

1 *Failed 12/13/05*

2 **Submitted by:** Assemblymembers  
3 Tesche, Traini, Coffey, Stout  
4 **Prepared by:** Department of Assembly  
5 **For reading:** August 9, 2005

6 **ANCHORAGE, ALASKA**  
7 **No. AO 2005-108**

8  
9 **AN ORDINANCE OF THE ANCHORAGE MUNICIPAL ASSEMBLY**  
10 **REQUIRING UTILIZATION OF EFFICIENT COMBINED CYCLE POWER**  
11 **GENERATION TECHNOLOGY, TOGETHER WITH COMBINED HEAT AND**  
12 **POWER AND BEST AVAILABLE ENVIRONMENTAL CONTROL**  
13 **TECHNOLOGY, IN CONNECTION WITH REPLACEMENT OF EXISTING**  
14 **POWER GENERATION EQUIPMENT, INCLUDING UNIT #3, PLANT #1, BY**  
15 **MUNICIPAL LIGHT & POWER.**

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17  
18 THE ANCHORAGE ASSEMBLY ORDAINS:

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20 **Section 1:** That in connection with replacement of existing power  
21 generation equipment, including replacement of Unit #3, Plant 1, Municipal Light  
22 and Power shall acquire and utilize combined cycle technology together with  
23 combined heat and power and the best available emission control technology.

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25 **Section 2:** That this ordinance shall take effect upon passage and  
26 approval.

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28 PASSED AND APPROVED by the Anchorage Assembly this \_\_\_\_ day of  
29 \_\_\_\_\_, 2005.

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35 \_\_\_\_\_  
36 Chair

37 ATTEST:

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40 \_\_\_\_\_  
41 Municipal Clerk



**MUNICIPALITY OF ANCHORAGE**  
**ASSEMBLY MEMORANDUM**  
**NO. AM 905-2005**

**Meeting Date:** December 13, 2005

1       **From:** Assemblymember Allan Tesche

2       **Subject:** **AO 2005-108 — UTILIZATION OF COMBINED-CYCLE TECHNOLOGY,**  
3                   **COMBINED HEAT AND POWER, AND BEST AVAILABLE ENVIRONMENTAL**  
4                   **CONTROL TECHNOLOGY FOR REPLACEMENT OF GAS TURBINES OF**  
5                   **PLANT #1, MUNICIPAL LIGHT & POWER**  
6

7       Until 2004, a portion of electrical power produced by ML&P at Plant #1 in Ship Creek was  
8       produced by Unit 3, a machine originally installed in 1967. Unit #3 was a gas-fired, single-  
9       cycle turbine generator. Because Unit #3 has broken down, ML&P has decided to replace Unit  
10      #3 with a new gas turbine, to be located in Plant #1.  
11

12      Modern gas-fired turbines now use “combined cycle” technology which enables utilities to  
13      reduce fuel required to produce each kilowatt hour, lower per unit operating costs, and through  
14      modern pollution controls, meet stringent environmental standards. Combined-cycle turbines  
15      achieve these efficiencies by utilizing waste heat from the generator. It is estimated that use of  
16      combined-cycle turbines with waste-heat recovery will increase energy efficiency of the units  
17      from 30% to 45%. With district heating, fuel-saving efficiency rises to 65%. Because of these  
18      advantages, its competitive pricing, and widespread availability in the industry, use of combined-  
19      cycle technology is recommended in ML&P’s 2004 Integrated Resource Plan as the Utility  
20      replaces older equipment and expands its plant to meet new demands, such as Ft. Richardson and  
21      Elmendorf.  
22

23      Dwindling gas stocks in South Central Alaska make it imperative that utilities select technology  
24      which minimize fuel requirements and reduce operating costs per kilowatt hour. Use of  
25      combined-cycle technology and waste heat recovery on the same LM 2500 machine ML&P  
26      wishes to install in Plant #1 will reduce ML&P’s operating costs through significantly greater  
27      fuel efficiencies. Moreover, stringent environmental requirements virtually dictate use of the  
28      most modern technology with state-of-the art controls, particularly if new facilities are to be  
29      located in highly urbanized areas such as Ship Creek. Finally, a combined-cycle unit, if located  
30      in Ship Creek, would also produce steam which can heat buildings and public facilities in the  
31      Ship Creek and downtown area, much as the older Steam Plant in Ship Creek heated public  
32      buildings downtown until that facility was closed in 1978.  
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1 As ML&P replaces Unit #3, it can elect to configure Plant #1 to accommodate the more modern  
2 equipment or, alternatively, the Utility could contract with a private Qualified Facility in the area  
3 to undertake the construction and operation of a new plant capable of furnishing ML&P a  
4 reliable source of electrical power, at or below the costs ML&P would incur to install the same  
5 combined-cycle generator in its plant. That business decision should be left to the Utility.  
6 AO 2005-108, if enacted, would require ML&P to utilize combined-cycle technology, including  
7 waste heat recovery, in connection with replacement of Unit #3 in Plant #1, in addition to other  
8 units as they are replaced in order to realize the benefits set out in this memorandum.

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10 It is not the intent of this ordinance to address technology currently utilized in power generation  
11 or under study by ML&P, such as solar, wind, or geothermal means.

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13 Enactment of AO 2005-108 is recommended.

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15 Respectfully submitted

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19 Allan Tesche  
20 Assemblymember, Section 1  
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Municipality of Anchorage  
MUNICIPAL CLERK'S OFFICE  
**Agenda Document Control Sheet**

AM 905-2005

(SEE REVERSE SIDE FOR FURTHER INFORMATION)

<b>1</b>	SUBJECT OF AGENDA DOCUMENT	DATE PREPARED
	AO 2005-108 - UTILIZATION OF COMBINED- CYCLE TECHNOLOGY ...	12/8/05
		Indicate Documents Attached <input checked="" type="checkbox"/> AO <input type="checkbox"/> AR <input type="checkbox"/> AM <input type="checkbox"/> AIM
<b>2</b>	DEPARTMENT NAME	DIRECTOR'S NAME
	Assembly	Anna Fairclough, Chair
<b>3</b>	THE PERSON THE DOCUMENT WAS ACTUALLY PREPARED BY	HIS/HER PHONE NUMBER
	Susan Lutz	343-4572
<b>4</b>	<b>COORDINATED WITH AND REVIEWED BY</b>	<b>INITIALS</b>
	<b>Mayor</b>	
	<b>Municipal Clerk</b>	
	<b>Municipal Attorney</b>	
	<b>Employee Relations</b>	
	<b>Municipal Manager</b>	
	Cultural & Recreational Services	
	Fire	
	Health & Human Services	
	Merrill Field Airport	
	Municipal Light & Power	
	Office of Management and Budget	
	Police	
	Port of Anchorage	
	Public Works	
	Solid Waste Services	
	Transit	
	Water & Wastewater Utility	
	<b>Executive Manager</b>	
	Community Planning & Development	
	Finance, Chief Fiscal Officer	
	Heritage Land Bank	
	Management Information Services	
	Property & Facility Management	
	Purchasing	
	<b>Other</b>	
<b>5</b>	<b>Special Instructions/Comments</b> REF. AO 2005-108	
	ADDENDUM - CONTINUED PUBLIC HEARINGS - 13.C.1.	
<b>6</b>	ASSEMBLY HEARING DATE REQUESTED	<b>7</b>
	12/13/05	
	PUBLIC HEARING DATE REQUESTED	
	12/13/05	

M.O.A.  
 2005 DEC - 8 AM 11:10  
 CLERK'S OFFICE

**Content Information**

**Content ID :** 003158

**Type:** Ordinance - AO

AN ORDINANCE OF THE ANCHORAGE MUNICIPAL ASSEMBLY  
REQUIRING UTILIZATION OF EFFICIENT **COMBINED CYCLE**

**Title:** **POWER GENERATION TECHNOLOGY**, TOGETHER WITH  
COMBINED HEAT AND POWER AND BEST AVAILABLE  
ENVIRONMENTAL CONTROL ENVIRONMENTAL CONTROL  
TECHNOLOGY, IN CONNECTION

**Author:** gray-jacksone

**Initiating Dept:** Assembly

**Date Prepared:** 8/5/05 11:02 AM

**Director Name:** Anna Fairclough

**Assembly**

**Meeting Date** 8/9/05

**MM/DD/YY:**

**d Public**

**Hearing Date** ~~8/23/05~~ 9/13/05

**MM/DD/YY:**

**Workflow History**

<u>Workflow Name</u>	<u>Action Date</u>	<u>Action</u>	<u>User</u>	<u>Security Group</u>	<u>Content ID</u>
AllOrdinanceWorkflow	8/5/05 11:04 AM	Checkin	gray-jacksone	Public	003158

M.O.A.  
2005 AUG - 5 AM 11:42  
CLERKS OFFICE