DEGER ENERGIE
SOLAR TRACKING SYSTEMS

Greek References
2010-2011

Note:
All used data within this analysis (raw data, pictures, graphs, etc.) is the property of:

DEGERenergie GmbH
Solar Tracking Systems
Industriestraße 70
72160 Horb am Neckar
www.degerenergie.com
info@DEGERenergie.com

Reference projects and a production overview from DEGERenergie

DEGERENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	SARRIS OINOFYTA
Location:	OINOFYTA
Country/Region:	GREECE
Latitude:	38° 18' 10" E
Longitude:	23° 38' 34" N

System configuration:

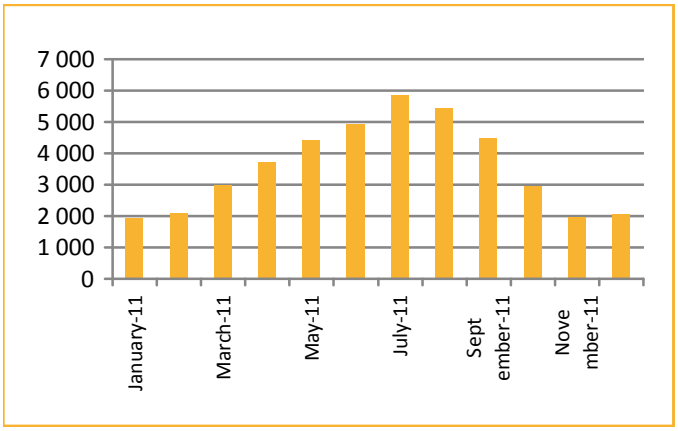
Rated installation output:	19.98 kWp
Number of trackers	3 DEGERtraker 7000NT
Number of modules	108 Aleo S17, 185Wp
Number of inverters	3 x SMA SMC 7000TL

Production period
January 2011 – December 2011

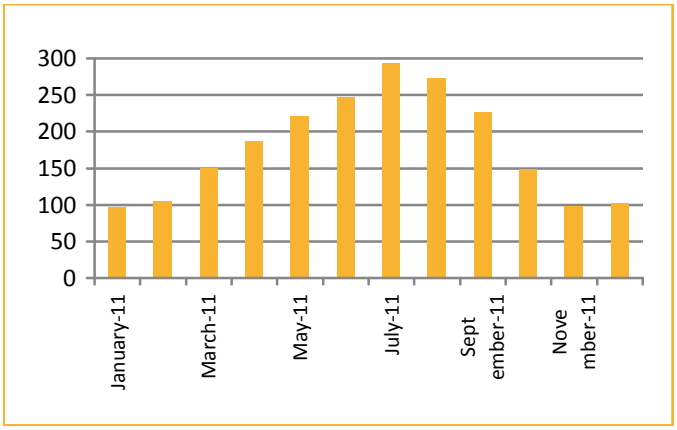
Month	kWh total	kWh/kWp
January-11	1 920.00	96.10
February-11	2 090.00	104.60
March-11	2 980.00	149.15
April-11	3 720.00	186.19
May-11	4 420.00	221.22
June-11	4 930.00	246.75
July-11	5 850.00	292.79
August-11	5 430.00	271.77
September-11	4 500.00	225.23
October-11	2 950.00	147.65
November-11	1 960.00	98.10
December-11	2 050.00	102.60

TOTAL	42 800	2 142

OINOFYTA: 19,98 kWp



Total production: kWh



Production performance figure: kWh/kWp

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Reference projects and a production overview from DEGERenergie

DEGERENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	KALYMNOS PIZANIAS
Location:	KALYMNOS
Country/Region:	GREECE
Latitude:	36°58' 37" N
Longitude:	26° 58' 37" E

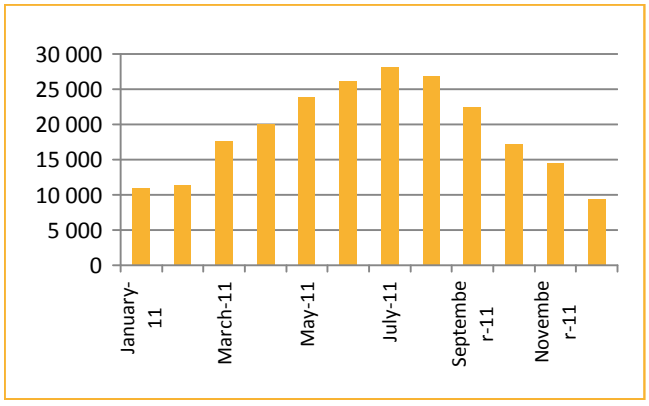
System configuration:

Rated installation output:	99.63 kWp
Number of trackers	18 x 5000 NT
Number of modules	Suntech STP270-24/Vd
Number of inverters	9xSunny Mini Central 11000TL

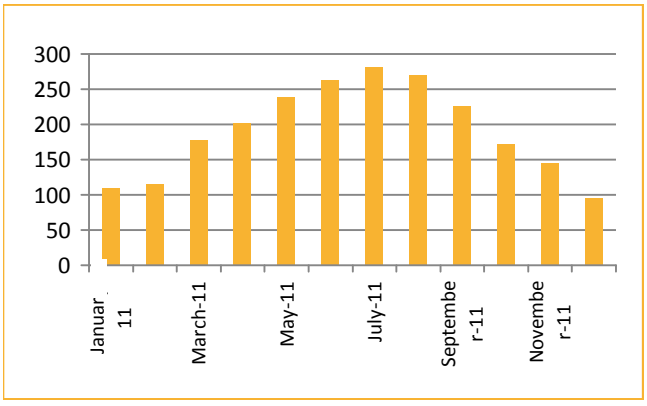
Production period
January 2011 – December 2011

Month	kWh total	kWh/kWp
January-11	10 870.00	109.10
February-11	11 390.00	114.32
March-11	17 620.00	176.85
April-11	20 100.00	201.75
May-11	23 820.00	239.08
June-11	26 200.00	262.97
July-11	28 110.00	282.14
August-11	26 860.00	269.60
September-11	22 440.00	225.23
October-11	17 150.00	172.14
November-11	14 500.00	145.54
December-11	9 400.00	94.35
TOTAL	**228 460**	**2 293**

KALYMNOS: 99,63 kWp



Total production: kWh



Production performance figure: kWh/kWp

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Reference projects and a production overview from DEGERenergie

DEGERENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	KOMOTINI KAZAKOS
Location:	KOMOTINI
Country/Region:	GREECE
Latitude:	41°10' 51" N
Longitude:	25° 25' 31" E

System configuration:

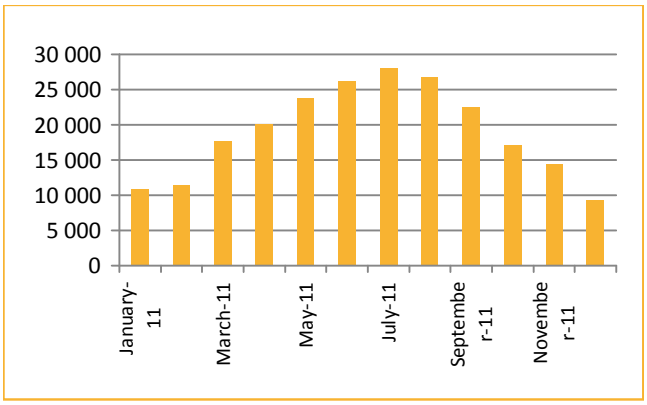
Rated installation output:	99.88 kWp
Number of trackers	15 DEGERtraker 7000NT
Number of modules	Sunways SM210U - 230wp
Number of inverters	15xSunny Mini Central 7000TL

Production period
January 2011 – December 2011

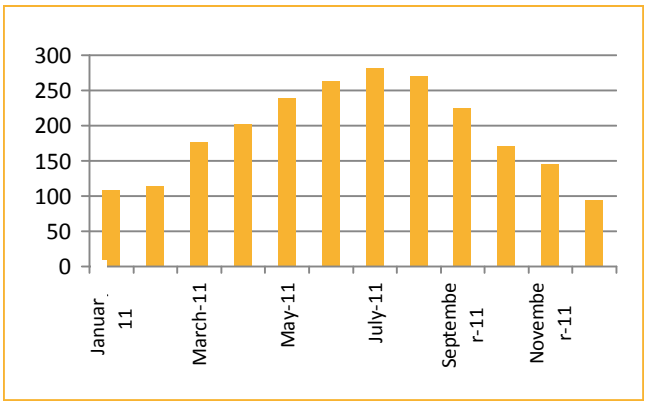
Month	kWh total	kWh/kWp
January-11	11 260.47	112.74
February-11	12 062.51	120.77
March-11	16 446.24	164.66
April-11	18 794.42	188.17
May-11	22 103.44	221.30
June-11	23 051.31	230.79
July-11	26 959.61	269.92
August-11	25 349.54	253.80
September-11	21 362.33	213.88
October-11	15 567.30	155.86
November-11	13 916.28	139.33
December-11	8 954.24	89.65

TOTAL	**215 828**	**2 161**

KOMOTINI: 99,88 kWp



Total production: kWh



Production performance figure: kWh/kWp

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Reference projects and a production overview from DEGERenergie

DEGERENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	AGIADES
Location:	SAMOS
Country/Region:	GREECE
Latitude:	37°44' 56" N
Longitude:	26° 51' 22" E

System configuration:

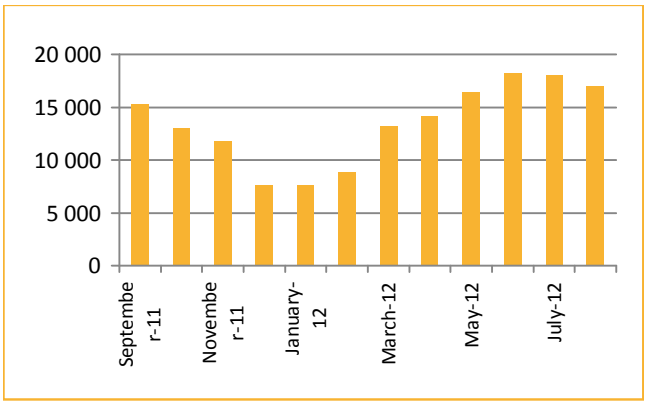
Rated installation output:	68.4 kWp
Number of trackers	9 x 9000NT
Number of modules	Schüco MPE 190 MS 05 EU
Number of inverters	4xSunny Tripower 17000TL-10

Production period
September 2011 – August 2012

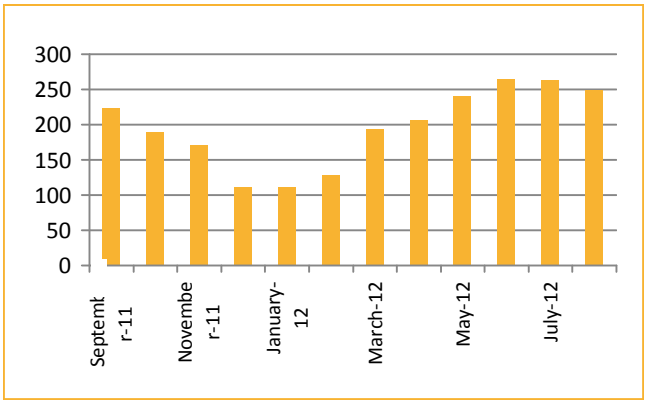
Month	kWh total	kWh/kWp
September-11	15 290.00	223.54
October-11	12 980.00	189.77
November-11	11 780.00	172.22
December-11	7 640.00	111.70
January-12	7 580.00	110.82
February-12	8 850.00	129.39
March-12	13 230.00	193.42
April-12	14 160.00	207.02
May-12	16 400.00	239.77
June-12	18 180.00	265.79
July-12	17 990.00	263.01
August-12	17 060.00	249.42

TOTAL	161 140	2 356

SAMOS: 68,40 kWp



Total production: kWh



Production performance figure: kWh/kWp

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Reference projects and a production overview from DEGERenergie

DEGERENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	MOLAOI-HELIDA1
Location:	LAKONIA
Country/Region:	GREECE
Latitude:	36°48'24" N
Longitude:	22°50'21" E

System configuration:

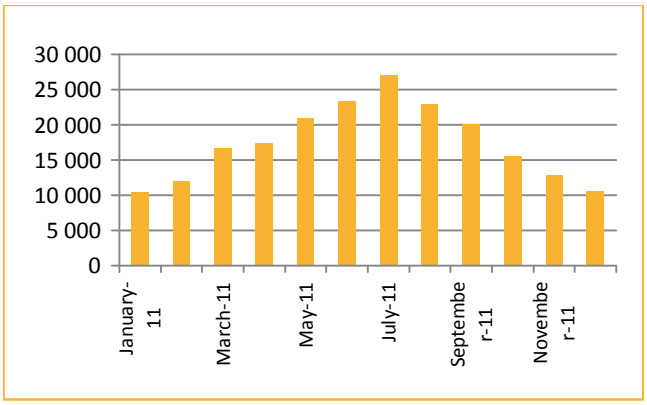
Rated installation output:	99.68 kWp
Number of trackers	18 x 5000NT
Number of modules	Suntech STP270-24/Vb
Number of inverters	20 x Sunny Boy 5000TL-20

Production period
January 2011 – December 2011

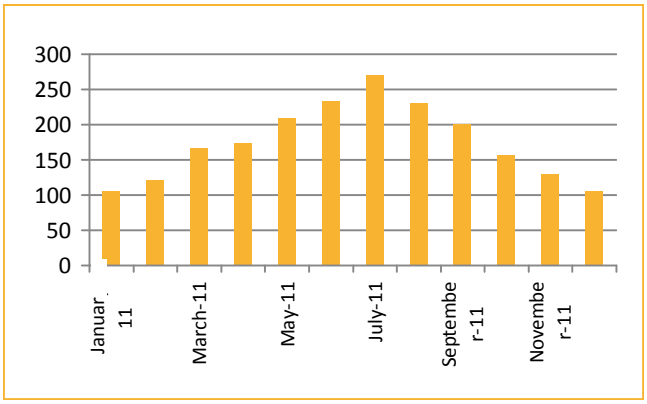
Month	kWh total	kWh/kWp
January-11	10 490.00	105.24
February-11	12 020.00	120.59
March-11	16 600.00	166.53
April-11	17 420.00	174.76
May-11	20 880.00	209.47
June-11	23 320.00	233.95
July-11	27 010.00	270.97
August-11	23 030.00	231.04
September-11	20 060.00	201.24
October-11	15 570.00	156.20
November-11	12 940.00	129.82
December-11	10 530.00	105.64

TOTAL	209 870	2 105

MOLAOI: 99,68 kWp



Total production: kWh



Production performance figure: kWh/kWp

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Reference projects and a production overview
from DEGERenergie

DEGERENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	KASOS-NIDIA ENERHOT
Location:	KASOS
Country/Region:	GREECE
Latitude:	35°23'10" E
Longitude:	26°54'25" N

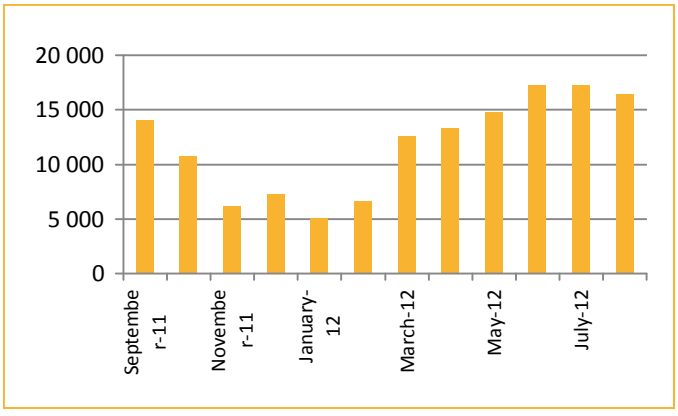
System configuration:

Rated installation output:	69.66 kWp
Number of trackers	Mixed park 5xDegertracker700NT (38,7kWp 2axis-30,96kWp Fixed)
Number of modules	324 x Sanyo HIP-215NKHE5
Number of inverters	9 x Sunny Mini Central 8000TL

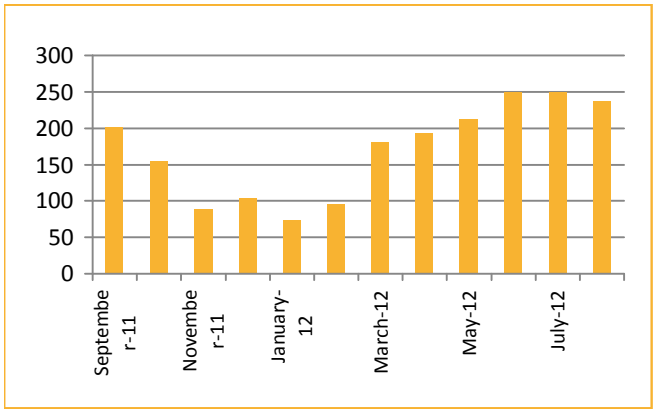
Production period
September 2011 – August 2012

Month	kWh total	kWh/kWp
September-11	14 010.00	201.12
October-11	10 810.00	155.18
November-11	6 150.00	88.29
December-11	7 250.00	104.08
January-12	5 090.00	73.07
February-12	6 700.00	96.18
March-12	12 550.00	180.16
April-12	13 400.00	192.36
May-12	14 790.00	212.32
June-12	17 330.00	248.78
July-12	17 320.00	248.64
August-12	16 510.00	237.01
TOTAL	**141 910**	**2 037**

KASOS: 69,66 kWp



Total production: kWh



Production performance figure: kWh/kWp

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Reference projects and a production overview from DEGERenergie

DEGERENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	RETHYMNO-FESSAS
Location:	KRHTH
Country/Region:	GREECE
Latitude:	35°19'19" E
Longitude:	24°29'43" N

System configuration:

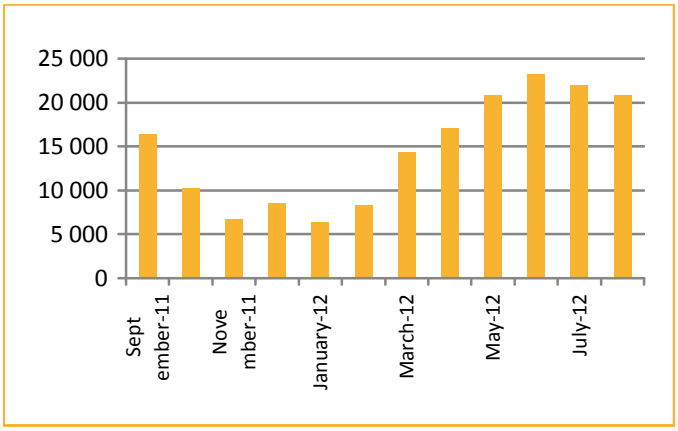
Rated installation output:	79.56 kWp
Number of trackers	
Number of modules	306 x Scheuten Multisol M6-66 260
Number of inverters	9xSunny Tripower 10000TL-10

Production period
September 2011 – August 2012

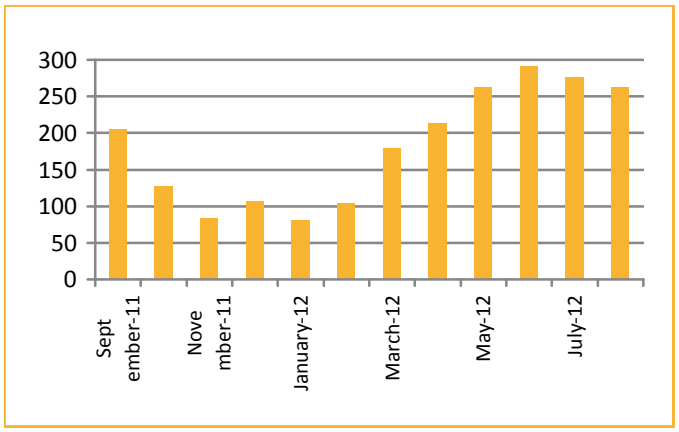
Month	kWh total	kWh/kWp
September-11	16 380.00	205.88
October-11	10 180.00	127.95
November-11	6 710.00	84.34
December-11	8 510.00	106.96
January-12	6 400.00	80.44
February-12	8 310.00	104.45
March-12	14 260.00	179.24
April-12	17 060.00	214.43
May-12	20 860.00	262.19
June-12	23 220.00	291.86
July-12	22 000.00	276.52
August-12	20 860.00	262.19

TOTAL	174 750	2 196

RETHYMNO: 79,56 kWp



Total production: kWh



Production performance figure: kWh/kWp

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Reference projects and a production overview from DEGERenergie

DEGER ENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	Gousios 19.80@ Megalohori
Location:	Trikala
Country/Region:	Greece
Longitude:	39º33'41'' N
Latitude:	21º45'36'' E

System configuration:

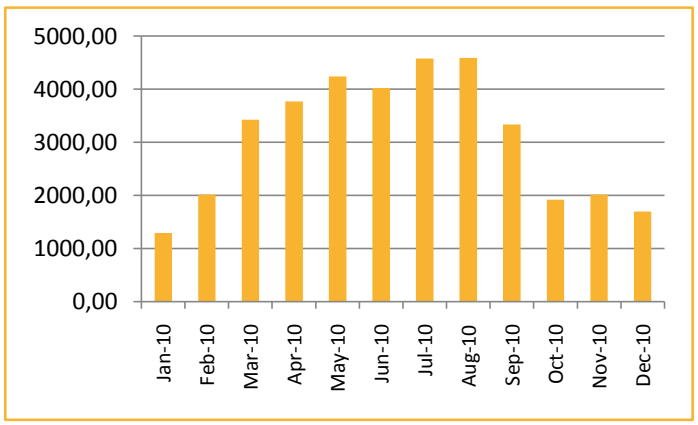
Installed capacity:	19,8 kWp
Number of trackers	18ut TOPtraker 8.5 (single-axis)
Number of modules	90 modules
Number of inverters	3ut Mini Central 7000TL

Production period

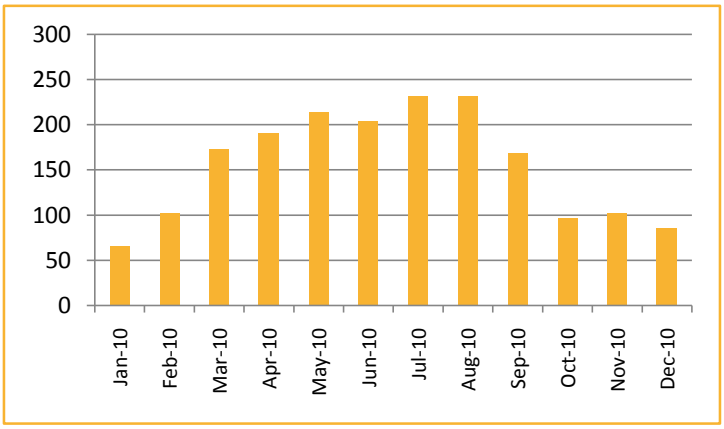
January 2010 - December 2010

Month	kWh total	kWh/kWp
Jan-10	1293,06	65,31
Feb-10	2017,19	101,88
Mar-10	3428,37	173,15
Apr-10	3769,29	190,37
May-10	4241,65	214,22
Jun-10	4026,47	203,36
Jul-10	4577,67	231,20
Aug-10	4589,19	231,78
Sep-10	3338,02	168,59
Oct-10	1921,33	97,04
Nov-10	2018,12	101,93
Dec-10	1700,36	85,88
TOTAL	**36.921**	**1.865**

Trikala1: 19.80 kWp single axis



Total production: kWh



Production performance figure: kWh/kWp

Reference projects and a production overview from DEGERenergie

DEGERENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	Pityrigkas @ Neohori No.2
Location:	Trikala
Country/Region:	Greece
Longitude:	39º33'41'' N
Latitude:	21º45'36'' E

System configuration:

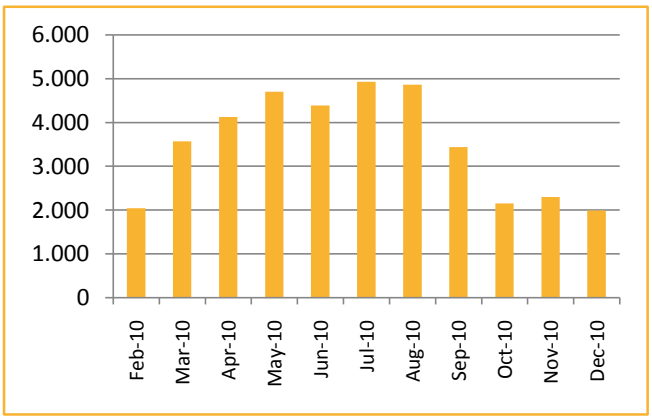
Installed capacity:	19,80 kWp
Number of trackers	3ut 7000NT (dual-axis)
Number of modules	aleo S_18 (220 W)
Number of inverters	3 Sunny Mini Central 7000TL

Production period

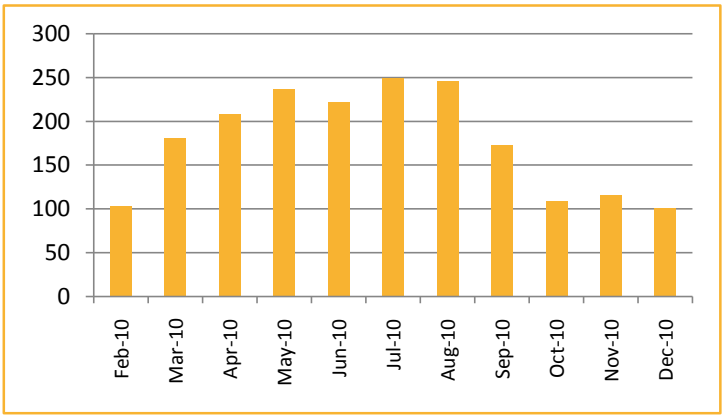
February 2010 - January 2011

Month	kWh total	kWh/kWp	Fixed System kWh/kWp	Additional Yield
Feb-10	2.041	103,06	53,71	92%
Mar-10	3.568	180,18	84,36	114%
Apr-10	4.124	208,28	132,70	57%
May-10	4.696	237,17	150,67	57%
Jun-10	4.383	221,37	165,17	34%
Jul-10	4.926	248,79	161,47	54%
Aug-10	4.859	245,39	175,75	40%
Sep-10	3.432	173,35	172,80	0%
Oct-10	2.148	108,48	128,99	-16%
Nov-10	2.295	115,89	74,84	55%
Dec-10	1.991	100,54	81,89	23%
Jan-10	2.068	104,45	65,16	60%
TOTAL	**40.530**	**2.047**	**1.447,5**	**41%**

Trikala2: 19.80 kWp dual axis



Total production: kWh



Production performance figure: kWh/kWp

Reference projects and a production overview from DEGERenergie

DEGER ENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	19,98KWp E. SARRI Oinofyta
Location:	Oinofyta
Country/Region:	Greece
Longitude:	37 ° 30' 48'' N
Latitude:	22° 43' 51'' E

System configuration:

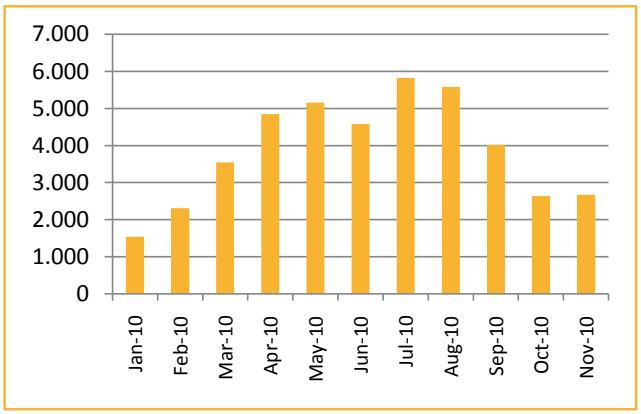
Installed capacity:	19,98 KWp
Number of trackers	3 ut 7000NT
Number of modules	108ut aleo 185Wp
Number of inverters	3ut SMA 7000TL

Production period

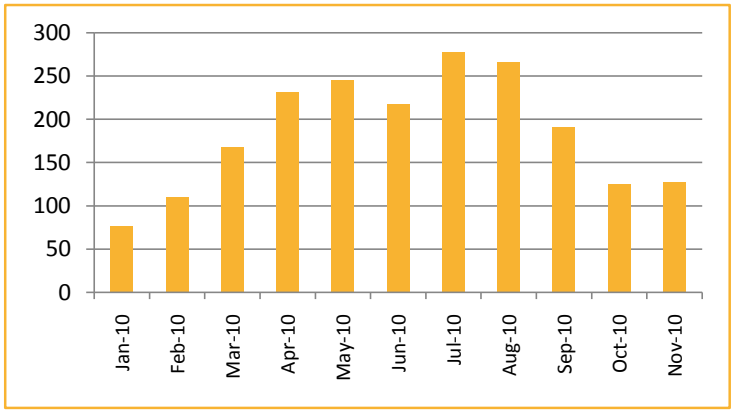
January 2010 - December 2010

Month	kWh total	kWh/kWp	Fixed System kWh/kWp	Additional Yield
Jan-10	1.539	77,01	57,35	34%
Feb-10	2.308	110,04	87,52	26%
Mar-10	3.536	168,55	126,77	33%
Apr-10	4.846	231,01	159,63	45%
May-10	5.150	245,5	161,33	52%
Jun-10	4.575	218,1	141,50	54%
Jul-10	5.814	277,14	177,20	56%
Aug-10	5.580	265,96	173,26	54%
Sep-10	4.015	191,36	133,94	43%
Oct-10	2.635	125,58	93,13	35%
Nov-10	2.669	127,21	96,67	32%
Dec-10	1.856	88,46	66,07	34%
TOTAL	**44.523**	**2.126**	**1.474,4**	**44%**

Oinofyta 19.98kWp dual axis



Total production: kWh



Production performance figure: kWh/kWp

Reference projects and a production overview from DEGERenergie

DEGER ENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	KLT ENERGY (IASMOS - KAZAKOS)
Location:	Komotini
Country/Region:	Greece
Longitude:	41° 7′ 2″ N,
Latitude:	25° 24′ 4″ E

System configuration:

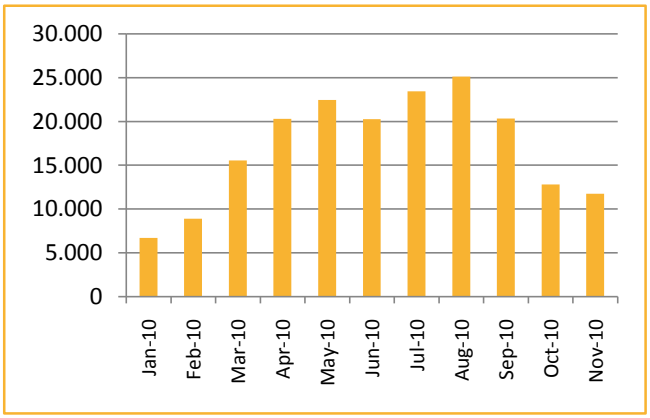
Installed capacity:	99.88 kWp
Number of trackers	15ut 7000NT
Number of modules	Sunways SM210U - 230wp
Number of inverters	15 Sunny Mini Central 7000TL

Production period

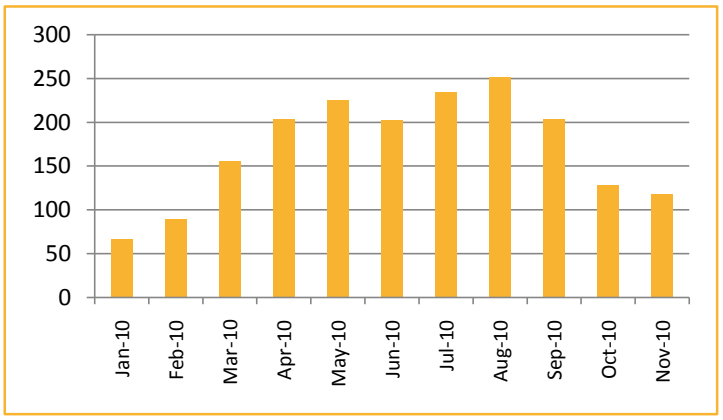
January 2010 - December 2010

Month	kWh total	kWh/kWp	Fixed System kWh/kWp	Additional Yield
Jan-10	6.695	67,03	55,92	20%
Feb-10	8.884	88,95	78,55	13%
Mar-10	15.542	155,61	127,34	22%
Apr-10	20.282	203,06	156,46	30%
May-10	22.451	224,78	136,94	64%
Jun-10	20.261	202,86	150,78	35%
Jul-10	23.411	234,39	169,34	38%
Aug-10	25.098	251,29	174,49	44%
Sep-10	20.332	203,57	147,6	38%
Oct-10	12.783	127,99	99	29%
Nov-10	11.719	117,33	88,94	32%
Dec-10	7.510	75,19	57,41	31%
TOTAL	**194.971**	**1.952**	**1.442,8**	**35%**

Komotini Kazakos 99.88kWp (dual-axis)



Total production: kWh



Production performance figure: kWh/kWp

Reference projects and a productior overview from DEGERenergie

DEGER ENERGIE
SOLAR TRACKING SYSTEMS

Basic installation data:

Solar plant identification:	HELIDA1 (K&M ENERGY)
Location:	Molaoi Lakonias
Country/Region:	Greece
Longitude:	36°48'16.23 N
Latitude:	22°48'59.30 E

System configuration:

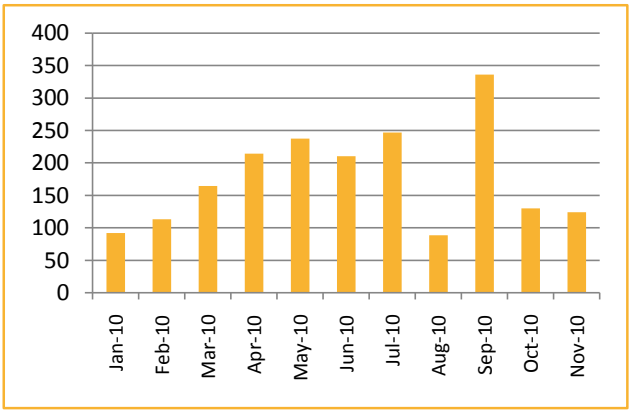
Installed capacity:	99.68 kWp
Number of trackers	20ut 5000NT (dual axis)
Number of modules	N/A
Number of inverters	20 Sunny Boy 5000TL

Production period

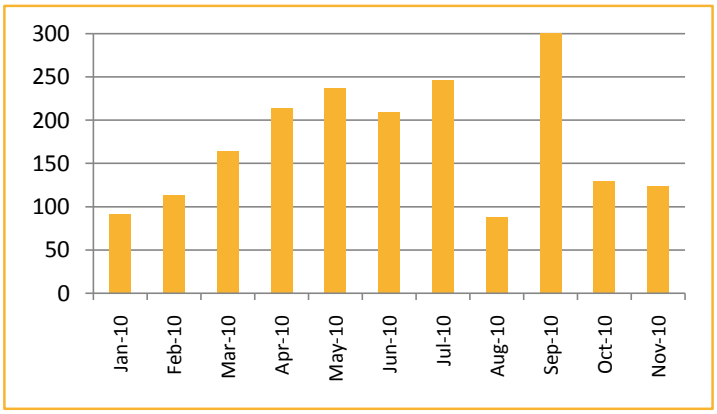
January 2010 - December 2010

Month	kWh total	kWh/kWp	Fixed System kWh/kWp	Additional Yield
Jan-10	9.160	91,89	57,35	60%
Feb-10	11.263	112,99	87,52	29%
Mar-10	16.377	164,3	126,77	30%
Apr-10	21.319	213,87	159,63	34%
May-10	23.663	237,39	161,33	47%
Jun-10	20.934	210,01	141,50	48%
Jul-10	24.567	246,46	177,20	39%
Aug-10	8.782	88,1	173,26	-49%
Sep-10	33.480	335,87	133,94	151%
Oct-10	12.931	129,73	93,13	39%
Nov-10	12.337	123,77	96,67	28%
Dec-10	8.855	88,83	66,07	34%
TOTAL	**203.667**	**2.043**	**1.474,4**	**39%**

Helida1 99.68 kWp (dual axis)



Total production: kWh



Production performance figure: kWh/kWp