

### EARLY OPINION (EO) REQUEST FORM V3

The information provided in this request form will be used to request an early opinion from CPUC staff.

Program Administrator (PA) may request an EO review on projects in the development stage that are not ready for full project review. EO requests may include any aspect of project development, such as policy question, appropriate baseline, calculation techniques, preponderance of evidence documentation, program influence, and so on. EO requests may reference a specific project or cover issues relevant to multiple projects.

EO requests must be in the form of a set of specific questions with the PA first stating clearly the issue(s) or the policy 'gray-area'. The PA is expected to provide its opinion/thought on the 'gray-area' issue then specifically ask on what it wishes to ask the CPUC Staff (CS).

Early Opinion Information		Date Tracking	
EO Title	Non-DEER EUL for Wastewater Treatment Plant (WWTP) Blower Systems	Submission Date	6/8/2023
EO Tracking Number		CS Response 1	7/3/2023
EO Reviewer(s)		CS Response 2	
EO sharing requested	<input type="checkbox"/> PA <input type="checkbox"/> CPUC	Completion Date	

EO Requestor			
PA / Third Party Implementer	[REDACTED]	<input type="checkbox"/> Gas / <input type="checkbox"/> Electric	
Department	[REDACTED]		
Contact Name(s)	[REDACTED]	Telephone #	[REDACTED]
Contact Email(s)	[REDACTED]		
Program Name	[REDACTED]		

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EO Questions (add rows as needed)

**Third Party Implementer/PA EO Question 1.**

The [REDACTED] program seeks EO on approving the 20-year EUL per the below justification for Wastewater Treatment Plant (WWTP) Blowers.

**PA Opinion/Proposed Response to EO Question 1. (must be filled in)**

There are no DEER EUL IDs applicable to Blowers at Wastewater Treatment Plants, and therefore all available DEER EUL IDs are not appropriate nor reasonable to claim. Per [EE Policy Manual V6 April 2020](#), “[if] DEER values and methods are not available, the IOUs, RENs and CCAs may propose new values for [CPUC] staff review and approval”. Furthermore, per section 3.2 (Page 42) of the Statewide Custom Guidance Document (version 1.4 effective 6/3/2021), non-DEER EUL’s are allowed so long as they are cited. This has been previously utilized and allowed in previous projects, such as project approval given in disposition SDGE-17-C-C-0178\_10740434\_UV Lighting (see SDGE-17-C-C-0178\_.pdf).

It is common for WWTP design firms to use a 20-year life cycle comparison when evaluating technology selections for WWTPs, because that is the standard practice minimum life expected from mission critical equipment. WWTP systems are critical components, therefore proper upkeep (preventative maintenance) and increased redundancies are employed to ensure discharge permit requirements are met. Failure to meet permit requirements can result in large fines and lawsuits. Most facilities evaluate the lifecycle of such critical equipment at 20 years with the understanding there would be an equivalent replacement or redundant equipment available onsite if equipment fails.

Additionally, some manufacturers of WWTP Blower Systems provide effective useful life ratings on quotes, marketing brochures, and spec sheets provided for their products. Referenced below are confidential examples provided from 3 different blower manufactures in May-June 2023.

1. CONFIDENTIAL [REDACTED] Technial Data Sheet.pdf – Design Useful Life: 30 Years
2. CONFIDENTIAL Budgetary Proposal [REDACTED] -Redacted.pdf – Effective Useful Life: 30 Years
3. CONFIDENTIAL Budgetary Proposal [REDACTED] – Redacted.pdf – Effective Useful Life: 30 Years
4. CONFIDENTIAL [REDACTED]-Life Cycle Costing Estimates.pdf – 20-year Life Cycle Cost Analysis
5. CONFIDENTIAL [REDACTED] - Email Reference.pdf – Design Life: 20 years

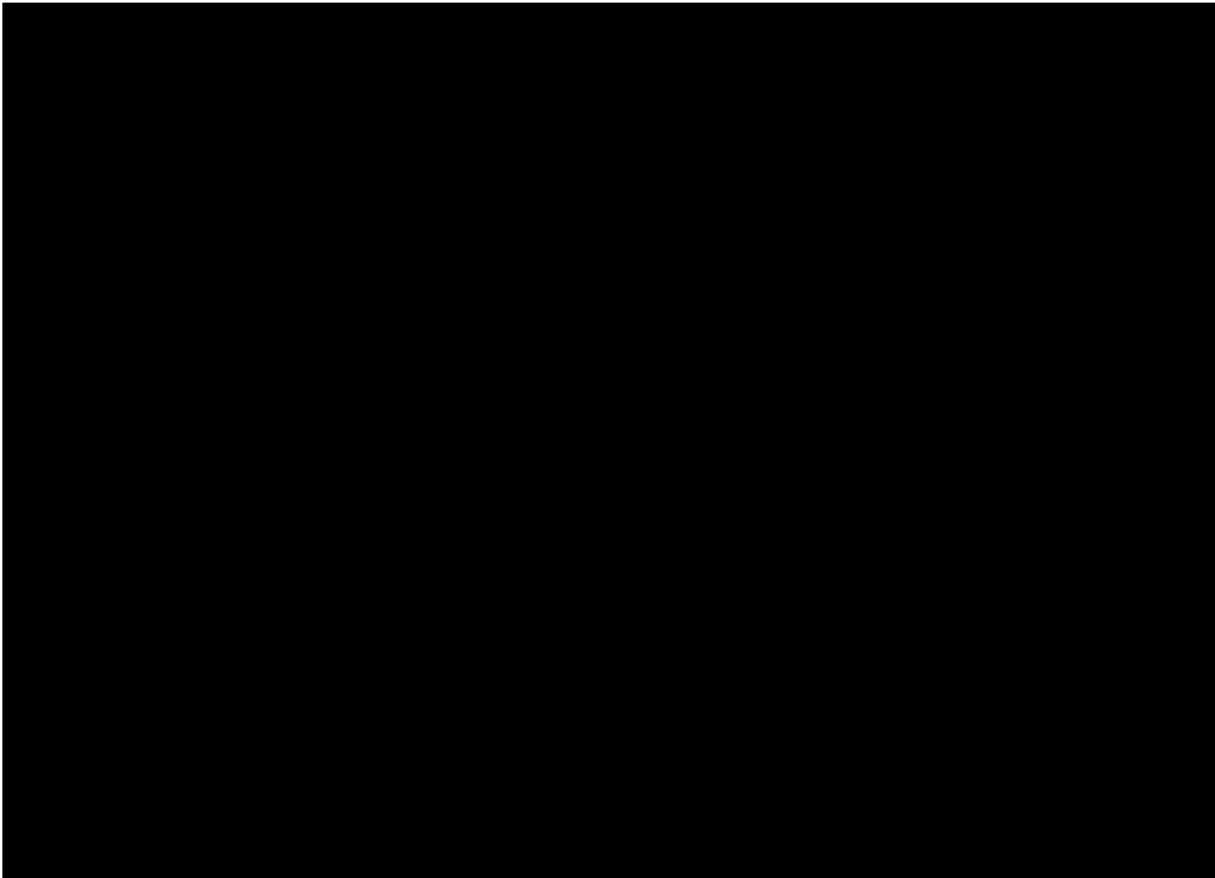
Manufacturer provided effective useful life comes from experience of historic installations and the maintenance management provided to customers for proper upkeep of equipment. One Manufacturer, [REDACTED], has stated that *“The life of a blower depends on many factors. If the blower was installed in the most ideal clean conditions, operated continuously at low pressures and temperatures, the blower could last 50 years or more. The bearings operate on an air film and therefore, oil life is not a factor.”*<sup>1</sup>

Another Manufacturer, [REDACTED], claims an EUL of 30 years and provided the following justification<sup>2</sup>:

- [REDACTED] turbo blower advantage is the “condition-based maintenance (CBM)” using integrated sensors and measuring equipment that continuously monitor operating conditions and collects data in the integrated PLC based Local Control Panel. Cleaning / changing air filters is the only required maintenance of [REDACTED] Blowers to ensure continuous operation and optimum performance for its life span.
- We performed Residual Life Assessments from our installation base of over [REDACTED] units in North America, including our first turbo blower installed in a Wastewater Treatment Plant in North America that has been installed since [REDACTED] we inspect the blower’s

components and their residual life after, [REDACTED] years of field operation, to determine that the effective useful of our turbo blower in a WWTP extends to 30 years.

- Additionally, we measured improved field reliability from our lessons learned of our fleet of installations with over [REDACTED] operating hours. Please see below our reliability curve.



Therefore, considering the range of design life referenced above indicating 20-30 years, and substantiated with three blower manufacturers, we strongly believe the EUL for Blowers at WWTP systems should be approved at 20 years for all projects going forward.

**SCE agrees with [REDACTED] assessment of WWTP Blower Systems and requests CPUC custom ex ante team to review and approve this the 20-year EUL for Wastewater Treatment Plant (WWTP) Blowers based on supporting documentations provided in this EO and the fact that there aren't any EUL IDs that are reasonable for this application.**

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<sup>1</sup> CONFIDENTIAL [REDACTED] EUL Confirmation E-mail.pdf

<sup>2</sup> CONFIDENTIAL [REDACTED] EUL Justification.pdf

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<b>(If Needed) CPUC Staff Clarifying Question(s) to PA</b>
<b>(If Needed) PA Response to CPUC Clarifying Question(s)</b>
<b>CPUC Response</b> <p>The service life of blowers installed in wastewater treatment plants can vary due to factors such as the blower's make and model, maintenance procedures, operating conditions, and the overall quality of the equipment. With proper maintenance and operation, they can often exceed 20 years.</p> <p>Currently, no general guidelines or comprehensive research data are available regarding the expected useful life (EUL) of turbo blowers.</p> <p>Based on supporting information from three manufacturers provided by the PA, an estimated EUL of 20 years for turbo blowers appears reasonable and conservative.</p>

<b>EO Scope</b>	
<b>Describe the size of the applicable markets:</b>	
Is the proposed set of measures applicable to a limited or broad market? Please give your best estimate for applicable market size (the range of like customers or plants): <input type="checkbox"/> Small (under 20) <input checked="" type="checkbox"/> Large (100+) <input type="checkbox"/> Other (please specify_____)	
Estimate the size of the incentive per project associated with a project subject to the EO review	
<input type="checkbox"/> < \$7500 <input type="checkbox"/> \$7500 – \$25000 <input type="checkbox"/> \$25000 – \$100000 <input type="checkbox"/> \$100000 <input checked="" type="checkbox"/> N/A or unknown	
<b>EO Category</b>	<input type="checkbox"/> Policy <input type="checkbox"/> Measure Performance <input type="checkbox"/> Baseline <input type="checkbox"/> Calculation Technique <input type="checkbox"/> Documentation Requirements <input type="checkbox"/> Program Influence <input checked="" type="checkbox"/> Other (Non-DEER EUL determination)

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<p>If Policy, SW Rulebook Section and Rule Affected</p>	
<p>Measure Description</p>	<p>High Efficiency Wastewater Treatment Aeration Blower</p> <p>This measure description considers all replacement measure application types (NR, AR, and NC). Please see below examples of scenarios with each MAT:</p> <ol style="list-style-type: none"> <li>1. Normal Replacement (NR) – includes replacement of existing blowers with new High Efficiency Wastewater Treatment Aeration Blowers. The age and viability/condition of existing blowers suggest that there is not enough preponderance of evidence to claim accelerated replacement.</li> <li>2. Accelerated Replacement (AR) - includes replacement of existing blowers with new High Efficiency Wastewater Treatment Aeration Blowers. The age and viability/condition of existing blowers suggest that there is enough preponderance of evidence to claim accelerated replacement.             <ol style="list-style-type: none"> <li>a. Both NR and AR projects will mostly be 1:1 replacement scenarios, but can also include scenarios in which the proposed blowers are sized differently than existing blowers per their ability to meet service level requirements at higher efficiency. In some cases, due to added controls and process improvements, the number of blowers can even be consolidated if the service level requirements have dropped since the existing design of existing blower. In other cases, the customer may want to increase redundancy and increase the number of blowers. In all scenarios, the standard practice baseline will be normalized per proposed service level requirements.</li> </ol> </li> <li>3. New Construction (NC) – includes installation of new High Efficiency Wastewater Treatment Aeration Blower as part of a new plant or process. This may include added WWTP processes, such as MBR scouring blowers for example.</li> </ol>
<p>Industry/Market Sector</p>	<p> <input type="checkbox"/> Residential             <input checked="" type="checkbox"/> Commercial             <input checked="" type="checkbox"/> Industrial             <input checked="" type="checkbox"/> Agricultural             <input type="checkbox"/> Cross cutting   <input type="checkbox"/> Other (describe)         </p>