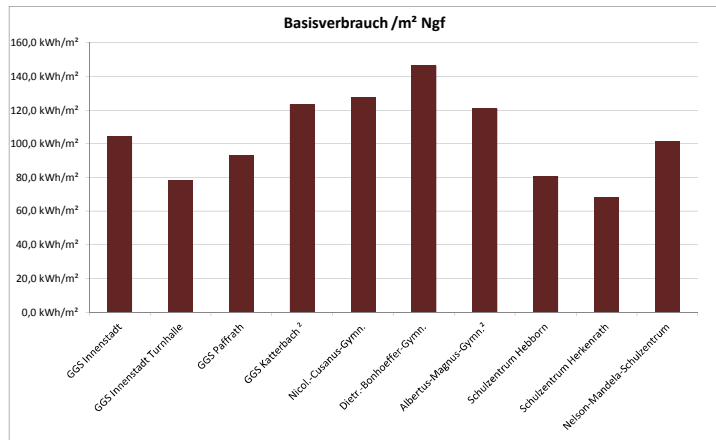


Schule	Elektrizität			Erdgas / Wärme unbereinigt			Erdgas / Wärme bereinigt			3550 Basis	Nettogrundfläche	Basisverbrauch m² Ngf	Elektrizität			Erdgas/Wärme				
	GTZ																			
	2016	2015	2014	Basis	2016	2015	2014	3199	3136				2830	2016	2015	2014	2016	2015	2014	
GGS Innenstadt	63.114 kWh/a	52.975 kWh/a	60.850 kWh/a	61.313 kWh/a	288.075 kWh/a	256.400 kWh/a	227.010 kWh/a	319.683 kWh/a	290.475 kWh/a	284.765 kWh/a	298.308 kWh/a	14.915 kWh/a	2.895 m²	104,5 kWh/m²	22,1 kWh/m²	21,2 kWh/m²	21,3 kWh/m²	100,9 kWh/m²	89,9 kWh/m²	79,5 kWh/m²
GGS Innenstadt Turnhalle	19.770 kWh/a	11.150 kWh/a	9.302 kWh/a	11.407 kWh/a	52.850 kWh/a	49.400 kWh/a	37.450 kWh/a	58.648 kWh/a	55.922 kWh/a	46.978 kWh/a	53.849 kWh/a	2.692 kWh/a	690 m²	78,0 kWh/m²	20,0 kWh/m²	16,2 kWh/m²	19,5 kWh/m²	76,6 kWh/m²	71,6 kWh/m²	54,3 kWh/m²
GGS Paffrath	93.700 kWh/a	94.980 kWh/a	75.910 kWh/a	88.197 kWh/a	377.730 kWh/a	323.910 kWh/a	305.590 kWh/a	419.175 kWh/a	366.671 kWh/a	383.337 kWh/a	389.728 kWh/a	19.486 kWh/a	4.180 m²	93,2 kWh/m²	22,4 kWh/m²	22,7 kWh/m²	18,2 kWh/m²	90,4 kWh/m²	77,5 kWh/m²	73,1 kWh/m²
GGS Katterbach 2	80.302 kWh/a	115.010 kWh/a	80.300 kWh/a	91.871 kWh/a	409.725 kWh/a	406.995 kWh/a	336.389 kWh/a	454.681 kWh/a	460.725 kWh/a	421.972 kWh/a	445.792 kWh/a	22.290 kWh/a	3.620 m²	123,1 kWh/m²	22,2 kWh/m²	31,8 kWh/m²	22,2 kWh/m²	113,2 kWh/m²	112,4 kWh/m²	92,9 kWh/m²
Nicol-Cusanus-Gymn.	218.400 kWh/a	219.050 kWh/a	234.750 kWh/a	224.067 kWh/a	1.269.855 kWh/a	1.370.430 kWh/a	1.574.500 kWh/a	1.409.186 kWh/a	1.551.348 kWh/a	1.975.080 kWh/a	1.645.204 kWh/a	82.260 kWh/a	12.900 m²	127,5 kWh/m²	16,9 kWh/m²	17,0 kWh/m²	18,2 kWh/m²	98,4 kWh/m²	106,2 kWh/m²	122,1 kWh/m²
Dietr.-Bonhoeffer-Gymn.	209.532 kWh/a	201.315 kWh/a	197.700 kWh/a	202.849 kWh/a	1.190.666 kWh/a	1.133.307 kWh/a	875.800 kWh/a	1.321.308 kWh/a	1.509.324 kWh/a	1.098.618 kWh/a	1.309.750 kWh/a	65.488 kWh/a	8.960 m²	146,2 kWh/m²	23,4 kWh/m²	22,5 kWh/m²	22,1 kWh/m²	132,9 kWh/m²	148,8 kWh/m²	97,7 kWh/m²
Albertus-Magnus-Gymn.2	173.929 kWh/a	182.950 kWh/a	172.410 kWh/a	176.430 kWh/a	1.235.675 kWh/a	1.059.850 kWh/a	794.400 kWh/a	1.371.255 kWh/a	1.199.766 kWh/a	996.509 kWh/a	1.189.177 kWh/a	59.459 kWh/a	9.830 m²	121,0 kWh/m²	17,7 kWh/m²	18,6 kWh/m²	17,5 kWh/m²	125,7 kWh/m²	107,8 kWh/m²	80,8 kWh/m²
Schulzentrum Hebborn	197.918 kWh/a	193.650 kWh/a	204.690 kWh/a	198.753 kWh/a	702.780 kWh/a	658.210 kWh/a	583.810 kWh/a	779.890 kWh/a	745.104 kWh/a	732.341 kWh/a	752.445 kWh/a	37.622 kWh/a	9.350 m²	80,5 kWh/m²	21,2 kWh/m²	20,7 kWh/m²	21,9 kWh/m²	75,2 kWh/m²	70,4 kWh/m²	62,4 kWh/m²
Schulzentrum Herkenrath	382.101 kWh/a	376.014 kWh/a	359.690 kWh/a	372.602 kWh/a	915.650 kWh/a	786.160 kWh/a	847.300 kWh/a	1.016.117 kWh/a	889.945 kWh/a	1.062.867 kWh/a	989.643 kWh/a	49.482 kWh/a	14.500 m²	68,3 kWh/m²	26,4 kWh/m²	25,9 kWh/m²	24,8 kWh/m²	63,1 kWh/m²	54,2 kWh/m²	58,4 kWh/m²
Nelson-Mandela-Schulzentrum	430.233 kWh/a	413.756 kWh/a	372.000 kWh/a	405.330 kWh/a	1.484.670 kWh/a	1.177.660 kWh/a	1.428.000 kWh/a	1.647.571 kWh/a	1.559.532 kWh/a	1.786.290 kWh/a	1.664.464 kWh/a	88.223 kWh/a	16.450 m²	101,2 kWh/m²	26,2 kWh/m²	25,2 kWh/m²	22,6 kWh/m²	90,3 kWh/m²	83,7 kWh/m²	86,6 kWh/m²
				1.832.817 kWh/a							8.738.361 kWh/a		436.918 kWh/a							



mail 171130  
mail 171201

Berechnung spez Durchschnittspreis Wärme + Strom			
MWh Wärme p.a.	8.738	0,0500	436.918
MWh Strom p.a.	1.833	0,1700	311.579
<b>Summe MWh</b>	<b>10.571</b>	<b>0,0781</b>	<b>748.497</b>

2012 - 2014		2014	
Heiz brutto p.a.	436.918,07€		
Strom brutto p.a.	311.578,90€		
<b>Gesamt brutto p.a.</b>	<b>748.496,96€</b>		

Einsparung		15%	25%
Euro p.a.		112.275€	187.124€

kWh Wärme	1.310.754	2.184.590
kWh Strom	274.923	458.204
CO <sub>2</sub> Wärme kg	276.569	460.849
CO <sub>2</sub> Strom kg	195.745	325.241
<b>CO<sub>2</sub> Summe kg</b>	<b>472.314</b>	<b>787.190</b>

Barwert	15%	25%
Eintritt	0,035	0,035
Anzahl Perioden, über die die Annuität	12	12
Betrag (Annuität) der gleichbleibend	112.275	187.124
<b>Zw(optional): zukünftige Endwert oder</b>	<b>0</b>	<b>0</b>
Fälligkeit am Periodenende	1	1
<b>Potenitelle Investition</b>	<b>1.122.920</b>	<b>1.871.533</b>