

**Summary of Potential Savings** King Abdullah II Design and  
Development Bureau (KADDB)

Area	Annual Energy Savings		Cost Savings (JD/yr.)	Investment Required (JD)	Pay Back Period (Years)	CO <sub>2</sub> (TON/year)
	kWh/yr					
	Electrical	Thermal				
<b>Chapter 3: ELECTRICAL SYSTEM</b>						
Switching off Computers	17,971		1,160	Nil	Immediate	12.0
<b>Chapter 4: LIGHTING SYSTEM</b>						
Replacement of Conventional Ballasts by Electronic Ballasts for 2*36 fluorescent lamps	11,459		963	1,066	1.1	7.7
Installing a timer to turn off lights from 10:00 pm till 7:00 am	16,947		1,424	50	Immediate	11.4
Replacing 35 watt Halogen with 11 watt Compact Fluorescent Down light	465		39	120	3.1	0.3
Replacing 50 watt Halogen with 11 watt Compact Fluorescent Down light	49,000		4,116	5,000	1.2	32.8
Installing occupancy sensor for first floor meetings room lighting	517		43	50	1.2	0.3
Installing occupancy sensor for second floor meetings room lighting	1,043		88	50	0.57	0.7
Installing occupancy sensor for third floor meetings room lighting	329		28	50	1.8	0.2
Removing unnecessary lights at the corridor and copying area at the third floor	924		78	Nil	Immediate	0.6
<b>Chapter 5: HEATING SYSTEM</b>						
Replacing the Hot Water Boilers by Heat Pumps. (1 <sup>st</sup> Option)		102,000	6,120	17,150	2.8	265.2
<i>Tuning up of the combustion in the hot water boilers. (2<sup>nd</sup> Option)</i>		15,300	918	<i>Marginal</i>	<i>immediate</i>	39.78
<b>Chapter 6: SOLAR WATER HEATING SYSTEM</b>						
Installation of a solar water heating system.		12,945	1,087	2,400	2.2	33.7
<b>Chapter 8: COOLING SYSTEM</b>						
Increase the supply water set point to be around 7.5°C	12,227		1,027	Nil	Immediate	8.2
Chiller #1 should work with its full load and keep Chiller #2 as stand by	8,117		681	Nil	Immediate	5.4
<b>Total</b>	<b>118,999</b>	<b>114,945</b>	<b>16,854</b>	<b>25,936</b>	<b>1.5</b>	<b>378.5</b>
<b>% Saving (based on expected 2008 consumption)*</b>					<b>26.5 %</b>	