

# GET THE MOST OUT OF YOUR MOTORS

AVOID REPLACING MOTORS – MOTORS ARE EXPENSIVE



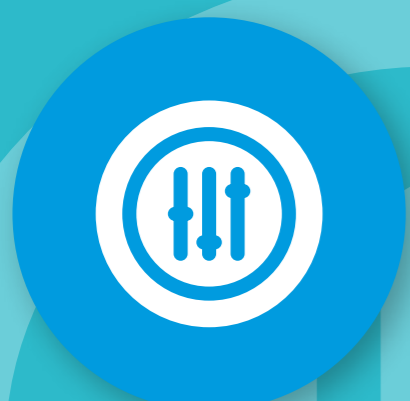
## SWITCH OFF WHEN NOT IN USE

- ✓ Sludge pumps – Return Activated Sludge (RAS) and Waste Activated Sludge (WAS).
- ✓ Aerators in sequential batch reactors.
- ✓ Mixers and aerators where the process is not full time.
- ✓ Mechanical screens and inlet screws during reduced influent.
- ✓ Conveyors and belts in dewatering.



## PERFORM ENERGY-INTENSIVE TASKS TO WHEN ENERGY IS CHEAPEST.

- ✓ Minimise electricity usage during morning and evening peak hours



## OPTIMISE YOUR SYSTEM

Operating setpoints should meet system requirements:

- ✓ Change motor load to use more efficient pumps and blowers.
- ✓ Replace motor control technology e.g. variable speed drives in oversized pumps.
- ✓ Manage upstream compliance by curbing suspended solids.

### IN ACTIVATED SLUDGE-TYPE WWTPS

- ✓ Install primary settling tanks to reduce unnecessary aeration.
- ✓ Improve system controls via feedback loops to monitor dissolved oxygen.
- ✓ Install variable speed drives to match aeration requirements.
- ✓ Change diffuser/bubble-making process within aeration basin.



# POORLY MAINTAINED MOTORS WASTE ENERGY

## YOU HAVE THE POWER TO CHANGE THAT



### DO DAILY CHECKS

- ✓ Keep motors free from debris and dirt.
- ✓ Check that fans are open to prevent overheating.
- ✓ Check that timers, thermostat and sensors are in working order.
- ✓ Inspect for oil leaks to prevent friction in bearings and gearboxes.
- ✓ Monitor pumps for discharge and suction pressures.
- ✓ Monitor blowers and compressors for pressure flow and temperature.



### LISTEN FOR ...

- ✓ Noises from pulley belts: correct the tension.
- ✓ Noises from bearings: ensure proper lubrication.
- ✓ Noises from shaft alignment: get motor serviced.



### MONITOR MOTOR LOAD CURRENT

- ✓ When was your service motor control room last inspected?
  - ✓ This should be done as part of your routine monitoring or at least once a month.
- Date of last inspection: .....



# WHEN SHOULD MOTORS BE REPLACED?

REPLACEMENT MOTORS SHOULD BE ENERGY EFFICIENT

