

 ORIGINAL

AMENDMENT FIVE TO  
SERVICE AGREEMENT

This Amendment Five to Service Agreement, Contract A03625 (the "Amendment") is made and entered into as of \_\_\_\_\_, 2013, by and between the County of Hennepin (the "County"), and Covanta Hennepin Energy Resource Co., Limited Partnership (the "Company").

WHEREAS, the County and the Company are parties to the Service Agreement, Contract No. A03625, dated July 1, 2003 (the "Agreement") for the operation of a solid waste resource recovery facility owned by the County (the "Facility"); and

WHEREAS, the County and the Company desire to enter into this Amendment for the purpose of further defining the roles and responsibilities of the parties relating to the maintenance and improvement of the Facility.

NOW, THEREFORE, in consideration of the mutual undertakings and agreements herein set forth, the parties agree as follows:

1. The following definitions are added to Section 1.01 of the Agreement:

"Odor Control System" means existing and future stationary and mobile mechanical equipment and associated appurtenances located at the Facility that nebulize and dispense specialized liquids into the air to suppress and/or neutralize malodors that emanate from solid waste or its combustion byproducts. The Odor Control System existing at the Facility in September, 2013, consists of (a) one stationary OMI 450 CFM Vapor Phase Unit, its inlet and outlet ducting and filters, and its external 230/460 VAC, Triple Phase, 60 Hz power supply box and (b) two Jaybird Aquafog ORSM mobile fogging units.

2. The definition of "System Replacement Projects" is amended to read as follows:

"System Replacement Projects" means those projects set forth in Attachment A to the Agreement, as such Attachment A may be amended from time to time, and any additional capital improvement projects that are included in the approved Hennepin County Capital Improvement Plan and are authorized by the County Administrator to be added to Attachment A as a System Replacement Project. The parties agree that Attachment A to this Amendment Five to Service Agreement replaces and supersedes the previous Attachment A created pursuant to Amendment Two to Service Agreement and Amendment Three to Service Agreement.

3. Section 2.12 of the Agreement is amended to read as follows:

2.12 System Preservation Projects

- (A) The County and the Company recognize that System Replacement Projects are important for the continued reliability of the Facility. Subject to the provisions of

JASIDU... this Section 2.12, the County will be responsible for the initial capital costs of the System Replacement Projects. The parties will cooperate in the determination of the appropriateness of such projects. The System Replacement Projects will be performed when there is a demonstrable need, as agreed to by the parties. The County agrees that it will not unreasonably withhold or delay agreement to a request for a System Replacement Project, and that it will determine if any reduction in guarantees will be permitted for the System Replacement Project under paragraph (E) below prior to the parties finalizing their agreement to proceed with the System Replacement Project. The County reserves the right to have any proposed System Replacement Project reviewed by outside consultants to evaluate whether such project is required.

- (B) Prior to performing any System Replacement Project, the Company will review with the County the design of the project, schedule for performance of the project and the estimated cost of the project. The cost of each project may include the Company's engineering and administrative costs. If requested by the County, the Company will procure bids for any project on terms and conditions mutually acceptable to both parties. For System Replacement Projects having a cost in excess of \$50,000, the Company may add a markup of 7.5% to the project costs. Within 30 days of receiving an invoice therefore, the County will reimburse the Company for System Replacement Project costs, as demonstrated by Cost Substantiation.
- (C) The County has the authority to participate in the oversight of all aspects of System Replacement Projects, including but not limited to planning, design, cost, selection of contractors, construction and final approval of such projects, provided however, the County's participation, comments or acceptance of any System Replacement Project shall not be deemed to be an approval of the adequacy of the design or the quality of the materials used. The County's comments or acceptance of the design of any project shall not relieve the Company of its obligations under this Agreement or adversely affect the rights of the County under this Agreement.
- (D) Once each System Replacement Project is completed to the reasonable satisfaction of the County, the Company will thereafter be responsible for all maintenance, repair and upkeep of such System Replacement Project in accordance with its obligations under this Agreement.
- (E) The County, through the County Administrator in his/her sole discretion, shall have the authority to reduce the Guaranteed Throughput Capacity and/or the Guaranteed Net Electric Output when waste processing operations at the Facility are at a reduced capacity or the Facility is shutdown in order for the Company or the County to complete System Replacement Projects which are not part of a regularly scheduled outage. If installation of a System Replacement Project extends a regularly scheduled outage, the extra days needed to complete such project would be eligible for calculation of the reduction. The reduction shall be equal to the difference between the average number of tons processed daily

(calculated using the average daily tons processed for the previous twelve (12) months through the month proceeding the date when waste processing operations are reduced or shut down for a System Replacement Project) and the tons processed, if any, during the period of reduced capacity or shutdown. Periods of reduced capacity or shutdowns for maintenance or repair, including unscheduled downtimes for emergency maintenance or repair, shall not be eligible for Guaranteed Throughput Capacity and/or Guaranteed Net Electric Output reductions.

4. New subsection (G) is added to Section 2.01, Operation of the Facility, to read as follows:

(G) The parties agree to the following terms associated with the Odor Control System:

- (i) The Company will operate and maintain the Odor Control System in the same manner and pursuant to the terms and conditions of this Agreement applicable to the maintenance of the Facility, and in accordance with the requirements of the Odor Control System operations and maintenance manual given to the Company by the County. Said manual may be modified if new equipment is installed or at any other time by mutual agreement between the Director and the Facility operations manager.
- (ii) The Company will make all necessary repairs to the Odor Control System.
- (iii) Costs associated with the maintenance and repair of the Odor Control System shall be a Pass Through Operating Cost under the Agreement and will be demonstrated by Cost Substantiation.

5. Section 2.09, Recordkeeping, Subsection (A), is amended to add the following additional paragraph:

The Company shall establish and maintain an information system to provide storage and ready retrieval by the County of all information necessary to verify repair information, calculations and other maintenance data relating to the Facility, including but not limited to, monthly performance reports used for Company-wide reporting system; maintenance tracking program and performance tracking systems and reports, e.g. maintenance program history and vibration program history; SCADA system and historical program; operating logs; operator log sheets; water treatment logs and reports; all available OEM manuals and documentation; and outage plans and reports. The Company shall provide a computer terminal which will have the above information loaded on no less than a weekly basis from which County staff can review such maintenance and operational records and logs.

6. A new Section 2.13 is added to the Agreement to read as follows:

2.13 County Enhancements

The County reserves the right to install signage, structures, appurtenances, improvements, additions, elements and other enhancements to the Facility or Facility site necessary or desirable, in the County's sole discretion, that do not reasonably impact the operation of the Facility. Such enhancements may be performed by County or third party contractors and shall be done at the sole expense of the County. The Company shall fully cooperate with the County in the County's efforts to complete such enhancements.

7. The parties agree that Paragraph 4 of Amendment Two to Service Agreement shall be deleted.

**COUNTY BOARD AUTHORIZATION**

Reviewed by the County Attorney's Office

*Paul Fejn*  
Assistant County Attorney

Date: 11/18/2013

COUNTY OF HENNEPIN  
STATE OF MINNESOTA

By: *Mike Gatz*  
Chair of Its County Board

ATTEST: *yc clerk*  
Deputy Clerk of County Board

Date: 1.3.14

By: *David Hough*  
David Hough, County Administrator

Date: \_\_\_\_\_

By: *Paul L. Bevo*  
Assistant County Administrator, Public Works

Date: 12/26/2013

**Recommended for Approval**

By: *Carl Michael*  
Director, Department of Environmental Services

Date: 11/15/13

CONTRACTOR  
CONTRACTOR warrants that the person who executed this Agreement is authorized to do so on behalf of CONTRACTOR as required by applicable articles, bylaws, resolutions or ordinances.

Printed Name: PAUL E. STAUDER

Signed: *Paul E. Stauder*

Title: SVP - Covanta

Date: 11/13/13

Attachment A

Hennepin Energy Recovery Center - Plant Systems Maintenance Plan for Life Extension  
of Facility [Systems Replacement Projects]

Plant System:

**Ash Handling System:**

Main Vibrating Pan Conveyor

[Completed] Pan

Truss & Support Structure

Drive

Grizzly/Scalper- Part of Main Vibrating

Standby Conveyor

New Drive Assembly

Conveyor Frame

Standby Grizzly

Stock Pile Conveyor

Drive System

Conveyor Frame

Residue Elevating Conveyor

Drive System

Conveyor Frame

Vibrating Pan Feeder

Pan

Support Structure

Drive.

Grizzly Chute- Part of Vibrating Pan Conveyor

Ferrous Chute - Work at Two Locations

Quench Reactor Conveyor

New Conveyor

Fly Ash Elevating Conveyor

New Conveyor

Baghouse Chain Conveyor (4)

New Conveyors ( 4)

Undergrate Chain Conveyor (4)

New Conveyors ( 4)

Economizer Chain Conveyor (4)

New Conveyors ( 4)

[Completed] Ash Screw Conveyor ( 4 )

New Conveyors ( 4)

Ash Conditioner  
Silo  
Cone  
Feeder  
Pug Mill  
Control System  
Fly ash Expansion Joint  
Fly ash Silo Dust Collector

**Boiler & Auxiliary:**

Furnace Tube Panels  
Inconel Overlay Furnace [Completed- Upper Furnace, Lower Furnace and Second Pass - Not Completed]  
Screen Tubes with Inconel Overlay  
Boiler #1  
Boiler #2  
Expansion Joints (3 per unit)  
Boiler #1  
Boiler #2  
Boiler Steel Casing  
Evaporator Hopper  
Boiler #1 Refractory Replacement  
Boiler #2 Refractory Replacement  
Superheater Hopper  
Boiler #1 Refractory Replacement  
Boiler #2 Refractory Replacement  
Internal Economizer Hopper  
Boiler #1 Refractory Replacement  
Boiler #2 Refractory Replacement  
External Economizer Hopper  
Boiler #1 Refractory Replacement  
Boiler #2 Refractory Replacement  
Auxiliary Burners  
Boiler #1 Controller  
Boiler #2 Controller  
Rappers  
Boiler #1 controller  
Boiler #2 controller  
Furnace Refractory  
Boiler #1  
Boiler #2  
Feedtable Refractory  
Feedtable Transition Boiler #1  
Feedtable Transition Boiler #2

Tertiary Air Fans  
Boiler #1  
Boiler #2  
Main Steam Valve (Pneumatic Block):  
Boiler #1  
Boiler #2  
Safety Valve - 10 valves total  
Safety Valves Boilers- Boiler #1 (3)  
Safety Valves Boilers- Boiler #2 (3)  
Safety Valves Common (4)

**Baghouse:**

Hopper Heaters  
Boiler #1  
Boiler #2  
Level Detectors  
Module ISO Damper  
Boiler# 1- Pneumatic (16)  
Boiler# 1- Manual (8)  
Boiler# 2- Pneumatic (16)  
Boiler# 2 -Manual (8)  
Reverse Air Fan  
Boiler #1  
Boiler #2  
Expansion Joints  
Boiler #1  
Boiler #2  
Ductwork  
Boiler #1 Economizer Outlet Scrubber Inlet  
Boiler #2 Economizer Outlet Scrubber Inlet  
Hoppers  
Boiler #1  
Boiler #2  
[Completed] Rebuild baghouse compartments  
Remaining 4 compartments in unit #1  
8 compartments in unit #2

**Air Pollution Control Systems:**

Scrubber  
Unit #1:  
S.S.Liner  
Sectional Replacement  
Inlet Ductwork  
Outlet Ductwork  
Unit #2:  
S.S.Liner



Sectional Replacement  
Inlet Ductwork  
Outlet Ductwork  
Pebble Silo Dust Collector  
Lime Feeder - Pebble Lime to Tank  
Slaker- Mechanical  
[Completed] Slaker- Controller  
Grit Screen  
Tank Mixer  
Slurry Pumps  
Dolomitic Lime Delivery System- New Design  
Dolomitic Silo Dust Collector

**Carbon Injection System:**

Scales  
Feeders  
Controls  
Blower System  
Carbon Silo Dust Collector

**Buildings & Grounds:**

Plant Elevator  
Tipping Floor  
    Floor Resurfacing  
    [Completed] Wheel Stop Replacement  
Plant Roads  
Control Room A/C  
[Completed] Admin HVAC  
Demin Floor Surface  
[Completed] Plant Structure Painting (Three Phases)  
Security Phone System  
Hauler Restroom  
[Completed] Plant Locker Room & Restroom Fixtures  
Boiler House Roof  
Tipping hall roof

**Cooling System (water):**

Main Condensor Retube  
Isolation Valves  
Cooling Tower  
    Cooling Tower Fans  
    Cooling Tower Gearboxes  
    [Completed] Cooling Tower Fan Motors  
    [Completed] Cooling Tower Structure  
    [Completed] Cooling Tower Fill & Mist Eliminators  
    [Completed] Cooling Tower Siding

[Completed] Cooling Tower Chemical System  
Circulating Pump  
Pump Motor

**Electrical Equipment:**

UPS Batteries  
Main Switch Gear-480V  
Motor Control Center  
Secondary Unit Substation

**Environmental Monitoring:**

CEM Equipment  
CEMS Software  
New Extraction CEMS System

**Fire Protection:**

Fire Pump, controller, motor, etc  
Fire Deluge System Valve  
System Control Panel (Control Room)  
Cooling Tower Deluge System

**Feedwater System:**

[Completed] Boiler Feedwater Pump (BWFP) (3 total)  
Boiler Feedwater Pump Motor  
Steam Driven BWFP  
BWFP Turbine  
Feedwater System Valves  
Check Valves  
Control Valves  
Isolation Valves  
Steam Coil Air Heaters (Finless) Both Units  
Steam Coil Air Heaters Trap System Both Units  
Expansion Joints Both Units

**Instrumentation & Control:**

PLC's I Controllers  
Allen Bradley-APC Units 1 & 2  
Allen Bradley-Sicker  
Cooling Tower  
Allen Bradley-Ash Conditioner  
New Steam Project  
Bailey Software Upgrade  
Positioners  
Transmitters  
Controls Modernization JS (PCU Upgrades)

**Refuse Handling:**

[Completed] North Crane:

Complete crane upgrade

[Completed] South Crane:

Complete crane upgrade

**Steam & Condensate System:**

Main Steam Trap

Other Steam Traps

Air Ejector System

**Condensate Pumps:**

[Completed] Pump #1

Pump #2

Make Up Water System:

Pump #1

Pump #2

**Stoker, Grates & Auxiliary:**

Feed Chutes

Boiler #1 - With Refractory installed

Boiler #2 - With Refractory installed

Feed Tables

Boiler #1 new upper and lower tables replaced

Boiler #2 new upper & lower tables replaced

Grate Surface

Boiler #1 -Motion Beams in Phases

Boiler #2 - Motion Beams in Phases

[Completed] Ash Discharger

Boiler #1- Two Phases

Boiler #2- Two Phases

Hydraulic Systems:

Boiler #1

Boiler #2

Lube System:

Boiler #1

Boiler #2

**Turbine/ Generator:**

**[Below list Completed, however all Turbine/ Generator (TG) work items must remain open for future TG testing, inspection, troubleshooting and repair**

Rotor Blading Install First Stage

Turbine parts stage 2

Turbine parts stage 3

Turbine parts stage 4

Stage 12,13,14 Phased Array UT

Turbine Parts Stage 1

- Inspect turbine rotor
- Restore Stage 13 Disc
- Restore Row 14 Disc
- Supply Row 13 & 14 Blade Rows
- Install Row 13 & 14 Blade Rows
- Pro-tech over speed protection
- Structural integrity to test row 13
- T/G Crane Upgrades
- [Completed] Bentley Nevada Control System (obsolete)
- [Completed] Generator:
  - Exciter
  - Windings - Rotors *and* Stator
  - Rewedging

**Truck Scales:**

- Weigh Scales
  - Change out to Electronic Scale system (3)
  - Software Upgrade
- Scale House

**Boiler Water Treatment:**

- Demineralizer System (Change to RO System)
- Condensate Polisher
- Chemical Pump Skid
- Water Storage Tank
- Sample System
- Conductivity System
- Silica Analyzers

**Plant Air System:**

- 3 Compressors
- 2 Air Dryers
- 3 Xpand Air Control Valve

**Evaporator Tubes:**

- Boiler #1 Evaporator #1
- Boiler #1 Evaporator #2
- Boiler #2 Evaporator #1
- Boiler #1 Evaporator #2

**Superheater Tubes: (shared in 2008-2009)**

- Boiler #1 Superheater #1
- Boiler #1 Superheater #2
- Boiler #2 Superheater #1
- Boiler #2 Superheater #2

Economizer Tubes:

Boiler #1 Internal  
Boiler #1 External  
Boiler #2 Internal  
Boiler #2 External

Piping Systems

Steam

Feed water

Condensate - phases

Cooling water -phases

Service water- phases

City water - phases

Drum magnet:

Switch to electromagnet

New urea ammonia system

Plant siding damage, deterioration, or upgrade:

[Completed] Ash handling building  
Ash elevating conveyor enclosure  
Tipping hall  
Plant  
[Completed] Admin building

[Completed] Landscaping and irrigation

[Completed] Back end drainage

Plant wiring:

APC

Residue area

[Completed] Lighting retrofit

Gas handling:

ID fan motor - VFD design unit #1  
ID fan motor - VFD design unit #2  
PA fan motor- VFD design unit #1  
PA fan motor- VFD.design unit #2  
OF A fan motor- VFD design unit #1  
OF A fan motor - Vfd design unit #2

[Completed] New exit portal and door on south wall of tipping hall, and associated changes to plant road system

[Completed] New door covering existing exit portals on east wall of tipping hall

[Completed] Other exterior improvements to make HERC Facility compatible with surrounding neighborhood

