder, rudder stock, HPU, cylinders, bearings, tiller arms	STEERING	<b>STEERING:</b> Hydraulic Cylinder, Hydraulic Power Unit, Motor, Pump, Rudder, Other
BOW THRUSTER	Motor, engine, gear, shaft, bearing, propeller, drives, piping, exhaust	BOW THRUSTER	<b>BOW THRUSTER ENGINE:</b> Angle Drive, Shafting, Transmission, Other
GENERATOR/MG SET (MULTI SYSTEM)	Motor, engine, MG set (multi system), gear, shaft, bearing, generator, drives, piping, exhaust	GENERATORS/MG SET (MULTI SYSTEM)	<b>GENERATOR ENGINE:</b> Cooling Water Piping, Lubrication System, Motor, Overheat, Pump, Other
PUMP DRIVE: DREDGE	Motor, engine, gear, clutch, couplings, shaft, bearing, drives, piping, exhaust	PUMP, DREDGE	<b>DREDGE PUMP:</b> Clutch, Shell, Engine Side Door/Liner, Gland Seal, Impeller, Pump Bearing Assembly, Shafting, Stuffing Box, Suction Side Door/Liner, Other <b>DREDGE PUMP ENGINE:</b> Air Hose, Engine, Fuel Lines, Gearbox, Heat Exchanger, Service Water Pipe, Other
PUMP DRIVE: JET / DILUTION	Motor, engine, gear, clutch, couplings, shaft, bearing, drives, piping, exhaust	PUMP, JET	<b>JET PUMP:</b> Gearbox, Jet Pump, Pump Bearing, Shafting, Stuffing Box, Valves, Other <b>JET PUMP ENGINE:</b> Heat Exchanger, Service Water Pipe, Other
DRAGARM HOISTING	Motor, gear, shaft, bearing, brake, drives, piping, drum, fairlead, sheaves & blocks, davit, gantry, yoke, cylinders, swell compensators, pump, winch, jet hose reel	DRAGARM HOISTING	<b>DRAGHEAD HOIST:</b> Brake Assembly, Davit, Winch, Gearbox, Hydraulic Cylinder, Hydraulic Power Unit, Motor (Electric/Hydraulic), Sheaves, Swell Compensator, Wires, Other <b>GIMBAL HOIST:</b> Brake Assembly, Davit, Gimbal Winch, Hydraulic Cylinder, Hydraulic Power Unit, Motor (Electric/Hydraulic), Sheaves, Underwater Block, Wires, Other <b>TRUNNION HOIST:</b> Brake Assembly, Davit, Drag Head Winch, Gearbox, Hydraulic Cylinder, Hydraulic Power Unit, Motor (Electric/Hydraulic), Wedge Repair, Wires, Other
CRANE / DERRICK / SERVICE / MOBILE	Motor, engine, winch, HPU, gear, shaft, bearing, brake, sheave, boom, swing, frame, cab, internal overhead cranes, blocks, controls, anti two block, load sensing, davits	SERVICE CRANE / HOISTS	<b>OTHER:</b> Crane
HYDRAULIC: CENTRAL	HPU, motor, engine, pump, gear, shaft, controls/valves, piping	HYDRAULIC SERVICE	<b>HYDRAULICS:</b> Bow Pumpout Winch, Heat Exchanger, Fluid Leak, Motor, Pump, Pump Motor, Service System, Radiator, Tank, Valve Stack, Other
ELECTRICAL / AUTOMATION	Switchgear, MCC, panels, ups unit, wiring, lighting fixtures, transformer, alarm system, automation, controls, closed circuit TV	ELECTRICAL	<b>OTHER:</b> Electrical



# HOPPER DIVISION

AVG Annual Maint Costs (Jan '15 – Mar '20)

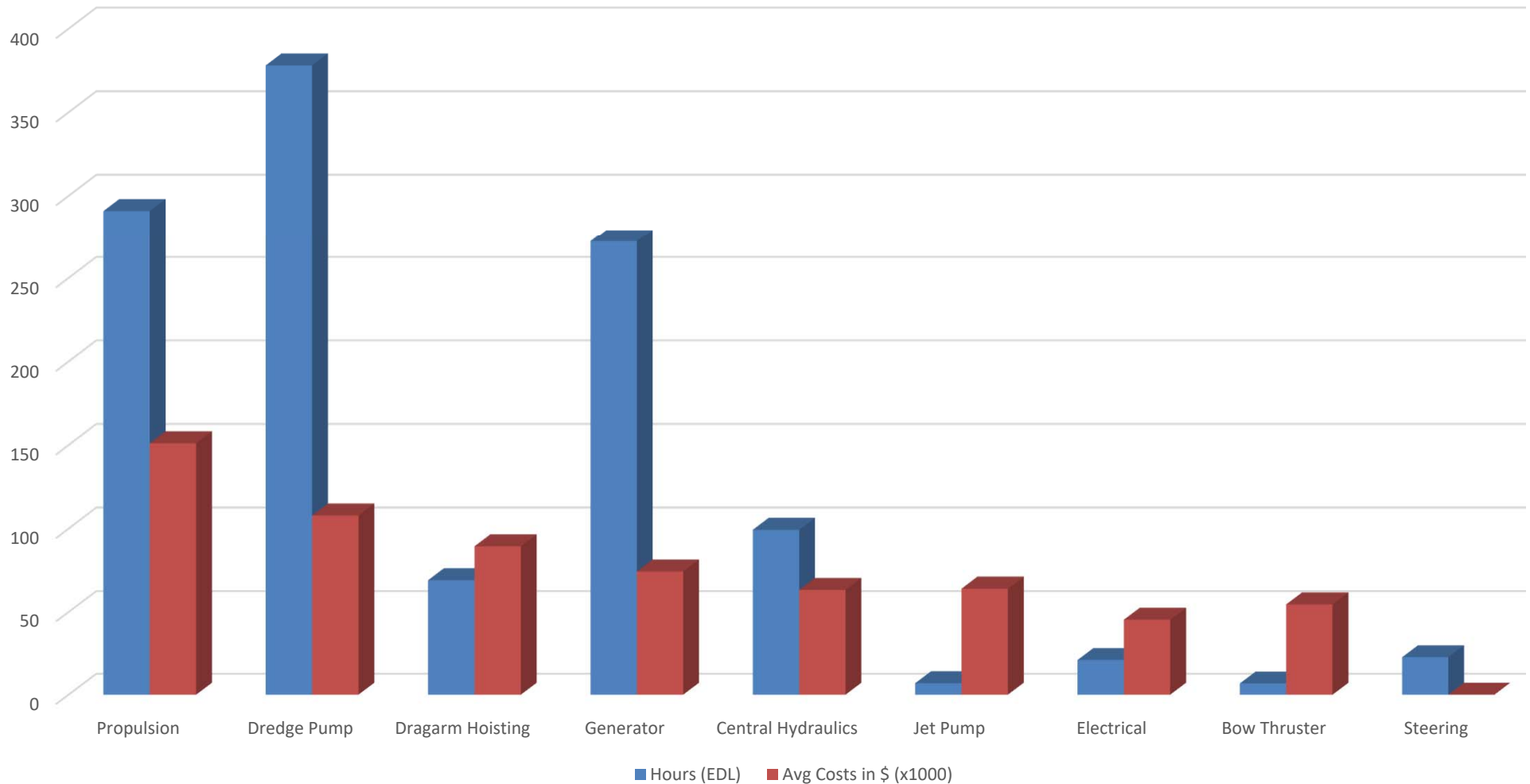


	Propulsion	Dredge Pump	Dragarm Hoisting	Generator	Central Hydraulics	Jet Pump	Electrical	Bow Thruster	Service Crane	Steering
DODGE	151.0	107.8	89.4	74.3	63.3	64.1	45.3	54.6	0.0	0.0
ELLIS	220.2	53.2	23.6	0.0	33.1	0.0	123.3	0.0	11.4	0.0
LIBERTY	814.3	122.3	97.1	230.8	191.7	0.0	108.2	0.0	0.0	0.0
PADRE	236.3	296.1	148.9	72.3	0.0	78.8	0.0	0.0	53.0	0.0
TERRAPIN	678.5	171.2	76.9	214.2	145.2	0.0	89.6	0.0	0.0	0.0



# DODGE ISLAND

Total Delay Hours (Apr '17 – Sep '20)  
vs  
AVG Annual Maint Costs (Jan '15 – Mar '20)



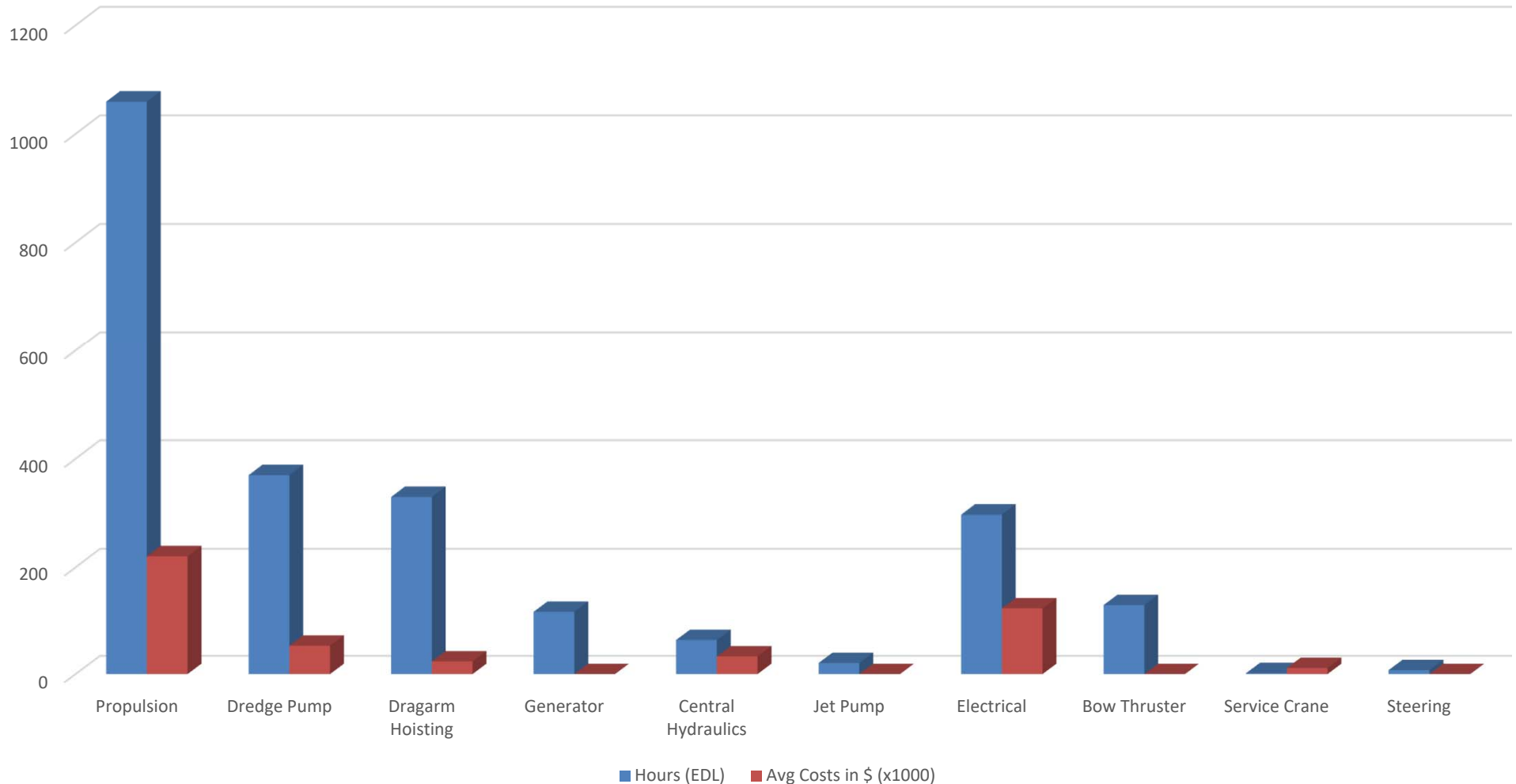
	Propulsion	Dredge Pump	Dragarm Hoisting	Generator	Central Hydraulics	Jet Pump	Electrical	Bow Thruster	Steering
Hours (EDL)	291	378	69	272	99	7	21	7	23
Avg Costs in \$ (x1000)	151.0	107.8	89.4	74.3	63.3	64.1	45.3	54.6	0.0





# ELLIS ISLAND

Total Delay Hours (Nov '17 – Sep '20)  
VS  
AVG Annual Maint Costs (Jan '15 – Mar '20)

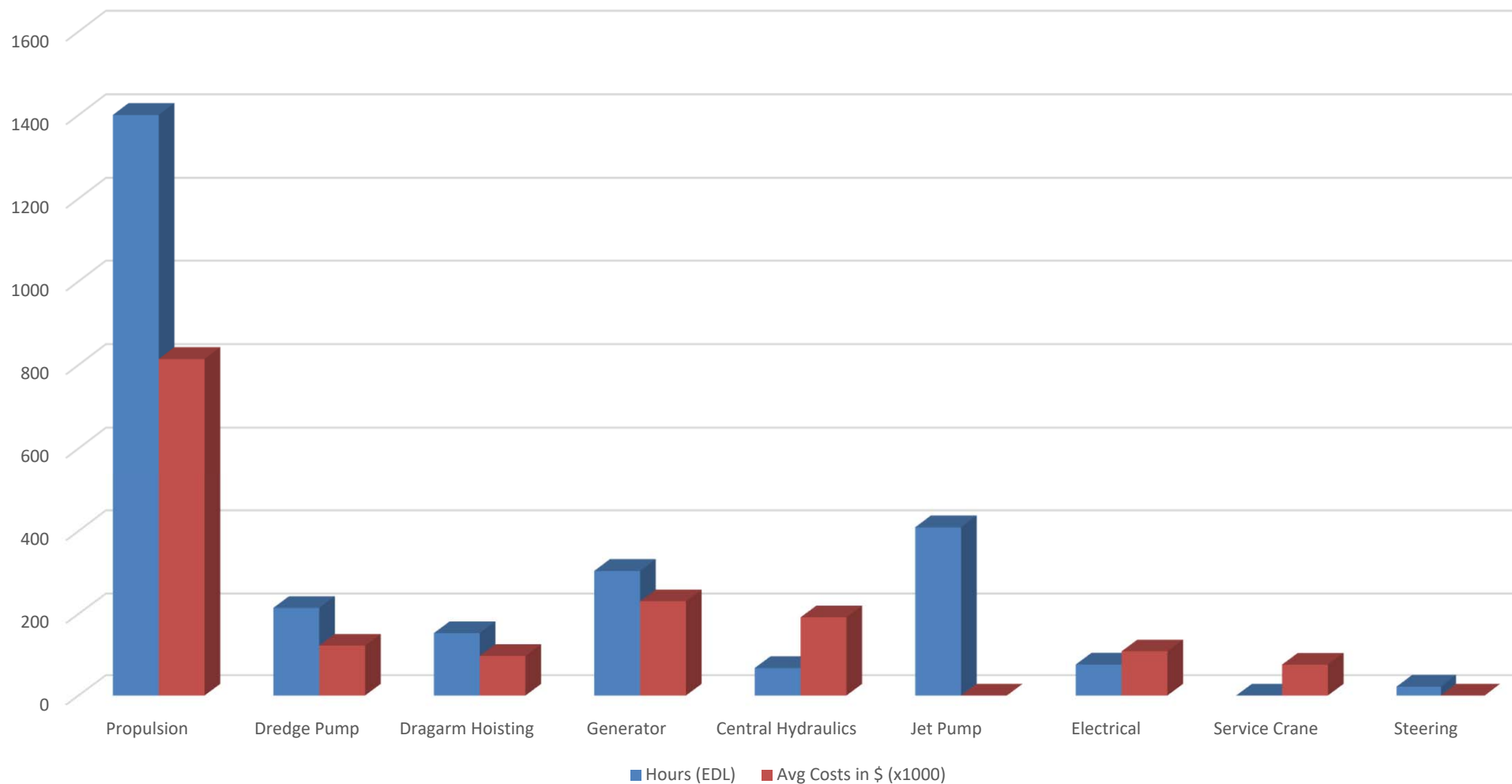


	Propulsion	Dredge Pump	Dragarm Hoisting	Generator	Central Hydraulics	Jet Pump	Electrical	Bow Thruster	Service Crane	Steering
Hours (EDL)	1059	370	330	117	64	21	297	130	2	7
Avg Costs in \$ (x1000)	220.2	53.2	23.6	0.0	33.1	0.0	123.3	0.0	11.4	0.0



# LIBERTY ISLAND

Total Delay Hours (Oct '16 – Sep '20)  
VS  
AVG Annual Maint Costs (Jan '15 – Mar '20)

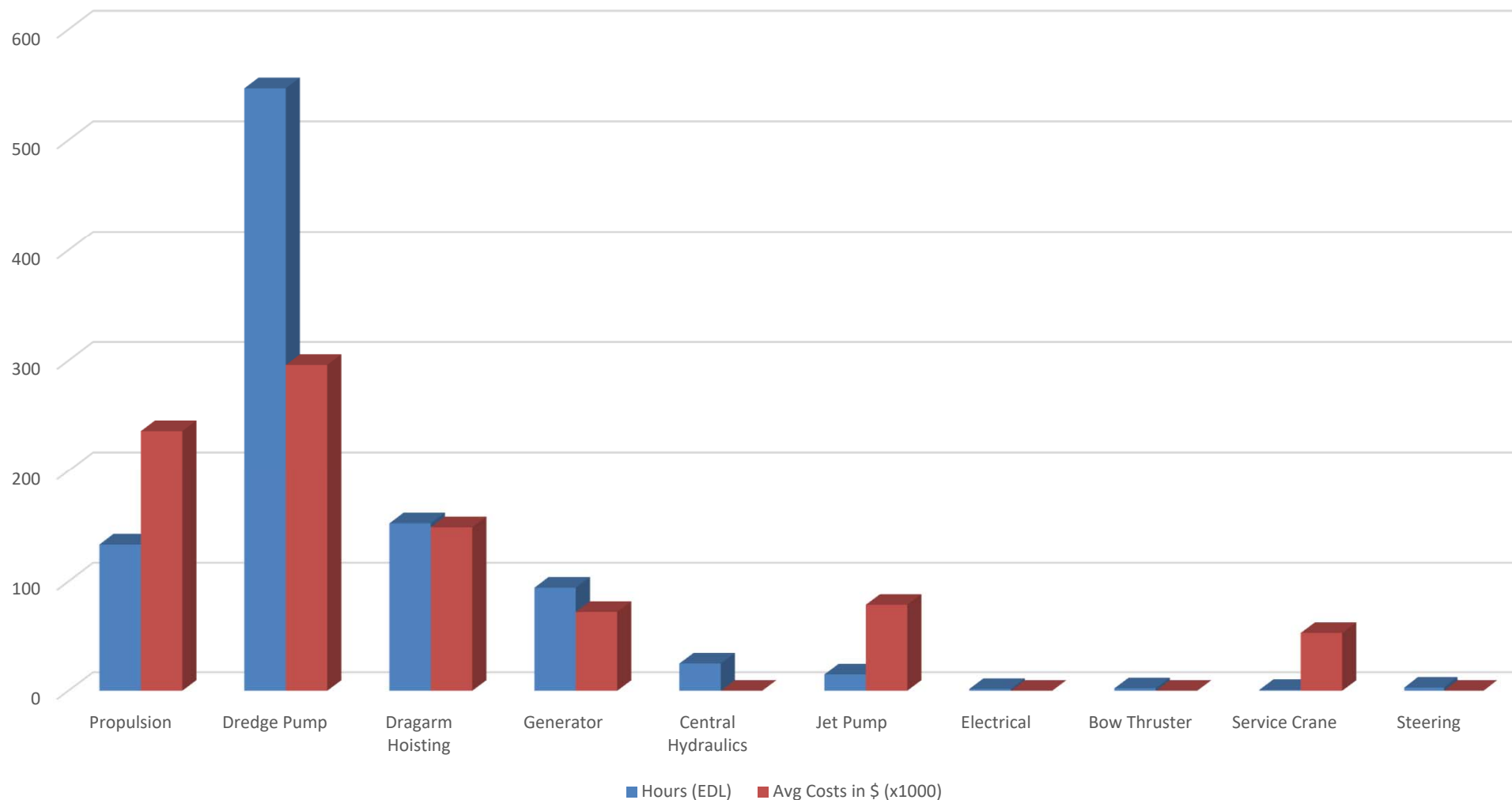


	Propulsion	Dredge Pump	Dragarm Hoisting	Generator	Central Hydraulics	Jet Pump	Electrical	Service Crane	Steering
Hours (EDL)	1400	215	153	304	67	409	76	0	22
Avg Costs in \$ (x1000)	814.3	122.3	97.1	230.8	191.7	0.0	108.2	75.6	0.0



# PADRE ISLAND

Total Delay Hours (Apr '17 – Sep '20)  
VS  
AVG Annual Maint Costs (Jan '15 – Mar '20)

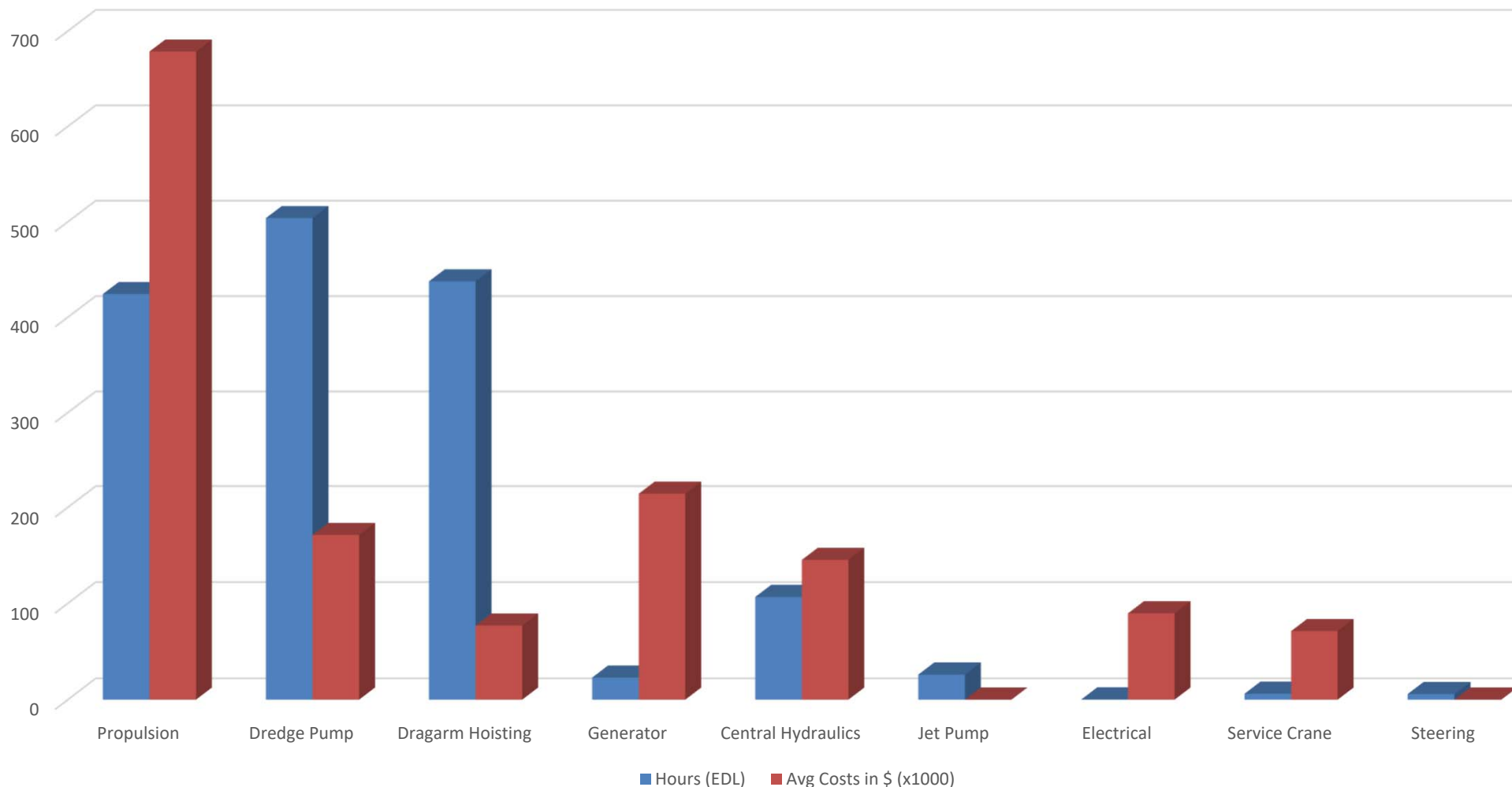


	Propulsion	Dredge Pump	Dragarm Hoisting	Generator	Central Hydraulics	Jet Pump	Electrical	Bow Thruster	Service Crane	Steering
Hours (EDL)	133	547	152	94	25	15	2	2	1	3
Avg Costs in \$ (x1000)	236.3	296.1	148.9	72.3	0.0	78.8	0.0	0.0	53.0	0.0



# TERRAPIN ISLAND

Total Delay Hours (Dec '17 – Sep '20)  
vs  
AVG Annual Maint Costs (Jan '15 – Mar '20)



	Propulsion	Dredge Pump	Dragarm Hoisting	Generator	Central Hydraulics	Jet Pump	Electrical	Service Crane	Steering
Hours (EDL)	424	504	438	23	107	26	0	6	6
Avg Costs in \$ (x1000)	678.5	171.2	76.9	214.2	145.2	0.0	89.6	71.1	0.0