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Г													
TA	G LOCATION	AREA	Elevation	(W) to	Manufacturer	Type	Model	Con	Interior	el Pressure	Outlet Pressure	Application	Condition
131		Sanitation dept back corner		8	SAR	_	_						
132		Seg area after door up	<del></del>	8	HOFF	<del></del>		<del></del>	75	15	0	DP	
133		Down first hall on left		-+-	HOFF	RAI			75	15	0	DP	0
134	SEG Building	Down first hall on left			HOFF	RAI	<del>-  </del>	<del></del>	75	15	0	DP	0
135	SEG Building	Seg #5	<u> </u>	6	ARM	F&:	<del> </del>			15	0	DP	0
136	SEG Building	Seg #5 at end to left		-+-	HOFF		<del></del>			15	0	DP	0
137	SEG Building	Seg #5 at end to right				RAI	+			15	0	DP	0
138	SEG Building	Seg #6 behind desk	<del>                                     </del>	6	HOFF	RAI	+			15	0	DP	0
139	SEG Building	Seg #6 behind desk	<del> </del>	<del></del> -	ARM	F&1	<del></del>			15	0	DP	0
140	SEG Building	Seg #6 behind desk	<del> </del>	<del></del>	HOFF	RAL	<del> </del>			15	0	DP	0
141	SEG Building	In front of seg 2	<del> </del>	_	HOFF	RAD	+	+	5	15	0	DP	0
142	SEG Building	Down seg 4 hall			HOFF	RAD	+	C 7	5	15	0	DP	0
43	SEG Building	Seg - R/O		_	HOFF	F&T	+	0.7	5	15	0	DP	0
44	SEG Building	Seg - R/O across room 005		_	HOFF	F&T	UNK	1.2	5	15	0	DP	0
45	SEG Building	In bathroom near 005			HOFF	F&T	UNK	1.2	5	15	0	DP	0:
	1	The second real dos		7 <u> </u>	HOFF	RAD	170	0.7	5	15	0	DP	<u></u>
46	SEG Basement	Down bottom of stairs		8	DUN	F&T	UNK		2	15	0	DP	Ol
47	SEG Basement	On wall to left down stairs		2	ARM	BUC	800	0.79		15	0	DP	Or
48	SEG Basement	Behind condensate tank on left		3 ,	ARM	BUC	800	0. 75		15	0	DP	<u>Or</u> B1
49	SEG Basement	On back side of water heater	1		UNK	F&T	UNK	2	2	15	0	DP	OK
50	SEG Basement	Near electrical panels	7	, _ /	ARM	BUC	800	0. 75		15	0	DP	<u>ок</u>
i1 2	Admin Building Boiler Room	Canteen Entrance near stairs	7		OFF	RAD	17C	0.75		15	0	DP	
_		Littratice flear stairs	8	_ A	ARM	F&T	В3	0.75	-	15	0	DP	os
3	Boiler Room	Above overhead door near old plant	15	_ A	ARM	F&T	В8			5	0	DP	OS
4	Boiler Room	Above overhead door near old plant	18	A	\RM	F&T	В8	.2		5	0	DP	<u>ок</u> ок
	Boiler Room Boiler Room	Above overhead door near old plant Below tags 153-154	20	А	RM	F&T	В8	2		5	0	DP	ОК
		Dolow tags 133-154	10	A	RM	F&T	В3	0.75	1	5	0	DP	
7	Boiler Room	Near condensate tank and exit sign			] ¯	T			<u>-</u>	$\dagger$	+		_ок
3 1	Boiler Room	Near windows & oil tanks	10		RM	BUC	816	21	6	0	o	DP	ок
) ]I		After tag 159	1		RM	BUC	816	2.5	6	0	0	DP	ок
T		Above overhead door in back of	1	AI	RM	BUC	816		60	o T	0	DP	ОК
E		room	12	A 1			_			T			
E	Boiler Room	Above overhead door in back of room			RM	F&T	B8		15	5	0	DP	ок
Е	Boiler Room	Above overhead door in back of room	15		RM	F&T	B8		15	5	0	DP	ок
	oiler Room	Across from control room on wall	20		RM	F&T	B8		15	-	0	DP	ок
В		Across from boiler #2	3			F&T	В3	0.75	15	1	0	DP	ок
		Across from boiler #2	1	AR		BUC	816	2	60		0	DP	ОК
		TOTAL DOILE #2	1	AR	RMI I	BUC	816	2	60	+	0	DP	

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TA		AREA	Elevation (ft)	Manufacturer	Type	Model	Connection (in.)	Inlet Pressure	Outlet Pressure	Application	Condition
166		Back of boiler #2 above door		2 ARI			2	15	0		DP (
167		Back of boiler #2 above door	1	7 ARI	VI F&	T B8	2	15	0	1	DP (
168		Back of boiler #2 above door	2	0 ARI	√l F&	Т В8	2	15	0	1	DP (
170		On right side of boiler #2	<del></del>	O AR			0.75	15	0	[	DP (
171		In control room unit heater	1	+			0.75	15	0		OP (
172		In generator room unit heater		B ARM			0.75	15	0		OP (
173		KSR unit heater KSR unit heater		HOF	<del> </del>		0.75	15	0		OP (
<del></del>	KSR Laundry	NOR Unit heater		HOF	F&	T FT53	0.75	15	0		OP (
174		Near condensate tank	ļ <u>.</u>	ARM	1 F&	т ва	2	15	0		OP C
175		Near condensate tank	7	ARM	BUC	800	0.75	15	0	D	P C
176	,	Unit heater near condensate tank	7	ARM	вис	811	0.75	15	0	D	P C
177		Behind dryer #0	6	ARM	вис	811	0.75	15	0	P	s c
178	Room KSR Laundry	Behind dryer #1	6	ARM	BUC	711	0.75	15	0	Р	s c
179	Room KSR Laundry	Behind dryer #1	6	ARM	вис	811	0.75	15	0	P	s c
180	Room KSR Laundry	Behind dryer #2	6	ARM	вис	811	0.75	15	0	P	s o
81	Room KSR Laundry	Behind dryer #2	6	ARM	вис	811	0.75	15	0	P	s o
182	Room KSR Laundry	Behind dryer #3	6	ARM	BUC	811	0.75	15	0	PS	s o
183	Room KSR Laundry	Behind dryer #4	6	ARM	BUC	800	0.75	15	0	PS	S B
84	Room KSR Laundry	Behind dryer #4	6	ARM	BUC	800	0.75	15	0	PS	3 01
85	Room KSR Laundry	Behind dryer #5	6	ARM	BUC	800	0.75	15	0	PS	01
86	Room KSR Laundry	Behind dryer #5	6	ARM	BUC	800	0.75	15	0	PS	O P
87	Room KSR Laundry	Room after laundry unit heater	9	ARM	F&T	ВЗ	).75	15	0	DP	05
88	Room KSR Laundry	Drip leg above compressor	9	ARM	вис	800	0.75	15	0	DP	OF
89	Room KSR Laundry	On water heaters in back room	2	ARM	BUC	816	2	15	0	DP	OK
90	Room KSR Laundry	On water heaters in back room	5	ARM	BUC	816	2	15	0	DP	OK
91	Room	Behind water heaters	4	ARM	BUC	800	∴75	15	0	DP	ОК
92	MVL Building MVL Building	To left	4	SAR	BUC	В1Н	□.75	15	0	DP	os
	MVL Building	In back All the way in back	4	SAR	BUC	B1H	.75	15	0	DP	os
	Metal Fab 2	Above metal fab 2	4	SAR	BUC	B1H	.75	15	0	DP	os
	Metal Fab 2	Above metal fab 2	12	SAR	TD	TD52	0.75	15	0	DP	ОК
	Metal Fab 2	Inside Metal Fab office	4	SAR	TD TD	TD52	0.75	15	0	DP	OK
8	Metal Fab 2	Near cleaner	12	SAR	TD	TD52	0.75	15 15	0	DP DP	OS
9	Metal Fab 2	In fab 1 straight near side offices	12	SAR	TD	TD52	C 75	15	0	DP DP	os os
ntu	Men Bepartm	entant Georgia etians de offices rmance Contract – Phase B	12	SAR	TD	TD52	0.75	15	0		age of

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## ECM 8 - Condensate Pump Replacement and Repair

#### **DETAILED ECM DESCRIPTION**

#### Proposed System:

Replacement of the deteriorated portions of the steam and condensate return lines on the Kentucky State Reformatory campus – and re-insulation of the remaining lengths – is currently being undertaken by the Department of Corrections. This will result in significant energy savings due to a reduction in piping radiant losses and steam leaks. However, significantly greater savings could be achieved by also replacing and/or repairing the existing condensate return pumps throughout the campus buildings. Savings would result from an overall increase in the volume of condensate returned to the boiler plant and, therefore, reduced makeup quantities.

NORESCO proposes to replace twelve (12) existing electrically powered condensate return pumps on the KSR campus with new steam pressure-powered pumps. A steam-powered pump operated in much the same way as a steam trap: As condensate fills the pump, a float inside the device rises. Once the float reaches a trigger point, valves are opened which allow team to fill the pump, forcing the condensate out. As the condensate leaves the pump, the float falls allowing the steam valve to close once more. This type of system allows condensate to be returned at temperatures well above the 210°F (99°C) limit of conventional electric centrifugal pumps without the headaches of leaking seals or cavitation problems.

The Department of Corrections may select which pumps are the highest priority for replacement. Any remaining electrically-powered condensate pumps will be inspected and repaired as necessary to ensure proper operation. This may include motor replacements or rebuilds, tank level control replacement, and recommissioning of controls.

Savings will result from a number of different sources, including: reduced makeup water quantities, reduced boiler fuel consumption, and reduced water softening chemical usage.

#### **EQUIPMENT INFORMATION**

NORESCO plans to install steam-powered pumps manufactured by one or more of the following companies. If the Department of Corrections has standardized on a specific manufacturer for steam specialties, then that manufacturer will be favored for this project.

- Armstrong Intl. 816 Maple Street Three Rivers, MI 49093 (616) 273-1415
- Spirax Sarco Inc. P.O.Box 119 Allentown, PA 18105 (215) 433-5830

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ECM 9 – New Gas-Fired	Kitchen Appliances at RCC
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#### **DETAILED ECM DESCRIPTION**

#### Proposed System:

NORESCO proposes to remove the two (2) existing Blodgett Mark V electric convection ovens in the Roederer Correctional Complex kitchen and install new gas-fired units in their place. The gas-fired cooking equipment will be properly sized to match the heat output of the existing units based on information received from the manufacturer. The new equipment will perform the same tasks as the electric units, but at a reduced cost.

In addition, the existing natural gas line will be modified as necessary to adequately supply both the new and the existing gas-fired equipment.

Finally, NORESCO will also replace the existing "experimental" Blakeslee Rack-A-Round dishwasher with a new, more conventional unit. The new dishwasher will also make use of natural gas-fired booster heaters, thereby resulting in additional electric energy savings.

The proposed equipment will provide the facilities with an optimum combination of efficiency, convenience, and performance. The facility food preparation staff would have little trouble adapting to the appliances.

#### **EQUIPMENT INFORMATION**

NORESCO proposes to replace the above equipment one-for-one with natural gas-fired cooking appliances. The new gas-fired convection ovens will be manufactured by Blodgett, Alto-Sham, or equal. The new dishwasher will be manufactured by Hobart, Insinger, or equal. Final equipment selections will be coordinated with the facility kitchen statif.

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## ECM 10 – Water-Cooled Ice Machine Replacement

#### **DETAILED ECM DESCRIPTION**

#### Proposed System:

NORESCO proposes to remove the existing "single-pass" water-cooled ice machine compressors located throughout the KSR and LLCC dorms and install new air-cooled units in their place. The new air-cooled units will consume slightly more electricity to produce the same amount of ice; however, the water consumption will be reduced to zero, resulting in a net reduction in operating cost.

The new units will also be somewhat more reliable, as there are no condenser water lines to become plugged.

The following table presents the electric and water ratings for the existing and proposed ice machine compressors. These ratings are based on Scotsman model CME-506 ice machines, which appear to be the predominant units in the La Grange facilities.

Commodity	ii. Units	Air- Cooled	Waler- Cooled
Electric	kWh/100lb	7.30	6.70
Water	Gal/1001b		170
Total Cost* of Operation	\$/100lb	\$0.16	\$0.40

<sup>\*</sup> Based on \$0.0221/kWh and \$1.48/kga

The new air-cooled compressor units will be installed on existing ice bins. NORESCO has budgeted to replace a total of (20) water-cooled ice machine compressors at the Kentucky State Reformatory and (7) units at the Luther Luckett Correctional Complex. (All ice machines observed on the Roederer Correctional Complex were already air-cooled.)

#### **EQUIPMENT INFORMATION**

NORESCO proposes to install air-cooled ice machine compressors manufactured by Scotsman Ice Systems, or approved equal.

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# ECM 11 - Instantaneous Domestic Hot Water Heaters

# **DETAILED ECM DESCRIPTION**

Proposed System:

NORESCO proposes to remove the existing tank-type steam converters on the Kentucky State Reformatory campus and install new instantaneous domestic water heaters in their place.

The following buildings will be affected by this measure:

- Administration
- Kitchen/Dining Hall
- Dorm 1
- Dorm 2

The new instantaneous water heaters will meet the same hot water demands, but at a much higher efficiency. The existing steam, water, and condensate leaks will be eliminated. The new heaters will also take up only a fraction of the space currently occupied by the tank-type heaters. This will reduce standing radiant losses, as well as freeing up much needed storage space.

NORESCO will phase the installation of the storage tanks to ensure that domestic hot water service continues during the construction. Isolation valves will be installed to allow the existing tank to continue to operate prior to completion of the new tanks.

# **EQUIPMENT INFORMATION**

NORESCO proposes to install MicroMix®II instantaneous steam hot water heaters as manufactured by Graham Engineering Corporation, or approved equal.

The proposed unit consists of two main components, the heat exchanger and the blending valve. The blending valve is a 3-way valve, which mixes cold water with overheated water to provide the outlet temperature desired. The unit is completely self-contained, requiring no electric or pneumatic connections. The blending valve operates automatically based on the differential pressure between the supply (or county) water side and the demand (or building) water side.

This "instantaneous" or "feed forward" method of control provides hot water immediately based on demand. Even when flow demands change rapidly, the outlet water temperature is maintained with no overshooting or undershooting of the desired temperature. Accuracy is  $\pm 4^{\circ}$ F through all flows.

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### **Training Provisions**

Operations training will be provided in conjunction with the commissioning process when new equipment and systems are brought on-line. This process includes the completion of as-built record drawings based on finished locations of equipment and materials, the compilation of manufacturers literature, warranty information, operating instructions, and instruction on the contents and use of the information. Noresco will provide or arrange for comprehensive instruction on the operation, troubleshooting, maintenance and repair of equipment and systems modified or installed under each ECM. Instruction will include both classroom phase and practical application phase.

The training to be provided each Energy Conservation Measure is as follows:

<u>Lighting / Lighting Retrofits</u> – NORESCO, in coordination with the equipment manufacturer, would provide a training on technology application, trouble shooting, safety and maintenance instructions for each technology installed.

Building Controls - Noresco will include a minimum of 40 hours of training conducted by the Training Manger of the selected controls contractor in conjunction with highly qualified Noresco Senior Project Managers and Senior Engineers who have previous experience in conducting such a training program. The training would be broken up into the control systems basics leading into the control system installed in each of the buildings. The length on each session would be flexible and geared towards accomplishing the task of training in the most comprehensive manner possible.

Boiler Controls - Training will be conducted by the Boiler Controls Manufacturer. NORESCO will coordinate the design of the training program to meet the requirements of the Department of Corrections. At a minimum the training will include onsite operations and maintenance of each piece of equipment installed along with a session geared towards trouble shooting and safety instructions.

New Windows in KSR Administration Buildings - Safety and maintenance instructions will be provided by the manufacturer. No special operational training required

<u>Water Conservation (Plumbing Fixtures)</u> - Written trouble shooting, safety and maintenance instruction will be provided for new equipment installed. In addition a comprehensive training session for staff (and potentially inmates too) will be provided by the manufacturer as desired by the facility.

Steam Heating System Renovation at KSR Administration Building - NORESCO, in coordination with the mechanical contractor, will provide training on operation, trouble-shooting, safety and maintenance instruction for the units installed. Written trouble-shooting, safety and maintenance instruction will be provided.

<u>Laundry Ozone Equipment</u> - Written trouble shooting, safety and maintenance instruction will be provided for new equipment installed in the laundries at each facility. Again, we envision a comprehensive training session for staff (and potentially inmates too) as desired by the facility. The economical operation of the laundry equipment would be the primary topic during classroom and site sessions.

<u>Piping Insulation</u> - Safety and maintenance instructions will be provided by the manufacturer. No special operational training required.

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<u>Steam Traps</u> - Written trouble shooting, safety and maintenance instruction will be provided for steam trap projects. In addition we envision a comprehensive training session for staff (and potentially inmates too) as desired by the facility regarding the importance of trap maintenance and how that maintenance can be enhanced through regular inspections and observation.

New Gas-fired Kitchen Equipment - Safety and maintenance instructions will be provided by the manufacturer. No special operational training required.

<u>New Air-cooled Ice Machines</u> - Safety and maintenance instructions will be provided by the manufacturer. No special operational training required

Instantaneous Domestic Water Heaters - Written trouble shooting, safety and maintenance instruction will be provided for water heaters installed. In addition we envision a comprehensive training session for staff (and potentially inmates too) as desired by the facility regarding the importance of maintenance and how that maintenance can be enhanced through regular inspections and observation.

Water Treatment Plan Upgrades - Written trouble shooting, safety and maintenance instruction would be provided for new equipment provided at the water treatment plant. In addition we envision a comprehensive training session for staff (and potentially inmates too) as desired by the facility. The economical operation of the softening equipment would be the primary topic during classroom and site sessions.

Operating manuals that comprehensively cover the operation of each ECM will be provided. The manuals will contain step-by-step methods for operating systems and individual components, detailing the location of the items, their function, characteristics as well as component relationships.

Maintenance manuals will provide necessary component detail and illustration, detailing arrangements and locations. The manuals will clearly prescribe the manufacturers recommended schedule for preventative maintenance, seasonal maintenance requirement and expected frequencies of maintenance. Emergency maintenance procedures will also be included.

Both operating and maintenance manuals will include all necessary manufacturer details, service manuals and parts lists. They will be bound and clearly marked, tabbed and indexed. In addition, the O&M supervisor will develop and strategically deploy environmentally protected framed instructions with condensed operating and maintenance instructions and diagrams.

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#### **EXHIBIT B**

### **EQUIPMENT LIST**

Major equipment is generally defined as equipment that is either large in size or cost therefore we have excluded the following from the list provided below: lamps, ballasts, faucets, toilets, sinks, domestic water heaters, kitchen equipment, miscellaneous fittings and mechanical parts, individual pneumatic and/or digital controls. All equipment provided is covered under standard manufacturer warranties.

### **Kentucky State Reformatory**

Quantity	Description
4,115	Lighting Fixtures replaced or retrofitted
1	Energy Management System
4	Instantaneous Domestic Water Heaters
568	Water Conservation – Toilets
56	Water Conservation – Urinals
586	Water Conservation – Sinks
138	Water Conservation - Showerheads
199	Steam Traps (various specifications and sizes defined in Scope of Work)
12	Pressure-Powered Condensate Pumps
4	Ozone Laundry Systems
20	New Air-cooled compressors for Ice Machines

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## **Luther Luckett Correctional Complex**

Quantity	Description	
3,701	Lighting Fixtures	
1	Energy Management System	
255	Water Conservation – Toilets	
46	Water Conservation – Urinals	
258	Water Conservation – Sinks	
64	Water Conservation Showerheads	
7	New Air-cooled compressors for Ice Machines	

## **Roederer Correctional Complex**

Quantity	Description		
1,011	Lighting Fixtures		
1	Energy Management System		
2	Blodgett AC-500 Double Convection Oven		
1	Insinger Dishwasher		
75	Water Conservation - Toilets		
45	Water Conservation – Urinals		
117	Water Conservation – Sinks		
106	Water Conservation – Showerheads		
4	Ozone Laundry Systems		

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#### **EXHIBIT C**

# PROGRESS AND PAYMENT SCHEDULE CONTRACT COST AND ANNUAL SERVICES

The Department of Corrections shall pay to NORESCO Five Million Fifteen Thousand Eight Hundred Ten dollars (\$5,015,810) for work performed under this contract (the Contract Price).

Application for Payment. Prior to commencement of the work to be performed, NORESCO will submit to the Agency a schedule of values allocated to various portions of the work to be performed. The schedule of values will be prepared in accordance with Commonwealth of Kentucky Form DOA-24 or Form SAS-25. These schedules shall be used as the basis for reviewing NORESCO's Application for Payment.

Progress payments shall be made to NORESCO in monthly installments on the percentage of work completed in the prior period. NORESCO will submit an Application and Certification for Payment to the Agency on the first day of every month. The Agency agrees to pay such invoice within thirty (30) days of receipt.

An estimated Progress and Payment Draw Schedule for the subject project is provided below:

Month of	Calendar	Percent	Progress
Constret.	Month	Completed	Payments
1	Jan-05	2.50%	\$125,395
2	Feb-05	2.50%	\$125,395
3	Mar-05	5.00%	\$250,791
4	Apr-05	5.00%	\$250,791
5	May-05	10.00%	\$501,581
6	Jun-05	10.00%	\$501,581
7	Jul-05	15.00%	\$752,372
8	Aug-05	15.00%	\$752,372
9	Sep-05	10.00%	\$501,581
10	Oct-05	10.00%	\$501,581
11	Nov-05	10.00%	\$501,581
12	Dec-05	5.00%	\$250,791
		100.00%	\$5,015,810

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Measurement & Verification Fee. The Customer shall pay NORESCO for annual services provided under this Agreement that the Parties mutually agree to have NORESCO perform. Customer agrees to pay the annual Measurement & Verification fee as provided for in Exhibit G of this Agreement. The annual Measurement and Verification fees are as follows:

Program	N	Aeasurement &
Year		Verification
1	\$	12,369.62
2	\$	12,369.62
3	\$	12,369.62
4	\$	12,369.62
5	\$	12,369.62
6	\$	12,369.62
7	\$	12,369.62
8	\$	12,369.62
9	\$	12,369.62
10	\$	12,369.62
11	\$	12,369.62
12	\$	12,369.62
	\$	148,435.44

Water treatment Fee. The Customer shall pay NORESCO for annual services provided under this Agreement that the Parties mutually agree to have NORESCO perform. Customer agrees to pay the annual Water Treatment fee as provided for in Exhibit G of this Agreement. The annual Water Treatment fees are as follows:

Program	Water
Year	Treatment
0	
1	\$ 9,500.00
2	\$ 9,500.00
3	\$ 9,500.00
4	\$ 9,500.00
5	\$ 9,500.00
6	\$ 9,500.00
7	\$ 9,500.00
8	\$ 9,500.00
9	\$ 9,500.00
10	\$ 9,500.00
11	\$ 9,500.00
12	\$ 9,500.00
	\$ 114,000

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#### **EXHIBIT D**

### **INSURANCE AND BONDING**

Noresco WILL PROVIDE Certificates of Insurance as well as Performance and Payment Bonds on the appropriate Commonwealth Forms when provided by the Commonwealth Ipon Contract execution.

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#### **EXHIBIT E**

#### **PROGRESS FORMS**

Monthly draws will be made on the escrow account on a percent complete basis to pay NORESCO. Progress payments shall be made to NORESCO in monthly installments on the percentage of work completed in the prior period. NORESCO will submit an Application and Certification for Payment to the Agency on the first day of every month. The Agency agrees to pay such invoice within thirty (30) days of receipt.

Application for Payment. Prior to commencement of the work to be performed, NORESCO will submit to the Agency a schedule of values allocated to various portions of the work to be performed. The schedule of values will be prepared in accordance with Commonwealth of Kentucky Form DOA-24 or Form SAS-25. These schedules shall be used as the basis for reviewing NORESCO's Application for Payment. Samples of these Forms are provided on the following pages

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#### **EXHIBIT F**

#### SAVINGS GUARANTEE MEASUREMENT AND VERIFICATION

#### 1. **DEFINITIONS**

When used in this Agreement, the following capitalized words shall have the meaning ascribed to them below:

- "Baseline Period" is the period of time that defines the Baseline Usage and is representative of the facilities operations, consumption, and usage that is used as the benchmark for determining cost avoidance.
- "Baseline Usage" is the calculated energy usage of the Facilities prior to the implementation of the ECMs.
- "Baseline Demand" is the calculated energy demand of a piece of equipment or a site prior to the implementation of the ECMs. Baseline physical conditions, such as equipment counts, nameplate data, and control strategies, will typically be determined through building occupancy, energy end-use survey and plug load surveys of the Facilities.
- "Energy Costs" may include, but is not limited to, the cost of electricity, fossil fuels, water, sewer, and district utility supply to operate the Facilities, as applicable.
- "Engineering Calculations" are the energy savings spreadsheet calculations contained in Section 5 of this Attachment.
- "ECM" the Energy Conservation Measure (ECM) is the installation of equipment or systems, or modification of equipment or systems as described in Attachment B.
- "Excess Verified Savings" is the amount of Verified Savings minus Guaranteed Savings in a Guaranty Period.
- "Facilities" shall mean those impacted by the Project and described Attachment A.
- "F.E.M.P." Shall mean the Federal Energy Management Program of the U.S. Department of Energy and its Measurement and Verification Guidelines for Federal Energy Projects (DOE/GO-10096-248, February 1996, or later versions). The F.E.M.P. guidelines classify measurement & verification approaches as Option A, Option B, Option C, and Option D.
- "First Guaranty Period" is defined as the period beginning on the first (1st) day of the month following the date of execution of the Delivery and Acceptance Certificate upon Substantial

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Completion of this Project by the Customer and ending on the day prior to the first (1<sup>st</sup>) twelvemonth anniversary thereof.

"Guaranty Period" is defined as the First Guaranty Period and each of the successive twelve (12) month periods commencing on the anniversary of the commencement of the First Guaranty Period throughout the Term of this Agreement.

"Guaranteed Savings" is defined as the amount of avoided Energy and Operational Costs guaranteed to the CUSTOMER in each Guaranty Period.

"Guaranteed Savings Reconciliation Report" is defined as the process and report for determining the Verified Savings in each Guaranty Period and reconciling it to the Guaranteed Savings in the same Guaranty Period.

"Measurement and Verification Plan" (M&V Plan) is defined as the plan providing details on how the Guaranteed Savings will be verified.

"Operations and Maintenance Costs" (O & M Costs) shall include the cost of operating and maintaining the Facilities as further described in the Measurement and Verification Plan.

"Term" shall be twelve (12) years from acceptance.

"Verified Savings" is the defined as the summation of avoided Energy and Operations and Maintenance Costs as determined by the Measurement & Verification Plan for the Facilities in each Guaranty Period as a result of the ECMs provided by NORESCO.

#### 2. TERM AND TERMINATION

- 2.1 Guaranty Term. The Term of this Guaranty shall commence on the first (1<sup>st</sup>) day of the month following the date of execution of the Delivery and Acceptance Certificate upon Substantial Completion of this Project by the Customer and shall terminate at the end of eighteen (18) years unless terminated earlier as provided for herein.
- 2.2 Guaranty Termination. Should this Agreement be terminated (including, as applicable, the Maintenance or Measurement & Verification Services) in whole or in part for any reason prior to the end of the Term, the Guaranteed Savings for the Guaranty Period in which such termination becomes effective shall be prorated as of the effective date of such termination, with a reasonable adjustment for seasonal fluctuations, if any, in Energy Costs and Operations and Maintenance Costs, and the Guaranteed Savings for all subsequent Guaranty Periods shall be null and void.

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#### 3. SAVINGS GUARANTY

3.1 Guaranteed Savings: The following table lists the amount of Guaranteed Savings resulting from the ECMs to be installed by NORESCO.

Program	 
Year	TOTAL
0	\$ 201,498.11
1	\$ 549,024.47
2	\$ 549,024.47
3	\$ 549,024.47
4	\$ 549,024.47
5	\$ 549,024.47
6	\$ 549,024.47
7	\$ 549,024.47
8	\$ 549,024.47
9	\$ 549,024.47
10	\$ 549,024.47
11	\$ 549,024.47
12	\$ 549,024.47
	\$ 6,789,791.69

- 3.1.1 Adjustments to Guaranteed Savings. If all or a portion of a proposed ECM cannot be implemented due to site conditions or Customer requirements, Guaranteed Savings will be adjusted equitably.
- 3.1.2 Savings Shortfalls. In the event that the Verified Savings in any Guaranty Period is less than the Guaranteed Savings required for that Guaranty Period, NORESCO shall, upon receipt of written demand from Customer, compensate Customer the amount of any such shortfall, limited by the value of the guaranty, within thirty (30) days. Resulting compensation shall be NORESCO's sole liability for any shortfall in the Guaranteed Savings.
- 3.1.3 Guaranteed Savings Reconciliation Report. NORESCO will provide Customer with a Guaranteed Savings Reconciliation Report after each Guaranty Period within 120 days. Customer will assist NORESCO in generating the savings reconciliation report by providing NORESCO's receipt thereof, together with access to relevant records relating to such Energy and Operations and Maintenance Costs. Customer will also assist NORESCO by permitting access to any energy billing information, maintenance records, drawings, or other data deemed necessary by NORESCO to generate the said report. Data and calculations utilized by NORESCO in the preparation of its Guaranteed Savings Reconciliation report will be made available to Customer, along with such explanations and clarifications as Customer may reasonably request.
- 3.1.4 Guaranteed Savings Reconciliation. Verified Savings for each Guaranty Period will be determined in accordance with the methodology(s), operating parameters, formulas, and

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constants as defined in Section 4. below. For ECMs where efficiency is measured (i.e., kW savings or water gallons per use reduction) our measured pre- and post-retrofit, verified savings will be adjusted to reflect actual efficiency improvement. The actual savings reduction in utility bills may vary from the Verified Savings for reasons outside of NORESCO's control including but not limited to: changes in energy and other utility rates and tariffs, changes in Customer operating schedules and usage patterns, changes in Customer loads due to addition or reductions in energy and water consuming devices, changes in weather, impacts due to the operations of ECMs, impacts due to the maintenance of ECMs maintained by Customer, additions to and/or reduction in facility space usage. For the purposes of calculating any shortfalls or excesses of Verified Savings versus Guaranteed Savings, the Measurement & Verification Plan will be utilized.

- 3.1.5 Acceptance of Guaranteed Savings Reconciliation Report. At the end of each Guaranty Period CUSTOMER will have forty-five (45) days to review the Guaranteed Savings Reconciliation Report and provide written notice to NORESCO of non-acceptance of the Guaranteed Savings Reconciliation Report for that Guaranty Year. Failure to provide written notice within forty-five (45) days of the receipt of the Guaranteed Savings Reconciliation Report will deem it accepted by Customer.
- 3.2 Adjustments to Verified Energy Savings
- 3.2.1 Additional Savings. Additional Energy and/or Operations and Maintenance Cost avoidance that can be demonstrated as a result of NORESCO's efforts that result in no additional costs to Customer beyond the costs identified in this Agreement will be included in the Verified Savings for the applicable Guaranty Period (s).
- 3.2.2 Savings Prior to Final Retrofit Acceptance. All Energy and Operations and Maintenance Cost avoidance realized by Customer and as calculated through the Measurement & Verification Plan that result from activities undertaken by NORESCO prior to Final Project Acceptance may be applied to the Verified Savings for the First Guaranty Period.
- 3.2.3 Activities and Events Adversely Impacting Savings. Customer must promptly notify NORESCO of any activities known to Customer, which adversely impacts NORESCO's ability to realize the Guaranteed Savings and NORESCO shall be entitled to reduce the Guaranteed Savings by the amount of any such adverse impact to the extent that such adverse impact is beyond NORESCO's reasonable control.
- 3.2.4 Performance Deficiencies. NORESCO shall have the right to rectify performance deficiencies which may be identified by measurements taken over the term of the contract, at its own expense, and to adjust Verified Savings accordingly.
- 3.2.5 Guaranty Adjustment. NORESCO's Guaranteed Savings obligations under this Agreement are contingent upon: (1) Customer following the Operations and Maintenance

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requirements for the ECMs in accordance with the Agreement; (2) no alterations or additions being made by the Customer without prior notice and written agreement of the Parties; (3) Customer sending all current utility bills to NORESCO within one (1) month after receipt; and (4) NORESCO'S ability to render services not being impaired by circumstances beyond its control. To the extent that the Customer defaults or fails to perform fully any of its obligations under this Agreement, NORESCO may, in its sole discretion, adjust the Guaranteed Savings obligation; provided, however, that no adjustment hereunder shall be effective unless NORESCO has first provided the Customer with written notice of Customer's default(s) or failure(s) to perform and Customer has failed to cure its default(s) and failure(s) to perform within thirty (30) days after receipt of such notice.

#### 4. MEASUREMENT & VERIFICATION PLAN

- 4.1 Measurement and Verification. NORESCO and the Customer agree that the Verified Savings will be determined using the following Measurement and Verification Plan. This plan verifies energy and water savings by combining industry standards and manufacturers' equipment ratings with proven engineering calculations and measurements. The objective of the plan is to cost-effectively quantify the actual electrical, fossil fuel and water usage and compare those to the specific baselines established for each ECM, the difference of which is the energy savings.
- 4.2 Energy Rates. The unit energy and water costs shown in the following table are used to calculate monthly energy and water cost savings in the Engineering Calculations of energy savings. The prices are based on two years of historical energy cost data spanning the baseline period of September 2001 through August 2003. These unit costs will be compared to actual utility rates during each Guaranty Period, throughout the Agreement term, and the higher of these floor values or the actual rates in force will be used to determine savings.

		Electric \$/kW/mo.			Sewer \$/kGal
Kentucky State Reformatory	\$0.0221	\$4.77	\$0.635()	\$1.48	\$0.00
Luther Luckett Correctional Complex	\$0.0221	\$4.77	\$0.635()	\$1.48	\$0.00
Roederer Correctional Complex	\$0.0221	\$4.77	\$0.635()	\$1.48	\$0.00

4.3 M&V Descriptions. Detailed descriptions for measurement and verification of each ECM are presented on the pages that follow. Each description lays out the procedure for the calculation of savings, detailing the equations and specific variables needed.

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#### 4.3.1. ENERGY EFFICIENT LIGHTING

# Lighting Savings = Saved Electric Consumption + Saved Electric Demand

The total annual demand and energy consumption savings attributable to the installation of energy efficient lighting systems will be calculated as shown below.

ECM 1	KSR Lighting LLCC Lighting RCC Lighting
Calculation Methodology:	Demand savings are the difference between pre- and post-re-rofit kilowatts (kW).  Consumption savings (kWh) are the product of the demand savings for each lighting audit entry multiplied by the associated annual hours of operation.  Annual hours of operation will be the values shown for each entry in the comprehensive lighting audit. These values will remain fixed for the term of the contract.
Savings Summary:	Per Lighting Audit Summary in the Following Section (Refer to Detailed Lighting Audit in DEA for Line-by-line hours of use and demand savings):  KSR: Demand Savings = 227.98 kW/mo., Usage Savings = 888,443 kWh/yr  LLCC: Demand Savings = 141.88 kW/mo., Usage Savings = 526,120 kWh/yr  RCC: Demand Savings = 36.43 kW/mo., Usage Savings = 156,870 kWh/yr  Total Energy Cost Savings = \$57,985,723  Total O&M Cost Savings = \$14,150
Performance Compliance Procedures:	<ul> <li>NORESCO will perform the following one-time measurements:</li> <li>Pre- and post-retrofit instantaneous kW measurements of a statistical sample of each fixture type. Verified Savings will be adjusted to reflect pre- and post-retrofit kW measurements.</li> <li>NORESCO will perform the following one-time verification activity:</li> <li>Installed fixture quantities will be adjusted as required based on the as-built lighting audit. Verified Savings will be adjusted to reflect final fixture quantities. Guaranteed Savings may also be adjusted, in accordance with Section 3.</li> <li>Remaining variables will be based on the following:</li> <li>Engineering Calculations, manufacturer's published data, and field verification of proper equipment operation.</li> </ul>

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# 4.3.2. UPGRADE AND EXPAND ENERGY MANAGMENT SYSTEM

# Energy Management Savings = Saved Electric Consumption + Saved Natural Gas

The total annual energy consumption savings attributable to the installation of energy management system will be calculated as shown below.

ECM 2	KSR Upgrade and Expand Energy Management System LLCC Upgrade and Expand Energy Management System RCC Upgrade and Expand Energy Management System
Calculation Methodology:	Total energy savings are the sum of savings calculated individually for several different EMS control strategies.
	Heating setback savings (natural gas or electricity) are based on a bin analysis employing local temperature data, a heat load calculation done for each building or group of similar buildings, existing and proposed occupancy schedules, and both existing and proposed occupied and unoccupied heating setpoint temperatures.
	Cooling setforward savings (electricity) are done similarly, using existing and proposed occupied and unoccupied cooling setpoint temperatures.
	Start/stop savings have two components: Fan electric savings are based on the total fan kW being controlled, and the existing and proposed operating hours. Heating savings are based on avoiding the need to heat outdoor air, calculating using a bin analysis employing local temperature data, the minimum outdoor air introduced by each air handler, and the occupied temperature setpoint of the associated spaces.
	Hot water reset savings are based on reduced temperature losses in hot water heating loops of between zero and one-half degree. Chilled water reset savings are based on a chiller efficiency increase of two percent per degree of increased chilled water temperature. Condenser water reset savings are based on a chiller efficiency increase of one percent per degree of increased condenser water temperature. All three calculations are based on a weather bin analysis.
	Economizer savings are based on reducing mechanical cooling loads by increasing outdoor air introduced by air handlers when the outdoor temperature is between the discharge temperature setpoint and the return air temperature. Damper control savings include reductions in both heating and cooling loads due to a reduction in excess outdoor air ventilation when outdoor air is not suitable for economizer cooling. Demand ventilation savings are based on reduced outdoor air ventilation when the associated spaces (the RCC gymnasium and dining hall) are unoccupied. Savings from all three strategies are calculated using weather bin analyses.

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#### Savings Summary:

Per Engineering Calculations in the Following Section:

KSR: Electric Savings = 284,065 kWh/yr, Natural Gas Savings = 81,076therms/yr

Energy Cost Savings = \$57,761/yr

LLCC: Electric Savings = 1,184,067 kWh/yr

Energy Cost Savings = \$26,168/yr

RCC: Electric Savings = 334,417 kWh/yr, Natural Gas Savings = 8,519 therms/yr

Energy Cost Savings = \$12,800 (Elect and Gas Heated Facilities Combined)

Total EMS Energy Cost Savings = \$96,729/yr

#### Performance Compliance Procedures:

NORESCO will provide an IPMVP Option C guarantee for the expected reduction in natural gas consumption associated with this Energy Conservation Measure. IPMVP Option C involves whole meter analysis, or utility bill comparison, making adjustments for changes to variables outside of NORESCO's control. Adjustments to actual utility consumption data will be performed for changes usage due to weather, additional buildings or additions or alterations to existing buildings served by these meters, significant changes in functional use of the buildings, included but limited to operating hours or temperature set points, the addition of natural gas consuming equipment to the buildings, the proper maintenance of equipment, and changes to other operating parameters affecting natural gas usage.

NORESCO will perform the following one-time verification activity for electricity savings:

- Thorough commissioning of EMS hardware and so tware programming to assure proper operation
- Confirmation of occupied and unoccupied schedule changes on each piece of equipment
- Confirmation of occupied and unoccupied setback remperatures on each piece of equipment

Remaining variables will be based on the following:

• Engineering Calculations, manufacturer's published data, and field verification of proper equipment operation

NORESCO will perform the following long-term monitoring activity:

- Remote monitoring of the EMS on at least a quartealy basis from NORESCO offices to verify integrity of schedules, setpoints and programming, and to identify override conditions.
- Quarterly reporting to Customer's designated representative of issues identified for appropriate action

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### 4.3.3. WATER CONSERVATION

# Water Conservation Savings = Saved Water + Saved Natural Gas + Saved Electrical Consumption

The annual water consumption savings attributable to the installation of water conserving devices will be calculated as shown below.

ECM 3	KSR - Water Conservation LLCC - Water Conservation RCC - Water Conservation
Calculation Methodology:	I-CON Shower Controls:  Water Savings = (Existing gpm x existing minutes/inmate/day) - (New gpm x new minutes/inmate/day) x population x 365 days/year  Natural Gas Savings = water savings x temperature differential x efficiency I-CON Toilet Controls:  Water Savings = (Existing gallons/flush x existing flushes/inmate/day) - (New Gallons/flush x new flushes/inmate/day) x population x 365 days/year  Low Flow Showers and Lavatories:  Water Savings = (Existing gpm x new gpm) x minutes/inmate/day x population x 365 days/year  Natural Gas Savings = water savings x temperature differential x efficiency Low Flow Toilets and Urinals:  Water Savings = (Existing gallons/flush - new gallons/flush) x flushes/inmate/day) x population x 365 days/year  Flush per day values will be the values shown in the Engineering Calculations for this ECM, and will remain fixed for the term of the contract.
Savings Summary:	Per Engineering Calculations in the Following Section:  KSR: Water Savings = 30,341 kgal/yr, Natural Gas Savings = 76,950 therms/yr  LLCC: Water Savings = 31,630 kgal/yr, Electrical Savings = 1,751,086 kWh/yr  RCC: Water Savings = 10,680 kgal/yr, Electrical Savings = 478,406 kWh/yr, Natural Gas Savings = 5,432  Total Energy Cost Savings = \$209,049  Total O&M Cost Savings = \$11,280

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#### Performance Compliance Procedures:

NORESCO will provide an IPMVP Option C guarantee for the expected reduction in natural gas consumption associated with this Energy Conservation Measure. IPMVP Option C involves whole meter analysis, or utility bill comparison, making adjustments for changes to variables outside of NORESCO's control. Adjustments to actual utility consumption data will be performed for changes usage due to weather, additional buildings or additions or alterations to existing buildings served by these meters, significant changes in functional use of the buildings, included but limited to operating hours or temperature set points, the addition of natural gas consuming equipment to the buildings, the proper maintenance of equipment, and changes to other operating parameters affecting natural gas usage.

NORESCO will perform the following one-time measurements for water savings:

 Pre- and post-retrofit water usage (gallons per flush or gallons per minute) will be measured for a statistical sample of each type of device replaced. Verified Savings will be adjusted to reflect pre- and post- water usage measurements.

NORESCO will perform the following one-time verification activity for water and electricity savings:

• Installed fixture quantities will be adjusted as required based on As-Built conditions. Verified Savings will be adjusted to reflect final fixture quantities. Guaranteed Savings may also be adjusted, in accordance with Section 3.

Remaining variables will be based on the following:

• Engineering Calculations, manufacturer's published data, and field verification of proper equipment operation

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# Steam System Renovation Savings = Saved Electricity + Saved Natural Gas

The total annual electricity and natural gas savings attributable to renovation of the KSR Administration steam heating system will be calculated as shown below.

ECM 4	Administration Building Steam Heating System Renovation
Calculation Methodology:	<ul> <li>Savings from this measure accrue from three savings mechanisms, each calculated separately: <ol> <li>Reduced overheating due to the installation of self-contained thermostatic steam control valves.</li> <li>Installation of pipe insulation on uninsulated steam and condensate lines to reduce uncontrolled space heating</li> <li>Elimination of air conditioning operation currently used to offset overheating by the steam heating system.</li> </ol> </li> <li>Steam control and simultaneous cooling savings are calculated using weather bin analysis, reducing the average space temperature from 80 degF to 73 degF continuously. Pipe insulation savings are based on applying 1.5 to two inches of insulation to bare steam and condensate piping, using a standard U x A x delta-T calculation.</li> </ul>
Savings Summary:	Per Engineering Calculations in the Following Section:  Electric Savings = 66,229 kWh/year  Natural Gas Savings = 19,692 therms/year  Energy Cost Savings = \$13,968/year

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#### Performance Compliance Procedures:

NORESCO will provide an IPMVP Option C guarantee for the expected reduction in natural gas consumption associated with this Energy Conservation Measure. IPMVP Option C involves whole meter analysis, or utility bill comparison, making adjustments for changes to variables outside of NORESCO's control. Adjustments to actual utility consumption data will be performed for changes usage due to weather, additional buildings or additions or alterations to existing buildings served by these meters, significant changes in functional use of the buildings, included but limited to operating hours or temperature set points, the addition of natural gas consuming equipment to the buildings, the proper maintenance of equipment, and changes to other operating parameters affecting natural gas usage.

NORESCO will perform the following one-time verification activity for electricity savings:

- Thorough commissioning of the steam valves, EMS hardware and software programming to assure proper operation (in conjunction with EMS commissioning for ECM 2)
- Confirmation of occupied and unoccupied setback temperatures Remaining variables will be based on the following:
  - Engineering Calculations, manufacturer's published data, and field verification of proper equipment operation

NORESCO will perform the following long-term monitoring activity (in conjunction with other EMS monitoring):

- Remote monitoring of the EMS on at least a quarterly basis from NORESCO offices to verify integrity of schedules, setpoints and programming, and to identify override conditions.
- Quarterly reporting to Customer's designated representative of issues identified

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# 4.3.5. OZONE LAUNDRY WATER TREATMENT SYSTEM

# Laundry Savings = Saved Water + Saved Natural Gas - Increased Electric Consumption

The net annual energy and water savings attributable to the installation of ozone laundry water treatment systems will be calculated as shown below.

ECM 5	KSR - Ozone Laundry Water Treatment System RCC - Ozone Laundry Water Treatment System		
Calculation Methodology:	Ozone laundry water treatment reduces the amount of water required per pound of laundry, reduces the number of hot water cycles from two to one, and reduces the temperature of hot water required from 160 to 95 degrees Fahrenheit.		
	Water savings = laundry lb per year x [(existing cycles/load x existing gal/lb/cycle) - (new cycles/load x new gal/lb/cycle)]		
	Natural gas savings (KSR & RCC) = Hot Water Saved (included in water savings above) x 8.33 lb/gal x (existing hot water delta-T – new hot water delta-T) / (100,000 btu/therm x water heating system efficiency)		
	Where: Hot Water Savings (gallons) = laundry lb per year x [(existing hot cycles/load x existing gal/lb/cycle) - (new cycles/load x new gal/lb/cycle)]		
	Hot water is generated with electricity at LLCC, therefore:  Electrical savings (LLCC only) = Hot Water Saved (included in water savings above) x 8.33 lb/gal x (existing hot water delta-T – new hot water delta-T) / (3.415 btu/kWh x 100% system efficiency)		
	Increased electric usage = kWh/day x days/week x weeks/year and is subtracted from total savings at all three facilities.		
Savings Summary:	Per Engineering Calculations in the Following Section:  KSR: Water Savings = 327 kgal/yr, Natural Gas Savings = 4, 90 therms/yr  Electric Savings = (7,280) kWh/year		
	RCC: Water Savings = 186 kgal/yr, Natural Gas Savings = 2,3/4 therms/yr Additional electric usage = (7,280) kWh/year		
	Total Energy Cost Savings = \$4,851 Total O&M Cost Savings = \$4,042		
Performance Compliance Procedures:	NORESCO will provide an IPMVP Option C guarantee for the expected reduction in natural gas consumption associated with this Energy Conservation Measure. IPMVP Option C involves whole meter analysis, or utility bill comparison, making adjustments for changes to variables outside of NORESCO's control. Adjustments to actual utility consumption data		

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will be performed for changes usage due to weather, additional buildings or additions or alterations to existing buildings served by these meters, significant changes in functional use of the buildings, included but limited to operating hours or temperature set points, the addition of natural gas consuming equipment to the buildings, the proper maintenance of equipment, and changes to other operating parameters affecting natural gas usage.

NORESCO will perform the following one-time verification activity for water savings and increased electricity usage:

- Confirmation that the systems are installed and operating properly Remaining variables will be based on the following:
  - Engineering Calculations, manufacturer's published data, and field verification of proper equipment operation

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#### 4.3.6. PIPING INSULATION

# Piping Insulation Savings = Saved Gas + Saved Electrical Consumption

The total annual gas savings attributable to the installation of piping insulation will be calculated as shown below.

ECM 6	KSR Piping Insulation LLCC Piping Insulation		
Calculation Methodology:	Thermal savings are based on applying up to two inches of insulation to bare steam, condensate and hot water piping, and to bare condensate receiver tanks to reduce heat loss, and are calculated using a standard U x A x delta-T calculation.		
Savings	KSR: 9,410 therms per year		
Summary:	LLCC: 27,681 kWh per year		
	Total Energy Cost Savings: \$6,587		
Performance Compliance Procedures:	NORESCO will provide an IPMVP Option C guarantee for the expected reduction in natural gas consumption associated with this Energy Conservation Measure. IPMVP Option C involves whole meter analysis, or utility bill comparison, making adjustments for changes to variables outside of NORESCO's control. Adjustments to actual utility consumption data will be performed for changes usage due to weather, additional buildings or additions or alterations to existing buildings served by these meters, significant changes in functional use of the buildings, included but limited to operating hours or temperature set points, the addition of natural gas consuming equipment to the buildings, the proper maintenance of equipment, and changes to other operating parameters affecting natural gas usage.		
	NORESCO will perform the following one-time verification activity for electricity savings:  • Confirmation of the type, thickness and lengths of installation		
	Confirmation that the insulation is properly installed		
	<ul> <li>Verified Savings will be adjusted to reflect final insulation quantities and types.</li> </ul>		
	Remaining variables will be based on the following:		
	Engineering Calculations, manufacturer's published data, and field verification of proper equipment operation		

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## 4.3.7. KSR - STEAM TRAP REPLACEMENT

# Steam Trap Savings = Saved Gas

The total annual gas savings attributable to the rebuild and replacement of failing steam traps will be calculated as shown below.

ECM 7	KSR - Steam Trap Replacement
Calculation Methodology:	The savings calculation is based on a standard equation for steam flow through an orifice, and the assumptions that twenty percent of steam traps have failed open and that half of the energy in the resultant steam flow is lost.
Savings Summary:	Natural gas savings: 45,595 therms per year  Energy cost savings: \$28,953 per year
Performance Compliance Procedures:	NORESCO will provide an IPMVP Option C guarantee for the expected reduction in natural gas consumption associated with this Energy Conservation Measure. IPMVP Option C involves whole meter analysis, or utility bill comparison, making adjustments for changes to variables outside of NORESCO's control. Adjustments to actual utility consumption data will be performed for changes usage due to weather, additional buildings or additions or alterations to existing buildings served by these meters, significant changes in functional use of the buildings, included but limited to operating hours or temperature set points, the addition of natural gas consuming equipment to the buildings, the proper maintenance of equipment, and changes to other operating parameters affecting natural gas usage.

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# 4.3.8. KSR – CONDENSATE PUMP REPLACEMENT/REPAIR

# Condensate Pump Replacement Savings = Saved Water + Saved Watural Gas

The total annual energy and water savings attributable to renovation of the steam distribution system will be calculated as below.

Condensate Pump Replacement/Repair
This measure will supplement the ongoing steam line replacement and reinsulation project by replacing (12) existing condensate pumps with new steam-driven pumps, and repairing and recommissioning the remaining electrically-powered pumps.  Water savings are based on reducing the boiler plant water makeup rate from approximately 60 percent to approximately 13 percent by increasing the quantity of condensate returned to the plant.
Natural gas savings are based on:  1. The reduced need to heat the boiler makeup water;  2. Reduction in steam leaks due to replacement of deteriorated steam distribution piping;  3. Reduced thermal losses from increasing the pipe insulation thickness on the new high-pressure steam and condensate lines from one inch to three inches.
Per Engineering Calculations in the Following Section:  Water Savings = 4,921 kgal per year  Natural Gas Savings = 127,007 therms per year  Energy Cost Savings = \$33,342  O&M Cost Savings = \$33,600
NORESCO will provide an IPMVP Option C guarantee for the expected reduction in natural gas consumption associated with this Energy Conservation Measure. IPMVP Option C involves whole meter analysis, or utility bill comparison, making adjustments for changes to variables outside of NORESCO's control. Adjustments to actual utility consumption data will be performed for changes usage due to weather, additional buildings or additions or alterations to existing buildings served by these meters, significant changes in functional use of the buildings, included but limited to operating hours or temperature set points, the addition of natural gas consuming equipment to the buildings, the proper maintenance of equipment, and changes to other operating parameters affecting natural gas usage.  NORESCO will perform the following one-time measurements for water savings:  • Pre- and post-retrofit boiler water makeup rate will be measured using the facility's existing water meter. Verified Savings will be adjusted to reflect pre- and post-water usage measurements.

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		the following one-time verification activity for missioning of the new steam-driven pumps and of	•
		alled and operating properly as part of this mean	

Remaining variables will be based on the following:

• Engineering Calculations, manufacturer's published data, and field verification of proper equipment operation

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# 4.3.9. NEW GAS-FIRED KITCHEN EQUIPMENT AND DISHWASHER Kitchen Equipment Savings = Saved Electricity Usage – New Gas Consumption

Replacing the existing dishwasher with a more efficient model reduces the amount of hot water consumed and the natural gas consumed to heat it. Replacing the existing electric oven with a gas-fired unit reduces operating costs by switching fuels. The total annual energy savings attributable to the replacement of existing kitchen equipment will be calculated as shown below.

ECM 9	Gas-Fired Kitchen Equipment and Dishwasher
Calculation Methodology:	Oven savings are calculated based on converting estimated electricity usage for the existing oven to equivalent natural gas. Dishwasher water and natural gas savings are calculated based reductions in both the amount of hot rinse water required and the natural gas burned to heat the water. Operations and maintenance savings are based on reducing the considerable maintenance required on the existing dishwasher.
Savings Summary:	Per Engineering Calculations in the Following Section:  Electric Demand Savings = 211.2 kW/year  Electric Usage Savings = 48,180 kWh/year
	Natural Gas Savings = (253) therms (net increase due to oven gas usage)  Energy Cost Savings = \$2,141
	O&M Cost Savings = \$13,500

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#### Performance Compliance Procedures:

NORESCO will provide an IPMVP Option C guarantee for the expected increase in natural gas consumption associated with this Energy Conservation Measure. IPMVP Option C involves whole meter analysis, or utility bill comparison, making adjustments for changes to variables outside of NORESCO's control. Adjustments to actual utility consumption data will be performed for changes usage due to weather, additional buildings or additions or alterations to existing buildings served by these meters, significant changes in functional use of the buildings, included but limited to operating hours or temperature set points, the addition of natural gas consuming equipment to the buildings, the proper maintenance of equipment, and changes to other operating parameters affecting natural gas usage.

NORESCO will perform the following one-time verification activity for electricity savings:

• Confirmation that the new kitchen equipment is insualled and operating correctly.

Remaining variables will be based on the following:

• Engineering Calculations, manufacturer's published data, and field verification of proper equipment operation

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#### 4.3.10. NEW AIR-COOLED ICE MACHINES

### Air-Cooled Ice Machine Savings = Saved Water - Additional Electric Consumption

Air-cooled ice machines use marginally more electricity than water-cooled, but reduced city water costs far outweigh the additional electrical costs. The total savings attributable to replacement of water-cooled ice machines with air-cooled will be calculated as shown below.

ECM 10	KSR – New Air-Cooled Ice Machines LLCC – New Air-Cooled Ice Machines		
Calculation Methodology:	Air-cooled ice machines consume more electricity than water-cooled ice machines but do not consume city water, resulting in a net decrease in utility costs.		
Savings Summary:	Per Engineering Calculations in the Following Section:  KSR: Increased Electrical Usage = (13,797) kWh/yr  Water Savings = 3,909 kGal/yr  LLCC: Increased Electrical Usage = (5,366) kWh/yr  Water Savings = 1,520 kGal/yr  Energy Cost Savings = \$7,612		
Performance Compliance Procedures:	NORESCO will perform the following one-time verification activity:  • Confirmation of equipment ratings and proper installation  Remaining variables will be based on the following:  • Engineering Calculations, manufacturer's published data, and field verification of proper equipment operation		

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### 4.3.11. KSR - INSTANTANEOUS DOMESTIC WATER HEATERS

## Instantaneous DHW Savings = Saved Natural Gas + Saved Water

The total annual natural gas and water savings attributable to the replacement of uninsulated and leaking domestic hot water (DHW) storage tanks with instantaneous water heating systems is calculated as shown below.

ECM 11	Instantaneous DHW Heaters for Administration and Kitchen Instantaneous DHW Heaters for Dorms 1 and 2
Calculation Methodology:	Savings are calculated based on eliminating heat loss from uninsulated tanks and hot water leaks where they were observed to occur.
Savings Summary:	Total Natural gas savings: 17,483 therms per year  Total Water savings: 1,576 kgal per year  Total Cost Savings: \$13,435
Performance Compliance Procedures:	NORESCO will provide an IPMVP Option C guarantee for the expected reduction in natural gas consumption associated with this Energy Conservation Measure. IPMVP Option C involves whole meter analysis, or utility bill comparison, making adjustments for changes to variables outside of NORESCO's control. Adjustments to actual utility consumption data will be performed for changes usage due to weather, additional buildings or additions or alterations to existing buildings served by these meters, significant changes in functional use of the buildings, included but limited to operating hours or temperature set points, the addition of natural gas consuming equipment to the buildings, the proper maintenance of equipment, and changes to other operating parameters affecting natural gas usage.
	NORESCO will perform the following one-time verification activity for water savings:  Confirmation that new water heater heaters are installed correctly and operating properly  Remaining variables are based on the following:  Engineering Calculations, manufacturer's published data, and field verification of proper equipment operation

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### **EXHIBIT G**

### SUPPORT SERVICES AGREEMEN'

### Measurement & Verification and Water Treatment Services

As part of the Energy Savings Guarantee, NORESCO will perform Measurement and Verification Services as described in Exhibit F of this document for the sum of Twelve Thousand Nine Hundred Twenty-seven dollars and eleven cents (\$12,369.62) per year. In addition, NORESCO will provide water treatment services at the KSR Boiler Plant for the term of the program for the sum of Nine Thousand Five Hundred dollars (\$9,500.00) per year.

Program	М	easurement &		Water
Year		Verification		Treatment
1	\$	12,369.62	\$	9,500.0
2	\$	12,369.62	\$	9,500.00
3	\$	12,369.62	\$	9,500.0
4	\$	12,369.62	\$	9,500.00
5	\$	12,369.62	\$	9,500.00
6	\$	12,369.62	49	9,500.00
7	\$	12,369.62	\$	9,500.00
8	\$	12,369.62	\$	9,500.00
9	\$	12,369.62	\$	9,500.00
10	\$	12,369.62	<del>()</del>	9,500.00
11	\$	12,369.62	\$	9,500.00
12	\$	12,369.62	\$	9,500.00
	\$	148,435.44	\$	114,000.0

During the term of the Contract, the Kentucky Department of Corrections (KY DOC) may cancel the annual Measurement and Verification Services and/or the Water treatment Services by providing written notice of cancellation to NORESCO at least thirty (30) days prior to the commencement of the next annual savings guarantee period. If KY DOC makes such request to cancel the Measurement and Verification Services and/or the Water Treatment Services, the parties stipulate and agree that the energy, operations and maintenance savings guaranteed by NORESCO during the term of the Contract shall be considered fully satisfied. Both parties further agree that upon cancellation of the Measurement and Verification Services and/or the Water Treatment Services to be provided for under this Exhibit, NORESCO will no longer be obligated to perform Measurement and Verification Services and/or the Water Treatment Services for any remaining period of the Contract term.

Additionally, in the event KY DOC fails to pay any fees associated with the annual Measurement and Verification Services and/or the Water Treatment Services within sixty (60) days of receipt of invoice for said Measurement and Verification services and/or the Water Treatment Services, NORESCO shall have the right to terminate this Measurement and Verification Service and/or

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the Water Treatment Services provision. In this event both parties stipulate and agree that the energy savings guaranteed by NORESCO during the term of this Contract shall be considered fully satisfied. Both parties further agree that upon this occurrence NORESCO will no longer be obligated to perform the remaining Measurement and Verification Services and/or the Water Treatment Services, and the energy, operations and maintenance savings guarantee contained in this Contract will be considered satisfied in full and the Energy Services Performance Contract will terminated.

### **Proposed Financial Recommendations**

NORESCO'S Guaranteed Energy Savings Program utilizes the combined KSR, LLCC and RCC utility budgets to amortize, or partially offset, the investment required to make infrastructure improvements. The proposed Program includes a financing approach where the savings stream produced by the project is used to amortize the project's cost over a period of time.

To fund the project cost, we have proposed a 156-month tax-exempt municipal lease to be arranged by NORESCO on behalf of the DOC with Citicorp Vendor Finance, Inc.. An interest rate of 3.98% has been utilized to establish lease payments and calculate the associated project cash flows. This rate was quoted to NORESCO by Citicorp Vendor Finance, Inc. based on the creditworthiness of the DOC. This rate was guaranteed through December 31, 2004 and is subject to change based on financial market fluctuations if lease commencement occurs after this date however we are confident that we would be able to secure this rate today given current market conditions.

### Structure of the Lease

NORESCO has structured the lease for this project as outlined below:

- The lease has been structured where at the beginning of construction the full amount of the project will be placed in an escrow account.
- Although interest will accrue to DOC while the funds are in the escrow account, this benefit has not been taken into consideration.

Monthly draws will be made on the escrow account on a percent complete basis to pay NORESCO. Progress payments shall be made to NORESCO in monthly installments on the percentage of work completed in the prior period. NORESCO will submit an Application and Certification for Payment to the Agency on the first day of every month. The Agency agrees to pay such invoice within thirty (30) days of receipt.

Application for Payment. Prior to commencement of the work to be performed, NORESCO will submit to the Agency a schedule of values allocated to various portions of the work to be performed. The schedule of values will be prepared in accordance with Commonwealth of Eentucky Form DOA-24 or Form SAS-25. These schedules shall be used as the basis for reviewing NORESCO's Application for Payment.

### **Proposal Economics**

NORESCO's proposal will provide KY DOC with a \$5,015,810 investment in building infrastructure improvements that will produce first year energy savings of \$481,934.12, first year operations and maintenance savings of \$67,090.35 and a simple payback period of less than 9.14 years.

### KY DOC

£CM#	1 CM Description	i	nvestment	Ener	gy Savings	0.80	d Savings	Tot	al Savings	Simple Payback
1	Lighting	\$	858,125	s	57,984	<u>\$</u>	4,669	\$	62,653	13.70
2	Repair/Upgrade/Expand Controls	\$	1,340,018	\$	96,729	\$	•	\$	96,729	13.85
3	Water Conservation Measures	s	1,762,942	\$	209,049	<u>s_</u>	11,280	\$	220,329	8.00
4	Steam Heating System Renovation in Admin	\$	139,335	\$	13,968	\$	-	\$	13,968	9.98
5	Ozone Laundry Systems	\$	96,122	\$	4,851	<u>s</u>	4,042	\$	8,893	10.81
6	Piping Insulation	\$	36,362	\$	6,587	s		\$	6,587	5.52
7	Steam Trap Replacement	\$	161,965	\$	28,953	\$		\$	28,953	5.59
8	Condensate Pump Replacement/Repair	\$	317,155	\$	40,624	\$	33,600	\$	74,224	4.27
9	New Gas Fired Kitchen Equipment/Dishwasher	s	89,530	s	2,141	<u>s</u>	13,500	\$_	15,641	5.72
10	New Air-Cooled Ice Machines	s	79,897	\$	7,612	\$		\$	7,612	10.50
11	Instant. DHW Heaters	\$	134,359	\$	13,435	<u>s</u>		\$	13,435	10.00
		s	5,015,810	s	481,934	S	67,090	\$	549,024	9.14

63,199.86	<del>⊗</del>	6,526,591.84	\$	114,000.00	<del>69</del>	148,435.43	S	6,464,156.41	S	6,789,791.69	\$ \$	816,416.66	3 \$	5,973,375.03	S	TOTAL
45,296.72	s	503,727.75	S	9,500.00	\$	12,369.62	\$	481,858.13	÷3	549,024.47	5 \$	67,090.35	2 \$	481,934.12	\$	12
1,491.37	S	547,533.10	69	9,500.00	65	12,369.62	<del>5</del>	525,663.48	\$	549,024.47	\$	67,090.35	2 \$	481,934.12	\$	11
1,491.37	s	547,533.10	69	9,500.00	85	12,369.62	₩	525,663.48	\$	549,024.47	5	67,090.35	2   \$	481,934.12	\$	10
1,491.37	S	547,533.10	S	9,500.00	<del>60</del>	12,369.62	€5	525,663.48 \$	€5	549,024.47	S	67,090.35	2 \$	481,934.12	\$	9
1,491.37	S	547,533.10	S	9,500.00	€5	12,369.62	4	525,663.48 \$	60	549,024.47	5	67,090.35	2 \$	481,934.12	\$	8
1,491.37	€0	547,533.10	64	9,500.00	60	12,369.62	6:	525,003. <del>4</del> 6	6 :	549,024.47	Ci Gii	67,090.35	F.	481,934.12	÷	ī
1,491.37	S	547,533.10	S	9,500.00	<del>60</del>	12,369.62	69	525,663.48 \$	60	549,024.47	\$	67,090.35	2	481,934.12	\$	6
1,491.37	S	547,533.10	ક્ક	9,500.00	69	12,369.62	8	525,663.48	€5	549,024.47	\$	67,090.35	2	481,934.12	€9	5
1,491.37	S	547,533.10	S	9,500.00	8	12,369.62	65	525,663.48	٠,	549,024.47	S	67,090.35 <b>\$</b>	2	481,934.12	\$	4
1,491.37	S	547,533.10	S	9,500.00	8	12,369.62	69	525,663.48	S	549,024.47	S	67,090.35	2 \$	481,934.12	\$	3
1,491.37	₩.	547,533.10	S	9,500.00	8	12,369.62	69	525,663.48	65	549,024.47	\$	67,090.35	2	481,934.12	\$	2
1,491.37	€9	547,533.10	8	9,500.00	8	12,369.62	65	525,663.48	69	549,024.47	S	67,090.35	2 \$	481,934.12 \$	\$	1
1,498.1	₩				Γ			200,000	€9	201,498.11	8	\$ 11,332.46 <b>\$</b>	35 \$	190,165.65 \$	\$	0
NET CASH FLOW	NET	TOTAL		Water Treatment	4	Measurement & Verification		Lease Payment		TOTAL		O&M		Culliy		Year Year
					318							SAVINGS				

Project Turnkey Price: \$
Estimated Finance Rate: 5,015,810 3.98%

KY DOCs Direct Payment: \$
Net Amount Financed: \$

- (Inmate Canteen Fund) 5,015,810

### RENTAL PAYMENT SCHEDULE

Eighteen (18) payments of interest @ \$15,742.60 to be paid out of the Escrow Account Followed by One hundred eighty (180) Rental Payments @ \$30,758.12 beginning 8/30/206 Monthly in Arrears

The Rental Payment Schedule is as set forth below. The Equipment listed in this Schedule may be purchased only as provided and at such times as set forth in Section 22 of the Master Lease.

Payment	Payment				
Date	Number	Rental Payment	Interest Portion	Principal Portion	Purchase Price
2/14/2005	1	\$ 17,185.83	\$ 17,185.83	\$ -	\$ 5,388,925.12
3/14/2005	2	17,185.83	17,185.83	-	5,388,925.12
4/14/2005	3	17,185.83	17,185.83	•	5,388,925.12
5/14/2005	4	17,185.83	17,185.83	•	5,388,925.12
6/14/2005	5	17,185.83	17,185.83	-	5,388,925.12
7/14/2005	6	17,185.83	17,185.83	-	5,388,925.12
8/14/2005	7	17,185.83	17,185.83	-	<b>5,388,92</b> 5.12
9/14/2005	8	17,185.83	17,185.83	•	<b>5,388,92</b> 5.12
10/14/2005	9	17,185.83	17,185.83	•	5,388,925.12
11/14/2005	10	17,185.83	17,185.83	-	<b>5,388,92</b> 5.12
12/14/2005	11	17,185.83	17,185.83	-	5, <b>388</b> ,925.12
1/14/2006	12	17,185.83	17,185.83	-	<b>5,388,92</b> 5.12
1/14/2006	13	200,000.00	-	200, 000.00	5,180,925.12
2/14/2006	14	43,805.29	16,522.50	27.282.79	5,152,551.02
3/14/2006	15	43,805.29	16,432.01	27.373.28	5, <b>124,0</b> 82.81
4/14/2006	16	43,805.29	16,341.23	27 464.06	5,095,520.19
5/14/2006	17	43,805.29	16,250.14	27 555.15	5,066,862.83
6/14/2006	18	43,805.29	16,158.75	27 646.54	5,038,110.42
7/14/2006	19	43,805.29	16,067.05	27,738.24	5,009,262.65
8/14/2006	20	43,805.29	15,975.05	27,830.24	4,980,319.20
	21	43,805.29	15,882.75	27,922.54	4,951,279.76
9/14/2006	22	43,805.29	15,790.14	28,015.15	4,922,144.00
10/14/2006	23	43,805.29	15,697.22	28,108.07	4,892,911.61
11/14/2006	23 24	43,805.29	15,604.00	28,201.29	4,863,582.27
12/14/2006	2 <del>4</del> 25	43,805.29	15,510.46	28,294.83	4,834,155.65
1/14/2007	26	43,805.29	15,416.62	28.388.67	4,804,631.43
2/14/2007	20 27	43,805.29	15,322.46	28.482.83	4,775,009.29
3/14/2007	28	43,805.29	15,227.99	28.577.30	4,745,288.90
4/14/2007	29	43,805.29	15,133.21	28.672.08	4,715,469.94
5/14/2007	30	43,805.29	15,038.12	28.767.17	4,685,552.08
6/14/2007	31	43,805.29	14,942.71	28 862.58	4,655,534.99
7/14/2007	32	43,805.29	14,846.98	28.958.31	4,625,418.35
8/14/2007	33	•	14,750.93	29.054.36	4,595,201.82
9/14/2007	33 34	43,805.29 43,805.29	14,654.57	29 150.72	4,564,885.07
10/14/2007	35	43,805.29	14,557.89	29 247.40	4,534,467.77
11/14/2007 12/14/2007	36	43,805.29	14,460.88	29 344.41	4,503,949.59
	37	43,805.29	•	29 441.73	4,473,330.19
1/14/2008	38	43,805.29		29 539.38	
2/14/2008 3/14/2008	39	43,805.29		29.637.35	
4/14/2008	40	43,805.29	14,069.64	29,735.65	
	41	43,805.29		29,834.27	4,349,833.66
5/14/2008	42	43,805.29		2933.22	4,318,703.11
6/14/2008	42	43,805.29		3(,032.50	4,287,469.30
7/14/2008	43	43,805.29		3(₁,132.11	4,256,131.91
8/14/2008	44 45			30,232.05	
9/14/2008	45 46			30,332.32	
10/14/2008		•	·	3(1,432.92	
11/14/2008	47			3(1,533.86	
12/14/2008	48	43,003.29	10,21 1.40	01.1,000.00	.,,.

### RENTAL PAYMENT SCHEDULE

Eighteen (18) payments of interest @ \$15,742.60 to be paid out of the Escrow Account Followed by One hundred eighty (180) Rental Payments @ \$30,758.12 beginning 8/30/206 **Monthly in Arrears** 

The Rental Payment Schedule is as set forth below. The Equipment listed in this Schedule may be purchased only as provided and at such times as set forth in Section 22 of the Mister Lease.

Payment	Payment				
Date	Number	Rental Payment	Interest Portion	Principal Fortion	Purchase Price
1/14/2009	49	43,805.29	13,170.16	30,635.13	4,097,878.99
2/14/2009	50	43,805.29	13,068.56	30,736.73	4,065,912.78
3/14/2009	51	43,805.29	12,966.61	30,838.68	4,033,840.56
4/14/2009	52	43,805.29	12,864.33	30,940.96	<b>4,001,661</b> .96
5/14/2009	53	43,805.29	12,761.71	31,043.58	3,969,376.64
6/14/2009	54	43,805.29	12,658.75	31,146.54	3,936,984.24
7/14/2009	55	43,805.29	12,555.45	31,249.84	<b>3,904,484</b> .40
8/14/2009	56	43,805.29	12,451.80	31,353.49	3,871,876.77
9/14/2009	57	43,805.29	12,347.81	31,457.48	<b>3,839,16</b> 0.99
10/14/2009	58	43,805.29	12,243.48	31,561.81	3,806,336.71
11/14/2009	59	43,805.29	12,138.80	31,666.49	3,773,403.56
12/14/2009	60	43,805.29	12,033.77	31,771.52	3,740,361.18
1/14/2010	61	43,805.29	11,928.40	31,876.89	3,707,209.21
2/14/2010	62	43,805.29	11,822.67	31,982.62	3,673,947.28
3/14/2010	63	43,805.29	11,716.59	32,088.70	3,640,575.04
4/14/2010	64	43,805.29	11,610.17	32,195.12	3,607,092.11
5/14/2010	65	43,805.29	11,503.39	32,301.90	<b>3,573,49</b> 8.13
6/14/2010	66	43,805.29	11,396.25	32,409.04	3,539,792.73
7/14/2010	67	43,805.29	11,288.76	32,516.53	<b>3,505,97</b> 5.55
8/14/2010	68	43,805.29	11,180.92	32,624.37	3,472,046.20
9/14/2010	69	43,805.29	11,072.71	32,732.58	<b>3,438,004</b> .31
10/14/2010	70	43,805.29	10,964.15	32.841.14	3,403,849.53
11/14/2010	71	43,805.29	10,855.23	32 950.06	3,369,581.46
12/14/2010	72	43,805.29	10,745.94	33 059.35	3,335,199.74
1/14/2011	73	43,805.29	10,636.29	33 169.00	3,300,703.98
2/14/2011	73 74	43,805.29	10,526.28	33:279.01	<b>3,266,09</b> 3.81
3/14/2011	7 <del>4</del> 75	43,805.29	10,415.91	33:389.38	3,231,368.86
4/14/2011	76	43,805.29	10,305.17	33:500.12	3,196,528.73
					3,161,573.05
5/14/2011	77 78	43,805.29	10,194.06	33 611.23 33 722.71	3,126,501.43
6/14/2011 7/14/2011	76 79	43,805.29	10,082.58 9,970.73	33 834.56	3,091,313.49
		43,805.29		33 946.77	3,056,008.85
8/14/2011	80 81	43,805.29	9,858.52	34.059.36	3,020,587.11
9/14/2011 10/14/2011	82	43,805.29	9,745.93 9,632.96	34 172.33	2,985,047.89
	83	43,805.29	9,519.62	34 285.67	2,949,390.79
11/14/2011	84	43,805.29	*	34 399.38	2,913,615.44
12/14/2011		43,805.29	9,405.91		2,877,721.43
1/14/2012	85	43,805.29	9,291.82	34.513.47	
2/14/2012	86	43,805.29	9,177.35	34,627.94	2,841,708.37
3/14/2012	87	43,805.29	9,062.50	34,742.79	2,805,575.87
4/14/2012	88	43,805.29	8,947.27	34.858.02	2,769,323.52
5/14/2012	89	43,805.29	8,831.66	34.973.63	2,732,950.95
6/14/2012	90	43,805.29	8,715.66	35,089.63	2,696,457.73
7/14/2012	91	43,805.29	8,599.28	35,206.01	2,659,843.48
8/14/2012	92	43,805.29	8,482.51	35,322.78	2,623,107.79
9/14/2012	93	43,805.29	8,365.36	35,439.93	2,586,250.27
10/14/2012	94	43,805.29	8,247.82	35,557.47	2,549,270.50
11/14/2012	95	43,805.29	8,129.89	35 675.40	2,512,168.07
12/14/2012	96	43,805.29	8,011.56	35.793.73	2,474,942.60

### RENTAL PAYMENT SCHEDULE

Eighteen (18) payments of interest @ \$15,742.60 to be paid out of the Estrow Account Followed by One hundred eighty (180) Rental Payments @ \$30,758.12 beginning 8/30/206 **Monthly in Arrears** 

The Rental Payment Schedule is as set forth below. The Equipment listed in this Schedule may be purchased only as provided and at such times as set forth in Section 22 of the Mester Lease.

Date	Number				
	Nulliber	Rental Payment	Interest Portion	Principal Fortion	Purchase Price
1/14/2013	97	43,805.29	7,892.85	35,912.44	2,437,593.65
2/14/2013	98	43,805.29	7,773.74	36,031.55	2,400,120.84
3/14/2013	99	43,805.29	7,654.23	36,151.06	2,362,523.74
4/14/2013	100	43,805.29	7,534.33	36,270.96	2,324,801.94
5/14/2013	101	43,805.29	7,414.03	36,391.26	<b>2,286,95</b> 5.03
6/14/2013	102	43,805.29	7,293.33	36,511.96	2,248,982.60
7/14/2013	103	43,805.29	7,172.24	36,633.05	2,210,884.22
8/14/2013	104	43,805.29	7,050.74	36,754.55	2,172,659.49
9/14/2013	105	43,805.29	6,928.83	36,876.46	2,134,307.97
10/14/2013	106	43,805.29	6,806.53	36,998.76	2,095,829.26
11/14/2013	107	43,805.29	6,683.81	37,121.48	2,057,222.92
12/14/2013	108	43,805.29	6,560.69	37,244.60	2,018,488.54
1/14/2014	109	43,805.29	6,437.17	37,368.12	1,979,625.70
2/14/2014	110	43,805.29	6,313.23	37,492.06	1,940,633.95
3/14/2014	111	43,805.29	6,188.88	37,616.41	1,901,512.89
4/14/2014	112	43,805.29	6,064.12	37,741.17	1,862,262.07
5/14/2014	113	43,805.29	5,938.94	37,866.35	1,822,881.07
6/14/2014	114	43,805.29	5,813.35	37,991.94	1,783,369.46
7/14/2014	115	43,805.29	5,687.35	38,117.94	1,743,726.80
8/14/2014	116	43,805.29	5,560.92	38,244.37	1,703,952.66
9/14/2014	117	43,805.29	5,434.08	38,371.21	1,664,046.60
10/14/2014	118	43,805.29	5,306.82	38.498.47	1,624,008.19
	119			38.626.16	1,583,836.98
11/14/2014		43,805.29	5,179.13		1,543,532.54
12/14/2014	120	43,805.29	5,051.02	38 754.27	
1/14/2015	121 122	43,805.29	4,922.48	38 882.81 30 011 77	1,503,094.42 1,462,522.18
2/14/2015	122	43,805.29	4,793.52	39 011.77 30 141 16	1,462,522.16
3/14/2015		43,805.29	4,664.13	39 141.16	
4/14/2015	124	43,805.29	4,534.32	39 270.97 39 401.22	1,380,973.56 1,339,996.29
5/14/2015	125	43,805.29	4,404.07		
6/14/2015	126	43,805.29	4,273.39	39.531.90	1,298,883.11
7/14/2015	127	43,805.29	4,142.27	39 663.02	1,257,633.57
8/14/2015	128	43,805.29	4,010.72	39 794.57	1,216,247.22
9/14/2015	129	43,805.29	3,878.74	39 926.55	1,174,723.60
10/14/2015	130	43,805.29	3,746.31	40 058.98	1,133,062.27
11/14/2015	131	43,805.29	3,613.45	40 191.84	1,091,262.76
12/14/2015	132	43,805.29	3,480.15	40 325.14	1,049,324.61
1/14/2016	133	43,805.29	3,346.40	40.458.89	1,007,247.37
2/14/2016	134	43,805.29	3,212.22	40 593.07	965,030.57
3/14/2016	135	43,805.29	3,077.58	40 727.71	922,673.75
4/14/2016	136	43,805.29	2,942.50	40 862.79	880,176.45
5/14/2016	137	43,805.29	2,806.97	4(1998.32	837,538.20
6/14/2016	138	43,805.29	2,671.00	41 134.29	794,758.54
7/14/2016	139	43,805.29	2,534.57	41 270.72	751,836.99
8/14/2016	140	43,805.29	2,397.69	41 407.60	708,773.08
9/14/2016	141	43,805.29	2,260.35	41 544.94	665,566.34
10/14/2016	142	43,805.29	2,122.56	41 682.73	622,216.30
11/14/2016	143	43,805.29	1,984.31	41 820.98	578,722.48
12/14/2016	144	43,805.29	1,845.61	41 959.68	535,084.41

### RENTAL PAYMENT SCHEDULE

Eighteen (18) payments of interest @ \$15,742.60 to be paid out of the Escrow Account Followed by One hundred eighty (180) Rental Payments @ \$30,758.12 b⊕ginning 8/30/206 **Monthly in Arrears** 

The Rental Payment Schedule is as set forth below. The Equipment listed in this Schedule may be purchased only as provided and at such times as set forth in Section 22 of the Master Lease.

Payment	Payment				
Date	Number	Rental Payment	Interest Portion	Principal Fortion	Purchase Price
1/14/2017	145	43,805.29	1,706.44	42,098.85	491,301.60
2/14/2017	146	43,805.29	1,566.81	42,238.48	447,373.59
3/14/2017	147	43,805.29	1,426.72	42,378.57	403,299.87
4/14/2017	148	43,805.29	1,286.16	42,519.13	<b>359,07</b> 9.98
5/14/2017	149	43,805.29	1,145.14	42,660.15	314,713.43
6/14/2017	150	43,805.29	1,003.65	42,801.64	<b>270,19</b> 9.73
7/14/2017	151	43,805.29	861.69	42:.943.60	225,538.39
8/14/2017	152	43,805.29	719.27	43.086.02	180,728.92
9/14/2017	153	43,805.29	576.36	43,228.93	<b>135,77</b> 0.84
10/14/2017	154	43,805.29	432.99	43,372.30	90,663.64
11/14/2017	155	43,805.29	289.14	43,516.15	45,406.84
12/14/2017	156	43,805.23	144.81	43,660.43	0.00
#REF!	157	#REF!	#REF!	#REF!	#REF!
		#REF!	#REF!	#REF	

### INVOICED PAYMENTS MAY VARY DUE TO ROUNDING, PAY INVOICED AMOUNT

Signed:			
Title:	<del></del>		
Date:			

Obligor Tenor (months) Interest Rate Rate Earned on	Obligor Tenor (months) Interest Rate Rate Eamed on Escrow		O	commonwealth of 144 3.98% 1.25%	Commonwealth of Kentucky-Dept. of Corrections 144 3.98% 1.25%	Corrections	Effective mo	Effective monthly lease rate Lease CLBO	3.98% 5,181,658.77		
Lease paymi Calculated P Project Cost	Lease payments monthly in advance Calculated Payment (advance) Project Cost	ly in advance Ivance)		\$5,015,810.00							
Period	PMT	Paid Into Escrow	Payments to Vendor	Earned on Escrow	Interest Paid from Escrow	Amount in Escrow	Beginning Balance	Interest	from	Principal	Ending Balance
0	1/14/2005	5,181,658.77	,			5,181,658.77		'	,	(5,181,658.77)	5,181,658.77
- 1	2/14/2005	•	' 6	5,397.56	17,185.83	5,169,870.50	5,181,658.77	17,185.83	•	•	5,181,658.77
~ ~	3/14/2005	4	250,790.50	5,385.28	17,185.83	4,907,279.44	5,181,658.77	17,185.83	• 1		5,181,658.77
) <del>4</del>	5/14/2005		250,790,50	4.837.93	17.185.83	4.381,276,45	5.181,658.77	17,185.83	•	•	5,181,658.77
2	6/14/2005	•	501,581.00	4,563.83	17,185.83	3,867,073.45	5,181,658.77	17,185.83	•		5,181,658.77
9 1	7/14/2005	•	501,581.00	4,028.20	17,185.83	3,352,334.82	5,181,658.77	17,185.83	•		5,181,658.77
~ α	8/14/2005		752,371.50	3,492.02	17,185.83	2,586,269.50 1 819 406 19	5,181,658.77	17,185.83			5,181,658.77
. 6	10/14/2005	•	501,581.00	1,895.21	17,185.83	1,302,534.57	5,181,658.77	17,185.83	•	•	5,181,658.77
9	11/14/2005	٠	501,581.00	1,356.81	17,185.83	785,124.54	5,181,658.77	17,185.83	•		5,181,658.77
Ξ;	12/14/2005	•	, 150 035	817.84	17,185.83	768,756.55	5,181,658.77	17,185.83	,	•	5,181,658.77
2	1/14/2006	•	152,371.50	87.008	17,185.83	0.00	2,181,038.//	17,183.83	. 000 000	, 000 000	7,1030.77
<b>-</b>	2/14/2006					<b>.</b> ,	4.981.658.77	16.522.50	43.805.29	27.282.79	4,954,375,98
- 2	3/14/2006	•		•		•	4,954,375.98	16,432.01	43,805.29	27,373.28	4,927,002.70
က	4/14/2006	•	•	•		•	4,927,002.70	16,341.23	43,805.29	27,464.06	4,899,538.64
4 1	5/14/2006		•	•		,	4,899,538.64	16,250.14	43,805.29	27,555.15	4,871,983.49
റ ഗ	7/14/2006						4,871,963.49	16,067.05	43,805.29	27,738.24	4,816,598.70
_	8/14/2006	•		•		•	4,816,598.70	15,975.05	43,805.29	27,830.24	4,788,768.47
<b></b> 0	9/14/2006	1 1				, ,	4,788,768.47	15,882.75	43,805.29	27,922.54	4,760,845.92
, ₽	11/14/2006	•	•	•		•	4,732,830.77	15,697.22	43,805.29	28,108.07	4,704,722.71
Ξ	12/14/2006	•	1	•		•	4,704,722.71	15,604.00	43,805.29	28,201.29	4,676,521.41
ंत द	2/14/2007		1 1	1 1			4.648.226.58	15,610,40	43.805.29	28.388.67	4,619,837.91
<del>_</del>	3/14/2007	•	•	٠		•	4,619,837.91	15,322.46	43,805.29	28,482.83	4,591,355.09
15	4/14/2007		•	•		•	4,591,355.09	15,227.99	43,805.29	28,577.30	4,562,777.79
<b>9</b> i	5/14/2007	ì	•	•		•	4,562,777.79	15,133.21	43,805.29	28,672.08	4,534,105.71
, 1,	6/14/2007					, ,	4,534,105.71	14,942,71	43,805,29	28.862.58	4,303,336.34
<b>\$</b>	8/14/2007					•	4,476,475.96	14,846.98	43,805.29	28,958.31	4,447,517.64
20	9/14/2007	•	•	1		•	4,447,517.64	14,750.93	43,805.29	29,054.36	4,418,463.29
7	10/14/2007	٠		•		•	4,418,463.29	14,654.57	43,805.29	29,150.72	4,389,312.57
2 5	11/14/2007	•	,	•		•	4,389,312.57	14,557.89	43,805.29	29,247.40	4,350,055.15
2 2	1/14/2008			1 #			4,330,720.76	14,363.56	43,805.29	29,441.73	4,301,279.02
25	2/14/2008	•		•		•	4,301,279.02	14,265.91	43,805.29	29,539.38	4,271,739.64
56	3/14/2008	•		1		•	4,271,739.64	14,167.94	43,805.29	29,637.35	4,242,102.29

Obligor Tenor (months) Interest Rate Rate Earned or	Obligor Tenor (months) Interest Rate Rate Earned on Escrow			Commonwealth of 144 3.98% 1.25%	Commonwealth of Kentucky-Dept. of Corrections 144 3.98% 1.25%	Corrections	Effective mor	Effective monthly lease rate Lease CLBO	3.98% 5,181,658.77		
Lease paym Calculated P Project Cost	Lease payments monthly in advance Calculated Payment (advance) Project Cost	y in advance vance)		\$5,015,810.00					Pavment		
	PMT	Paid Into	Payments	Earned on	Interest Paid	Amount In	Beginning	Informet	from	Principal	Ending Balance
Period	DATE	Escrow	to Vendor	Escrow	from Escrow	ESCTOW	2 072 446 92	0 858 52	43 805 29	33.946.77	2,938,470.04
29	8/14/2011	•	•	•			2,972,416.62	9,745,93	43,805.29	34,059.36	2,904,410.68
8	9/14/2011	1		) [		•	2,904,410.68	9,632.96	43,805.29	34,172.33	2,870,238.35
B 6	10/4/2011	•	•	•			2,870,238.35	9,519.62	43,805.29	34,285.67	2,835,952.69
2 5	12/14/2011	,	•	i		•	2,835,952.69	9,405.91	43,805.29	34,399.38	2,801,553.31
: 22	1/14/2012	•		ı		•	2,801,553.31	9,291.82	43,805.29	34.627.94	2,732,411.89
73	2/14/2012	•		•		•	2,707,039.03	9,117,50	43.805.29	34,742.79	2,697,669.10
74	3/14/2012	•	•	•			2.697.669.10	8,947.27	43,805.29	34,858.02	2,662,811.08
22	4/14/2012	1	•	•		•	2.662,811.08	8,831.66	43,805.29	34,973.63	2,627,837.45
92	5/14/2012	•	•			•	2,627,837.45	8,715.66	43,805.29	35,089.63	2,592,747.82
<b>:</b>	6/14/2012	•				•	2,592,747.82	8,599.28	43,805.29	35,206.01	2,557,541.81
8 f	7/14/2012	•	• •	•		•	2,557,541.81	8,482.51	43,805.29	35,322.78	2,522,219.03
2 8	8/14/2012		•	1			2,522,219.03	8,365.36	43,805.29	35,439.93	2,486,779.10
3 2	10/14/2012	•	•	•		•	2,486,779.10	8,247.82	43,805.29	35,557.47	2,451,221.05
82	11/14/2012	•	•	•		ř	2,451,221.63	8,129.89	43,605.29	35,07,345	2,379,752,50
83	12/14/2012	•	•	ı		•	2,415,546.23	8,011.36 7.892.85	43.805.29	35,912.44	2,343,840.05
<b>2</b>	1/14/2013	•	•	•			2 343 840 05	7.773.74	43,805.29	36,031.55	2,307,808.50
82	2/14/2013	1	1	•			2,307,808.50	7,654.23	43,805.29	36,151.06	2,271,657.44
8	3/14/2013	1	•			•	2,271,657.44	7,534.33	43,805.29	36,270.96	2,235,386.48
84	4/14/2013	•		•		,	2,235,386.48	7,414.03	43,805.29	36,391.26	2,198,995.22
8 8	5/14/2013			•		•	2,198,995.22	7,293.33	43,805.29	36,511.96	2,162,483.2/
8 8	7/14/2013			•		•	2,162,483.27	7,172.24	43,805.29	30,033.03	2,089,030.21
3 6			1	1		•	2,125,850.21	7,050.74	43,805.29	30,734.00	2,053,033,00
92	9/14/2013	1	•	•		•	2,089,095.66	6,806.53	43.805.29	36,998.76	2,015,220.44
93	10/14/2013	•	į	•			2.035,219.20	6,683.81	43,805.29	37,121.48	1,978,098.96
8	11/14/2013	•	•	•		•	1.978,098,96	6,560.69	43,805.29	37,244.60	1,940,854.37
92	12/14/2013	•	•	•		•	1.940,854.37	6,437.17	43,805.29	37,368.12	1,903,486.25
96	1/14/2014	i		•		•	1,903,486.25	6,313.23	43,805.29	37,492.06	1,865,994.19
6	2/14/2014		•	٠		•	1,865,994.19	6,188.88	43,805.29	37,616.41	1,525,377.70
S 6	3/14/2014		•	•		•	1,828,377.78	6,064.12	43,805.29	37,741.17	1,750,030.01
8 5	5/14/2014	•	•	•		•	1,790,636.61	5,938.94	43,805.29	37 991 94	1,714,778.33
5 5	6/14/2014	•	•	•		•	1,752,770.26	5,613.33	43,000.23	38.117.94	1,676,660.38
102	7/14/2014	•	•	•		•	1,714,776.55	5,567.33	43,805,29	38,244.37	1,638,416.02
103	8/14/2014	•	•	•		•	1,676,660.36	5 434 08	43.805.29	38,371.21	1,600,044.81
104	9/14/2014	•	•	•			1 600 044 81	5.306.82	43,805.29	38,498.47	1,561,546.33
105	10/14/2014	•	•	•		• •	1.561.546.33	5,179.13	43,805.29	38,626.16	1,522,920.17
106	11/14/2014	•	•	ı							

Part	Tenor (months) Interest Rate Rate Earned or	Construction (months) Interest Rate Rate Earned on Escrow			Commonwealth of Kentucky-Dept. of Coffections 144 3.98% 1.25%	Nentucky-Dept. of		Effective mo	Effective monthly lease rate Lease CLBO	3.98% 5,181,658.77		
PAMT         Paid Into         Pagments         Enrod on Interest Pad Amount In Bagments         Interest Pad Amount In Interest Pad Amount In Interest Pad Amount Inte	Lease p Calculat Project (	ayments month led Payment (ac Cost	ly in advance Ivance)		\$5,015,810.00					Pact		
1,424,100   1,522,800   1,52	roir o		Pald into	Payments to Vendor	Earned on	Interest Paid	Amount in Escrow	Beginning Balance	Interest	from	Principal	Ending Balance
21442016         452246         43,005.29         39,011.7         1464,520.09         4200.59         39,011.7         1464,520.09         39,011.7         1464,520.09         39,011.7         1462,200.09	107		-					1,522,920.17	5,051.02	43,805.29	38,754.27	1,484,165.90
214422015         1,445,220.0         4,785.2         4,3805.2         38,411.6         1,387.1           21442015         4,442,220.5         4,440.0         4,543.2         4,3805.2         38,411.6         1,387.1           24422015         4,420.0         4,543.2         4,3805.2         38,411.6         1,387.1           24422015         1,284.7         4,543.2         4,3805.2         38,411.6         1,288.2           24422015         1,284.7         4,240.0         4,4805.2         38,401.2         1,288.2           24422015         1,284.7         4,420.0         4,400.0         1,288.5         38,401.2         1,288.3           24422015         1,284.7         4,420.0         4,400.0         1,400.0	108	1/14/2015	•	•			•	1,484,165.90	4,922.48	43,805.29	38,882.81	1,445,283.09
9.44/2015         4.64 2713         4.68 4713         4.68 4713         4.68 4713         4.68 4713         4.68 472         4.68 472         4.68 472         4.68 472         4.68 472         4.68 672         8.68 472         4.68 672         8.68 472         4.68 672         8.68 472         4.68 672         8.68 472         4.68 672         8.68 472         4.68 672         8.68 472         4.68 672         8.68 472         4.68 672         8.68 472         4.68 672         8.68 472         4.68 672         8.68 672         1.28 68 672         1.28 68 672         1.28 68 672         1.28 68 672         1.28 68 672         1.28 68 672         1.28 68 672         1.28 68 672         1.28 68 672         8.68 672         1.28 68 672         8.68 672 <td>109</td> <td>2/14/2015</td> <td>•</td> <td></td> <td>•</td> <td></td> <td>•</td> <td>1,445,283.09</td> <td>4,793.52</td> <td>43,805.29</td> <td>39,011.77</td> <td>1,406,271.33</td>	109	2/14/2015	•		•		•	1,445,283.09	4,793.52	43,805.29	39,011.77	1,406,271.33
1,327,1801   1,327,1801   1,427   1,424.01   1,427   1,428.01   1,444.01   1,427   1,484.01   1,489.05   1,499.05   1,4	110	3/14/2015	•	•			Ī	1,406,271.33	4,664.13	43,805.29	39,141.16	1,367,130.17
61442015         61442015	7	4/14/2015	•		1		•	1,367,130.17	4,534.32	43,805.29	39,270.97	1,327,859.19
1,209,283.05   1,248,986.02   1,248,986.05   1,24	112	5/14/2015	•	•	•		•	1,327,859.19	4,404.07	43,805.29	39,401.22	1,200,437.37
1,200,202.01   1,100,402.02   1,10	113	6/14/2015	•	•			•	1,288,457.97	4,273.39	43,805.29	39,331.90	1 209 263 05
1/186/142015   1/186/1468   1/186/1469   1/186/1469   1/186/1490   1/186/149015   1/186/149015   1/146/140015	114	7/14/2015	•	•			•	1,240,320.07	4,142.21	43 805 29	39 794 57	1 169 468 48
1/1201420115   1/12	115	8/14/2015	•	•			• •	1 169 468 48	3 878 74	43.805.29	39,926,55	1.129.541.93
1/104/2015   1/1	9 1	9/14/2013	•	•			•	1 129 541 93	3.746.31	43,805.29	40,058.98	1,089,482,95
1,049,231,11   3,440,15   4,3865,29   4,0458,89   968,50   1,008,89   1,008,29   1,008,89   1,008	- 4	11/14/2015			•		•	1.089.482.95	3,613,45	43,805.29	40,191.84	1,049,291.11
1142016   143805.29   4458.89   468.80   468.80   448.8	- 5	12/14/2015	•	•			•	1,049,291.11	3,480.15	43,805.29	40,325.14	1,008,965.97
21/4/2016         3.71222         43.805.29         40.727.71         887.794.01         3.077.58         43.805.29         40.727.71         887.794.01         3.077.58         43.805.29         40.727.71         887.794.01         3.077.58         43.805.29         40.727.71         887.79         40.805.79         40.727.71         887.79         40.805.79         40.727.71         887.79         40.805.79         40.727.71         40.805.79         40.727.71         40.805.79         40.727.71         40.805.79         40.805.79         40.805.79         40.805.79         40.805.79         40.805.79         40.805.79         40.805.79         40.805.79         40.805.79         40.805.79         40.805.79         40.805.79         41.207.72         70.205.70         41.805.89         41.207.72         70.205.70         41.207.72         70.205.70         41.207.72         70.205.70         41.207.72         70.205.70         41.207.72         70.205.70         41.207.72         70.205.70         70.205.70         41.207.72         70.205.70         41.207.72         70.205.70         41.207.72         70.205.70         41.207.72         70.205.72         70.205.72         70.205.72         41.207.72         70.205.72         70.205.72         70.205.72         70.205.72         70.705.72         70.705.72         70.705.72	150	1/14/2016	,	•	•		•	1,008,965.97	3,346.40	43,805.29	40,458.89	968,507.09
3/14/2016         43,805.29         40,727.77         887,18           3/14/2016         43,805.29         40,805.29         40,998.32         41,474.29         764,190         722,90         41,407.60         80,532         41,407.60         80,532         41,407.60         80,532         41,407.60         80,532         41,407.60         80,532         41,407.60         80,532         41,407.60         80,532         41,407.60         80,532         41,407.60         80,532         41,407.60         80,532         41,407.60         80,532         41,407.60         80,532         80,532         41,407.60         80,532         80,532         41,407.60         80,532         80,532         41,407.60         80,532         80,532         41,407.60         80,532         80,532         41,407.60         80,532         80,532         41,407.60         80,532         41,407.60         80,532         41,407.6	121	2/14/2016	•	•			•	968,507.09	3,212.22	43,805.29	40,593.07	927,914.01
4/14/2016         4/14/2016 <t< td=""><td>122</td><td>3/14/2016</td><td>•</td><td>•</td><td>•</td><td></td><td>•</td><td>927,914.01</td><td>3,077.58</td><td>43,805.29</td><td>40,727.71</td><td>887,186.30</td></t<>	122	3/14/2016	•	•	•		•	927,914.01	3,077.58	43,805.29	40,727.71	887,186.30
61/4/2016         C. 1806 37         43,105.29         40,1394.32         764,100           61/4/2016         61/4/2016         61/4/2016         61/4/2016         41,270.72         764,100         43,805.29         41,270.72         722,92           7/14/2016         61/4/2016         61/4/2016         61/4/2016         61/4/2016         61/4/2016         61/4/2017         722,920.18         2.397.69         43,805.29         41,270.72         722,920.18         722,920.18         2.397.69         43,805.29         41,270.72         722,920.18         63,805.29         41,270.78         681,51         722,920.18         63,805.29         41,607.60         681,51         681,51         722,920.18         73,805.29         41,607.60         681,51         73,805.29         41,607.60         681,51         73,805.29         41,607.60         681,51         73,805.29         41,607.60         681,51         73,805.29         41,607.78         688,28         73,805.29         41,607.78         688,28         73,805.29         41,607.78         688,28         73,805.29         41,607.78         688,28         73,805.29         41,607.78         73,805.29         41,607.78         73,805.29         41,607.78         73,805.29         41,607.78         73,805.29         42,605.29         41,607.78	123	4/14/2016	•	•	•		•	887,186.30	2,942.50	43,805.29	40,862.79	846,323.51
644,142016   644,1805.28	124	5/14/2016	i	•	•		•	846,323.51	2,806.97	43,805.29	40,998.32	805,325.20
7/44/2016         7/44/2016 <t< td=""><td>125</td><td>6/14/2016</td><td>•</td><td>,</td><td></td><td></td><td>•</td><td>805,325.20</td><td>2,671.00</td><td>43,805.29</td><td>41,134.29</td><td>722 020 18</td></t<>	125	6/14/2016	•	,			•	805,325.20	2,671.00	43,805.29	41,134.29	722 020 18
814/2010         914/2011         914/2011	126	7/14/2016	•	•				722 920 18	2,397,69	43.805.29	41.407.60	681.512.57
1/14/2016   1,984.31   2,122.56   43,805.29   41,682.73   598,284   1,144/2016   1,984.31   1,984.31   43,805.29   41,682.03   1,984.31   1,9	12/	8/14/2016	• •				•	681,512.57	2,260.35	43,805.29	41,544.94	639,967.63
1/14/2016   1,984.31   43,805.29   41,820.98   556,463.92   1,945.61   43,805.29   41,820.98   556,463.92   1,945.61   43,805.29   41,950.88   514,50   1,24/2016   1,24/2016   1,24/2017   1,705,44   1,266.81   1,266.81   1,366.81   43,805.29   42,238.48   1,24/2017	129	10/14/2016	•		•		•	639,967.63	2,122.56	43,805.29	41,682.73	598,284.90
12/14/2016         1,845.61         43,805.29         41,959.68         514,50           11/4/2016         1,456.14         43,805.29         41,959.68         514,50           11/4/2017         472,405.39         1,566.81         43,805.29         42,238.48         430,16           21/4/2017         430,166.91         1,426.72         43,805.29         42,519.13         345,26           31/4/2017         387,788.34         1,286.16         43,805.29         42,519.13         345,26           51/4/2017         345,269.21         1,145.14         43,805.29         42,619.13         345,26           51/4/2017         302,690.07         1,003.65         42,945.60         42,946.60         15,646.16         302,69           7/14/2017         269,807.43         861.69         43,805.29         42,943.60         216,86         173,77           8/14/2017         10/14/2017         10/14/2017         10/14/2017         43,805.29         43,905.29         43,906.29         43,906.29         43,966.16         43,806.29         43,660.43         130,540.88         43,805.29         43,660.43         130,540.88         43,606.29         43,660.43         43,660.43         43,660.43         43,660.43         43,660.43         43,660.43         43,660	130	11/14/2016	•	•	•		•	598,284.90	1,984.31	43,805.29	41,820.98	556,463.92
174/2017   1,566.81	131	12/14/2016	•	ı	•		•	556,463.92	1,845.61	43,805.29	41,959.68	514,504.24
21/4/2017     47/4/405.39     1,390.31       21/4/2017     430,166.31     1,456.12     43,605.29     42,505.31       41/4/2017     387,786.34     1,286.16     43,805.29     42,519.13     345,26       5/14/2017     345,269.21     1,145.14     43,805.29     42,660.15     302,60       6/14/2017     302,609.07     1,003.65     43,805.29     42,943.60     216,86       7/14/2017     259,807.43     861.69     43,805.29     42,943.60     216,86       8/14/2017     101/4/2017     130,548.89     43,805.29     43,805.29     43,905.29       101/4/2017     130,548.89     43,805.29     43,805.29     43,616.15     43,606.43       12/14/2017     43,606.43     144,81     43,805.29     43,606.43     43,606.43       12/14/2017     43,606.43     144,81     43,805.29     43,606.43     43,606.43	132	1/14/2017	ı	•	1		j	014,004,24	1,700.44	40,000,00	10 000 10	420 488 04
31/4/2017     43,014/2017       41/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,014/2017       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017     34,016/2019       51/4/2017 <td>133</td> <td>2/14/2017</td> <td>1</td> <td>•</td> <td>•</td> <td></td> <td>4</td> <td>472,405.39</td> <td>1,566.81</td> <td>43,605.29</td> <td>42,230.40</td> <td>387 788 34</td>	133	2/14/2017	1	•	•		4	472,405.39	1,566.81	43,605.29	42,230.40	387 788 34
4/14/2017 54/14/2017	134	3/14/2017	•	•	•		•	450,100.31	1,420.72	43.805.29	42 519 13	345 269 21
614/2017 614/2017 714/2017 714/2017 714/2017 714/2017 714/2017 814/2017 814/2017 914/2017	135	4/14/2017	•	•				345 269 21	1 145 14	43.805.29	42.660.15	302,609,07
714/2017     259,807.43     861.69     43,805.29     42,943.60     216,88       714/2017     216,863.84     719.27     43,805.29     43,086.02     173,77       81/4/2017     173,777.81     576.36     43,805.29     43,28.93     130,54       91/4/2017     130,548.88     432.99     43,805.29     43,372.30     87,11       11/4/2017     87,176.58     289.14     43,805.29     43,516.15     43,660.43       12/14/2017     43,660.43     144.81     43,805.23     43,660.43	136	5/14/201/	•					302,609.07	1.003.65	43.805.29	42,801.64	259,807.43
8/14/2017 - 216,863.84 719.27 43,805.29 43,086.02 173,77 9/14/2017 - 173,777.81 576.36 43,805.29 43,228.93 130,54 10/14/2017 - 130,548.88 432.99 43,805.29 43,372.30 87,17 11/14/2017 - 87,176.58 289.14 43,805.29 43,516.15 43,66 12/14/2017 - 43,660.43 144.81 43,805.23 43,660.43	5 4	714412017	• •		•		•	259.807.43	861.69	43,805.29	42,943.60	216,863.84
9/14/2017	130	8/14/2017		•	•		•	216,863.84	719.27	43,805.29	43,086.02	173,777.81
10/14/2017 - 130,548.88 432.99 43,805.29 43,372.30 87,17 11/14/2017 - 87,176.58 289.14 43,805.29 43,516.15 43,66 12/14/2017 - 43,660.43 144.81 43,805.23 43,660.43	140	9/14/2017	•	•	•		•	173,777.81	576.36	43,805.29	43,228.93	130,548.88
11/14/2017 - 87,176.58 289.14 43,805.29 43,516.15 43,66 12/14/2017 - 43,660.43 144.81 43,805.23 43,660.43 43,660.43	141	10/14/2017	•	•	,		•	130,548.88	432.99	43,805.29	43,372.30	87,176.58
12/14/2017 43,660.43 144.81 43,805.23 43,660.43	142	11/14/2017	•	•	•		•	87,176.58	289.14	43,805.29	43,516.15	43,660.43
	143	12/14/2017	•	•	,		•	43,660.43	144.81	43,805.23	43,660.43	0.00

### LIFE EXPECTANCY OF PROPOSED EQUIPMENT

Major equipment is generally defined as equipment that is either large in size or cost, therefore, we have excluded the following from the list provided below: lamps, ballasts, steam traps, condensate pumps, domestic water heaters, kitchen equipment, miscellaneous fittings and mechanical parts, individual pneumatic and/or digital controls. All equipment is covered under standard manufacturer warranties.

Life Expectancy (years)	Description
25	Lighting Fixtures replaced or retrofit ed
20	Ozone Laundry Systems
25	Water Conservation - Toilets
25	Water Conservation – Urinals
25	Water Conservation – sinks
25	Water Conservation - Showerheads





October 6, 2004

Mr. Jim Nordmann
ESPC Coordinator
Commonwealth of Kentucky
Finance and Administration Cabinet
Department for Facilities Management
Division of Engineering
Room 158, New Capitol Annex
702 Capitol Avenue
Frankfort, KY 40601

### Re: REQUEST FOR PROPOSALS ES-139-04 Kentucky Department of Corrections

### Dear Jim:

In fulfillment of the requirements for submittal documentation for contract review and approval, NORESCO offers the following statement regarding the life expectancy of the equipment proposed to be installed in connection with the project at the Kentucky State Reformatory, Luther Luckett Correctional Complex and Roederer Correctional Complex collectively known as the La Crange facilities and as detailed in Exhibit B.

The equipment installed as part of the projects at the La Grange facilities is expected to have a useful service life that will exceed the financing term of the ESPC as proposed, based on normal operation, use and maintenance of said equipment. Normal operation, use and maintenance will be defined as that prescribed by the manufacturer.

Please contact me if you have any questions or require additional information.

Sincerely

David G. Mannherz
Executive Vice President

LaGrange Facilities (Dept. of Corrections)
Energy Management Project Analysis
Date: 05-Jan-05

Base Case Scenario with Annual Level DSS-Citicapital

### Summary

Expected Financing Rate		Amount Financed	Less Capital Contribution	Project Scope
	σı			↔
3.98%	5,014,058.00	5,015,810		5,015,810

Gross Savings	€0	0,/00,/02
Interest Earnings	↔	
Net Expenditures	↔	(6,726,592)
Difference		63,200
Initial Capital Outlay		
Net Cashflow	↔	63,200
Net Present Value	↔	42,935

# Positive Cumulative Cashflow Period Cashflow Present Value

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		42,935	8	63,200	816,417 \$	1,752 \$ (6,464,156) \$ 5,973,375 \$	\$ (6,464,156)	1	(148,435) \$ (114,000) \$	\$ (148,435) \$	\$	Total
63,200	42,935	28,358	\$0.62604	45,297	67,090.35	481,934.12	(481,858)		(9,500)	(12,369.62)		12
17,903	14,577	971	\$0.65096	1,491	67,090.35	481,934.12	(525,663)		(9,500)	(12,369.62)		=======================================
Ç	1,50,	,,,,,,,,	<b>\$0.07000</b>	-	تت.ناتان,	701,004.12	(525,555)		(0,500)	(12,303.52)		ć:
14,920	12,597	1,050	\$0.70380	1,491	67,090.35	481,934.12	(525,663)		(9,500)	(12,369.62)		9
13,429	11,547	1,091	\$0.73182	1,491	67,090.35	481,934.12	(525,663)		(9,500)	(12,369.62)		8
11,938	10,456	1,135	\$0.76094	1,491	67,090.35	481,934.12	(525,663)		(9,500)	(12,369.62)		7
10,446	9,321	1,180	\$0.79123	1,491	67,090.35	481,934.12	(525,663)		(9,500)	(12,369.62)		6
8,955	8,141	1,227	\$0.82272	1,491	67,090.35	481,934.12	(525,663)		(9,500)	(12,369.62)		<b>C</b> JI
7,464	6,914	1,276	\$0.85546	1,491	67,090.35	481,934.12	(525,663)		(9,500)	(12,369.62)		4
5,972	5,638	1,327	\$0.88951	1,491	67,090.35	481,934.12	(525,663)		(9,500)	(12,369.62)		မ
4,481	4,312	1,379	\$0.92491	1,491	67,090.35	481,934.12	(525,663)		(9,500)	(12,369.62)		2
2,989	2,932	1,434	\$0.96172	1,491	67,090.35	481,934.12	(525,663)	1,752	(9,500)	(12,369.62)		_
1,498	1,498	1,498	\$1.00000	1,498	11,332.46	190,165.65	(200,000)		•	•		0
Cumulative	Dollars Cumulative	Dollars C	Value	Total	Savings	Savings	Payments	Earnings*	Treatment	& Verification	Period (Yrs) Capital Outlay	Period (Yrs)
Total	PV	P۷	Present		Oper. & Maint.	Energy C	Lease	Interest	Water	Measurement		
			3.98%					Escrow				
												-

<sup>\*</sup>Assumed that all draws are made within an twelve month time period and that net interest earnings from the escrow account are at 2.00%.

Project Amount Interest Rate 5,015,810 2.00000% **Escrow Interest Earnings** 

Date(Mth	ns)	Complete	Balance	Interest
	1 2 3	2.50% 2.50% 5.00%	4,890,415 4,765,019 4,514,229 4,263,438	268 261 247
	4 5 6	10.00% 10.00%	3,761,856 3,260,275	234 206
	7 8	15.00% 15.00%	2,507,904 1,755,532	179 137
	9 10 11	10.00% 10.00% 10.00%	1,253,951 752,369 250,788	96 69 41
	12		(3)	14
Total				1,752

### Brewer, Robin (Finance OFM)

From:

Bobka, Andy [andy.bobka@citigroup.com] Wednesday, January 05, 2005 3:17 PM

Sent: To:

Brewer, Robin (Finance OFM) Marshall, Nora (Finance OFM)

Cc: Subject:

RE: LaGrange Facilities-Department of Corrections-ESPC Project

### Robin,

This is confirmation that the rate of 3.98% will be held through 1/14. Additionally, the repayment period will be 144 months, and the payment structure will consist of a \$200,000 initial payment with lease payments not exceeding \$525,663.48 per years 1 through 11, and not exceeding \$481,858.13 in the last year. Please contact me should you require any additional information. Regards

Andy Bobka Vice President CitiCapital Energy Finance 1991 Crocker Rd. #600 Westlake, OH 44145 440-892-3363 440-892-3326 fax andy.bobka@citigroup.com

----Original Message----

From: Brewer, Robin (Finance OFM) [mailto:Robin.Brewer@ky.gov]

Sent: Wednesday, January 05, 2005 11:41 AM

To: Bobka, Andy

Cc: Marshall, Nora (Finance OFM)

Subject: LaGrange Facilities-Department of Corrections-ESPC Project

### Andy,

As we have done in the past, could you please provide me with a statement, verifying that the monthly lease payments on this project will only be for 12 years and will not exceed the amounts provided by Noresco on the cashflow analysis, an initial upfront payment of \$200,000 (year 0), \$525,663.48 per year for years 1 through 11, and a lower payment of \$481,858.13 in the last year (year 12) to offset and pay off early. Thank you.

Robin A. Brewer
Finance and Administration Cabinet
Office of Financial Management
Room 261, Capitol Annex
Frankfort, KY 40601-3453
(502)564-2924 ext.152
Fax: (502)564-7416
Robin.Brewer@ky.gov

### CERTIFICATE OF REVIEW AND APPROVAL

Pursuant to KRS 56.784(3), the Office of Financial Management ("OFM") has reviewed the LaGrange Facilities (Department of Corrections) Guaranteed Energy Savings Performance Contract ("The Project"). OFM's review is limited to:

- (1) an evaluation of the reasonableness of the interest rate assumptions used in determining the financial viability of The Project; and
- (2) a review of the projected monetary savings and breakeven analysis outlined in The Project that should materialize if The Project performs as outlined in The Project documents.

OFM EXPRESSLY DISCLAIMS ANY REVIEW OF THE FEASIBILITY OF THE DESIRED RESULTS FROM AN ENGINEERING STANDPOINT, AND MAKES NO WARRANTIES - EITHER EXPRESS OR IMPLIED - AS TO WHETHER THE PROJECT WILL PERFORM AS DESIRED OR EXPECTED.

Based on the review of The Project as described and limited above, The Project is approved at the given interest rate as identified in The Project documents of 3.98%, locked through January 6, 2005, and provided by CitiCapital.

Dated this 5th day of January 2005.

Charles F. Bell, Jr., Executive Director

Office of Financial Management