

Scenario — PV

GEMINI-60-house-part-of-a-settlement Austria - Inning 48.182, 15.417

Name	Slope °	Azimuth °	Wp	Wall d/h m	Face	Bifacial	Wp counted
Roof East	22	-90	19800	—	front	—	yes
Roof West	22	90	19800	—	front	—	yes
Terrace railing south	90	0	4620	5 / 4	front	—	yes
Terrace railing north	90	180	4620	5 / 4	front	—	yes
share central structure east part	8	-90	20460	—	front	—	yes
share central structure west part	8	90	20460	—	front	—	yes
Total counted			89760				

Location: My most visited location in “lower Austria”, just at the Tesla SuC.
 Database PVGIS-SARAH3 2005–2023 loss 14 % azimuth 0 = south, 90 = west, –90 = east.
 Price bands and charts use UTC+1 from longitude (15° per hour), not the political time zone.
 Peak hour 2009-06-13 12:10 local (11:10 UTC) 62652 W 0.698 W/Wp of 89760 Wp.
 Database gaps: 10 days with 0 yield while the sun reached the horizon at noon. 2008-01-23, 2008-03-01, 2008-03-06, 2008-05-17, 2008-05-18, 2009-04-18, 2009-04-19, 2009-08-15, 2009-08-16, 2016-10-16. Yield charts skip them. The simulation uses the lowest-yield day of that month.
 Sell when the export price is above 0. At 0 cent export PV yield only, not the battery. Do not sell when the earning is negative. At 15:00 winter time, battery export is only the kWh that would not fit in the next 72 h.



Scenario — house, heat pump, battery
GEMINI-60-house-part-of-a-settlement

Austria - Inning 48.182, 15.417

Chapter	Parameter	Value
Building	Design out / in / heat	-10.0 °C / 20.0 °C / 1600.0 W
	Heat on / cool on / ground	22.0 °C / 25.0 °C / 10.0 °C
	Curve / flow min / max	0.4 / 25.0 °C / 55.0 °C
	Thermal mass of the house	25.0 kWh/K
	Household only	4.0 kWh/day
DHW	Litres at 40 °C / tank	200.0 L tank 42.0 °C 8-18 h
	Water out of the pipe Q1-Q4	8 °C 10 °C 12 °C 10 °C
Heat pump	Source	air and ground
	COP -10/0/10 @ 35 °C	2.4 3.4 4.5
	COP -10/0/10 @ 50 °C	1.9 2.6 3.3
	kW -10/0/10 @ 35 °C	4 5 6
	kW -10/0/10 @ 50 °C	3.5 4.5 5
Battery	kWh / C-rate / SOC min-max-start	257.2 kWh C 0.5 5 / 95 / 50 %
	Nameplate	—
	Charge / discharge η	95 % / 90 %
Grid	Inverter / grid connection	54.0 kW / 27.0 kW
	Max export	27.0 kW
	Import cap Jan-Jun kW	Jan 2 Feb 2 Mar 2 Apr 2 May 2 Jun 2
	Import cap Jul-Dec kW	Jul 2 Aug 2 Sep 2 Oct 2 Nov 2 Dec 2
Cars	Lunch DC / night AC	0.0 kWh @ 100.0 kW night 10.0 kWh @ 11.0 kW

Records 1-10 — contribution of each PV
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PV	2009-06-13 11:10	2020-05-24 11:10	2013-05-13 11:10	2009-06-03 11:10	2012-05-18 11:10	2009-06-13 10:10	2013-05-28 11:10	2020-05-27 11:10	2005-04-22 11:10	2021-06-02 11:10
Roof East	14180	13960	13831	13926	13821	15272	13859	13847	13630	13826
Roof West	14741	14686	14598	14572	14560	13169	14541	14529	14359	14473
Terrace railing south	2083	2248	2425	2120	2337	2017	2178	2202	2899	2108
Terrace railing north	221	214	217	231	221	228	154	192	153	156
share central structure east part	15608	15436	15308	15365	15276	15860	15305	15280	15102	15263
share central strucure west part	15819	15710	15596	15608	15554	15070	15561	15536	15375	15506
Watt at record	62652	62254	61975	61821	61770	61616	61598	61585	61517	61332
Percent of installed peak	69.8	69.4	69.0	68.9	68.8	68.6	68.6	68.6	68.5	68.3

Hours at or above a share of the record
Austria - Inning 48.182, 15.417

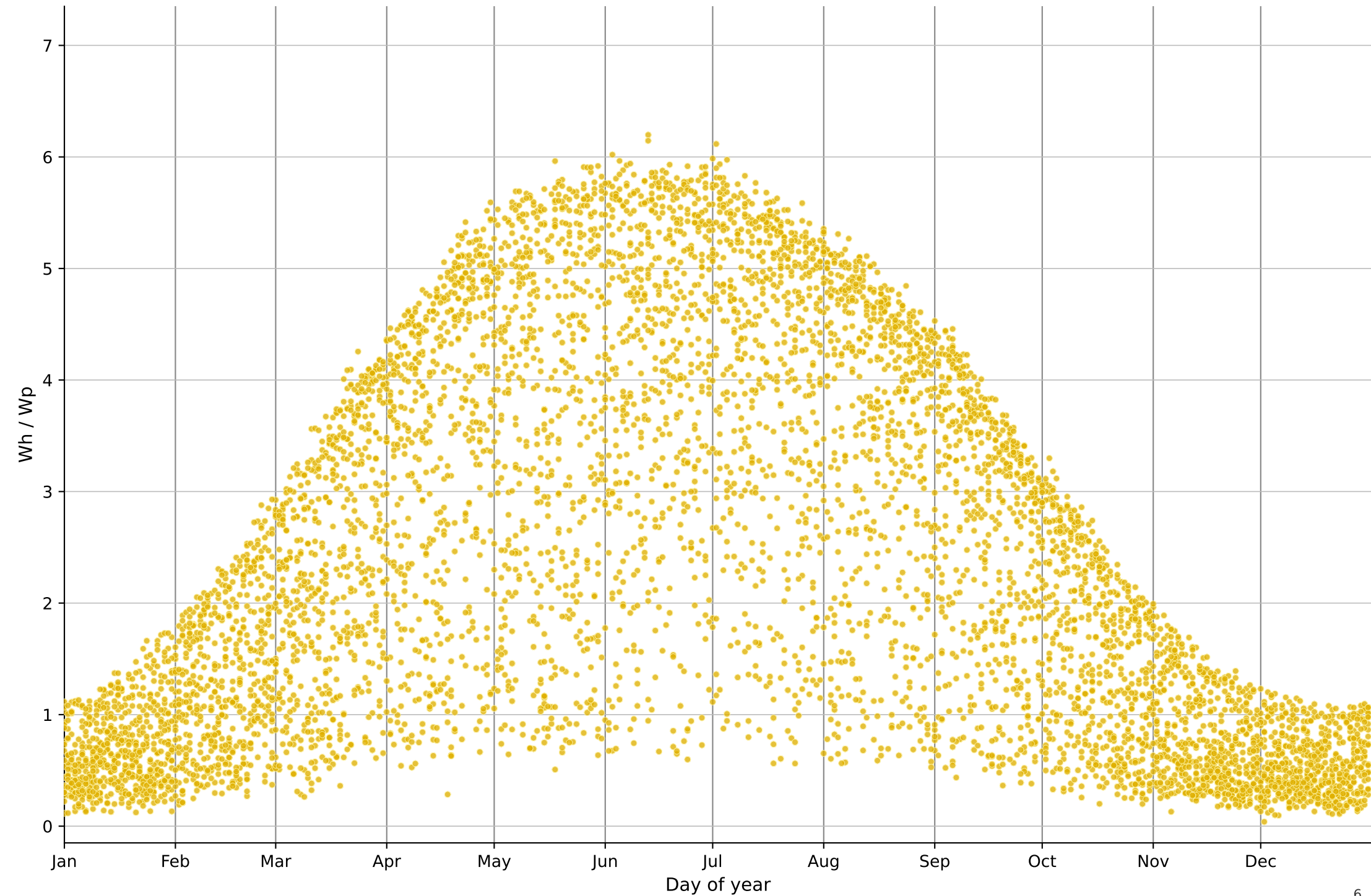
Of the record	Hours	Watts
98 %	9	61399 W
96 %	37	60146 W
94 %	135	58893 W
92 %	365	57640 W
90 %	773	56387 W

Records of each photovoltaic field
Austria - Inning 48.182, 15.417

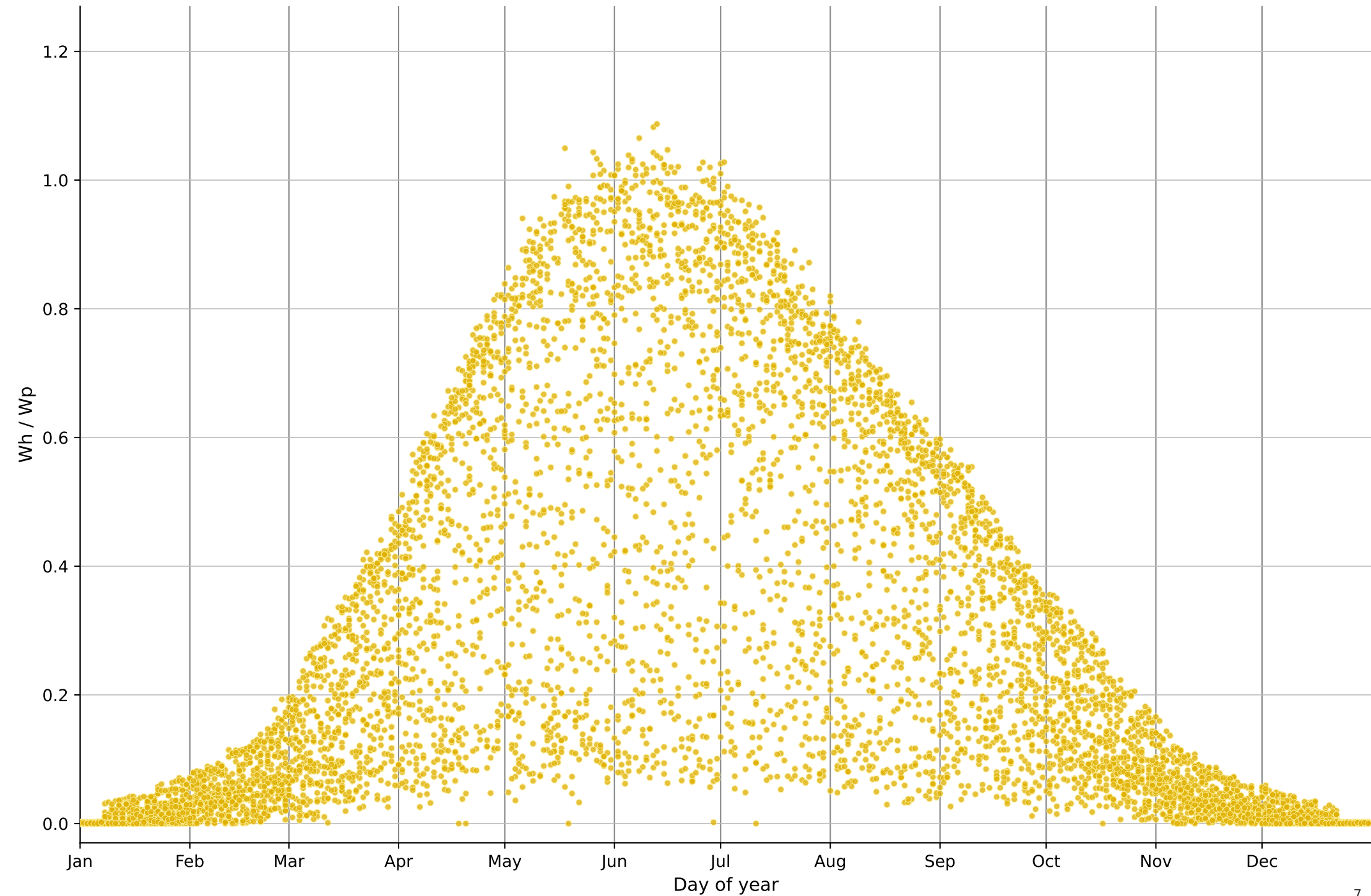
PV	Date	Watts	%	h ≥98%	h ≥96%	h ≥94%	h ≥92%	h ≥90%
Roof East	2006-05-25 09:10	15595	78.8	11	38	156	391	806
Roof West	2016-05-15 12:10	15912	80.4	3	12	30	118	333
Terrace railing south	2009-03-22 11:10	3507	75.9	8	17	26	45	75
Terrace railing north	2023-06-13 05:10	812	17.6	1	8	25	50	108
share central structure east part	2009-06-13 10:10	15860	77.5	5	35	121	334	777
share central strucure west part	2016-05-15 12:10	16031	78.4	4	21	59	189	471

Watts is the highest hour of that field. % is of its own Wp. Hours are the count of hours at or above that share of its own record. Use this to size the MPPT or the inverter for that field.

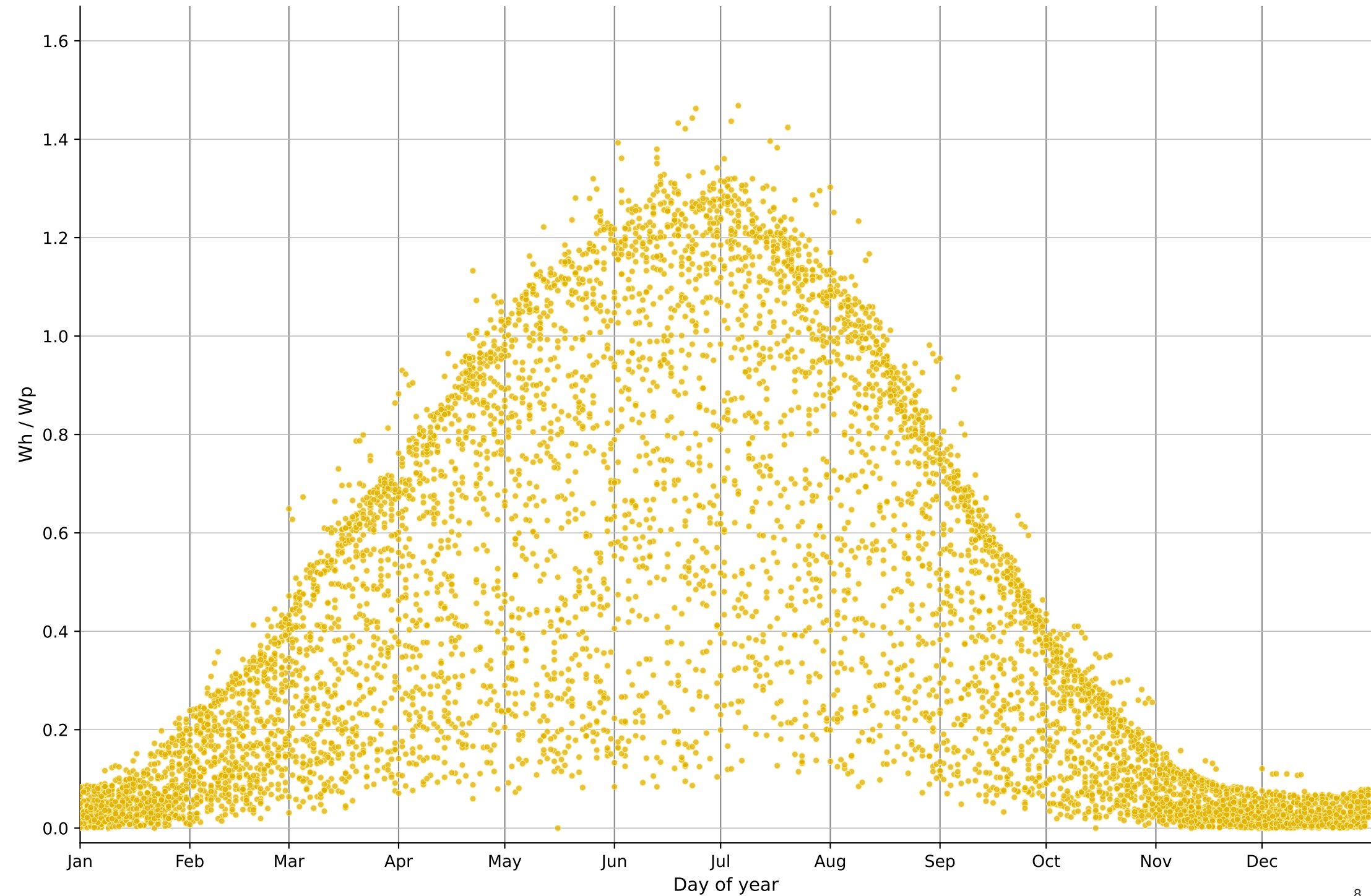
Yield distribution for each day — W_h / W_p of all PV together
Austria - Inning 48.182, 15.417



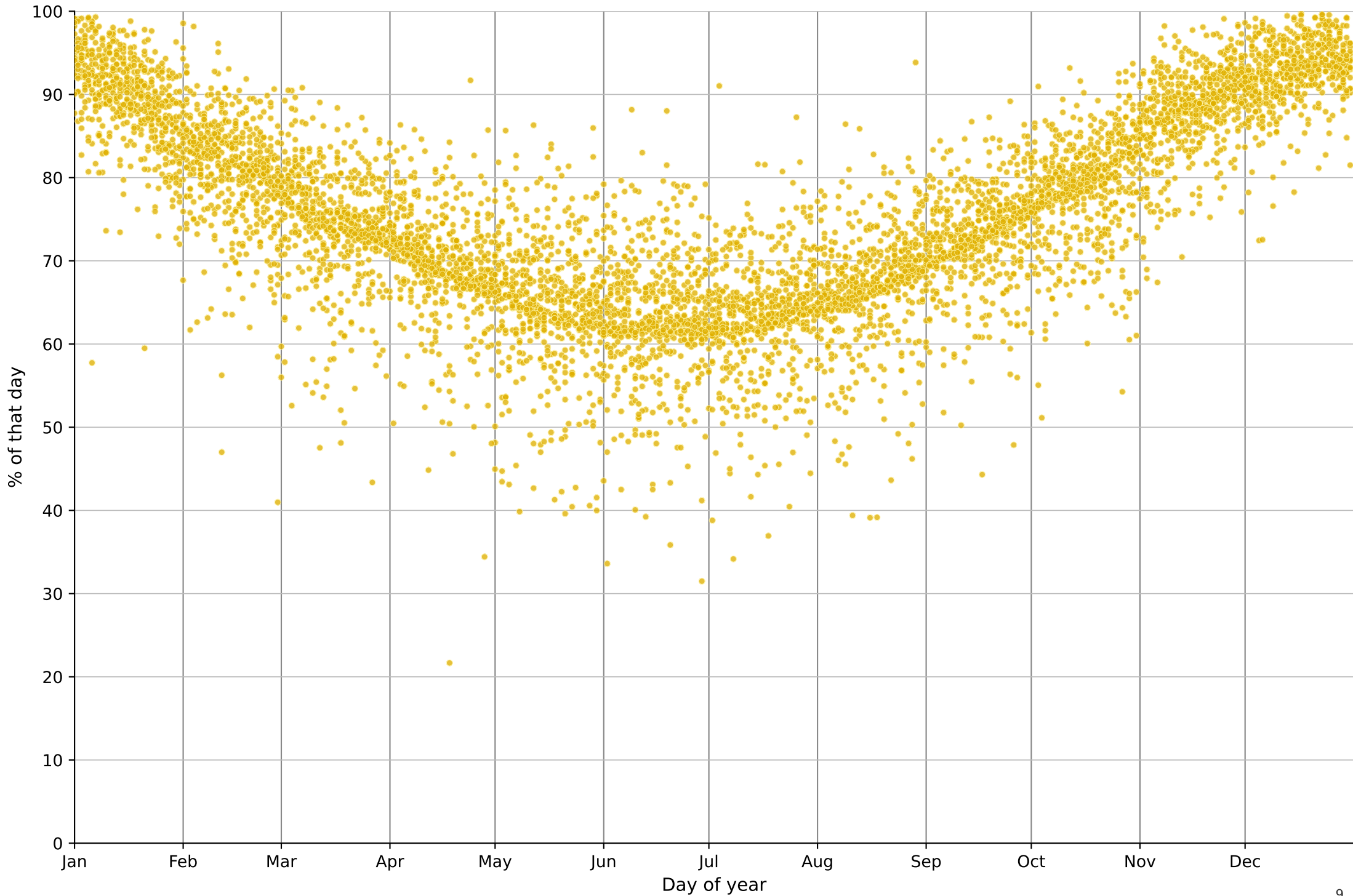
Yield distribution for each day — Wh / Wp of all PV together — 00:00-09:00
Austria - Inning 48.182, 15.417



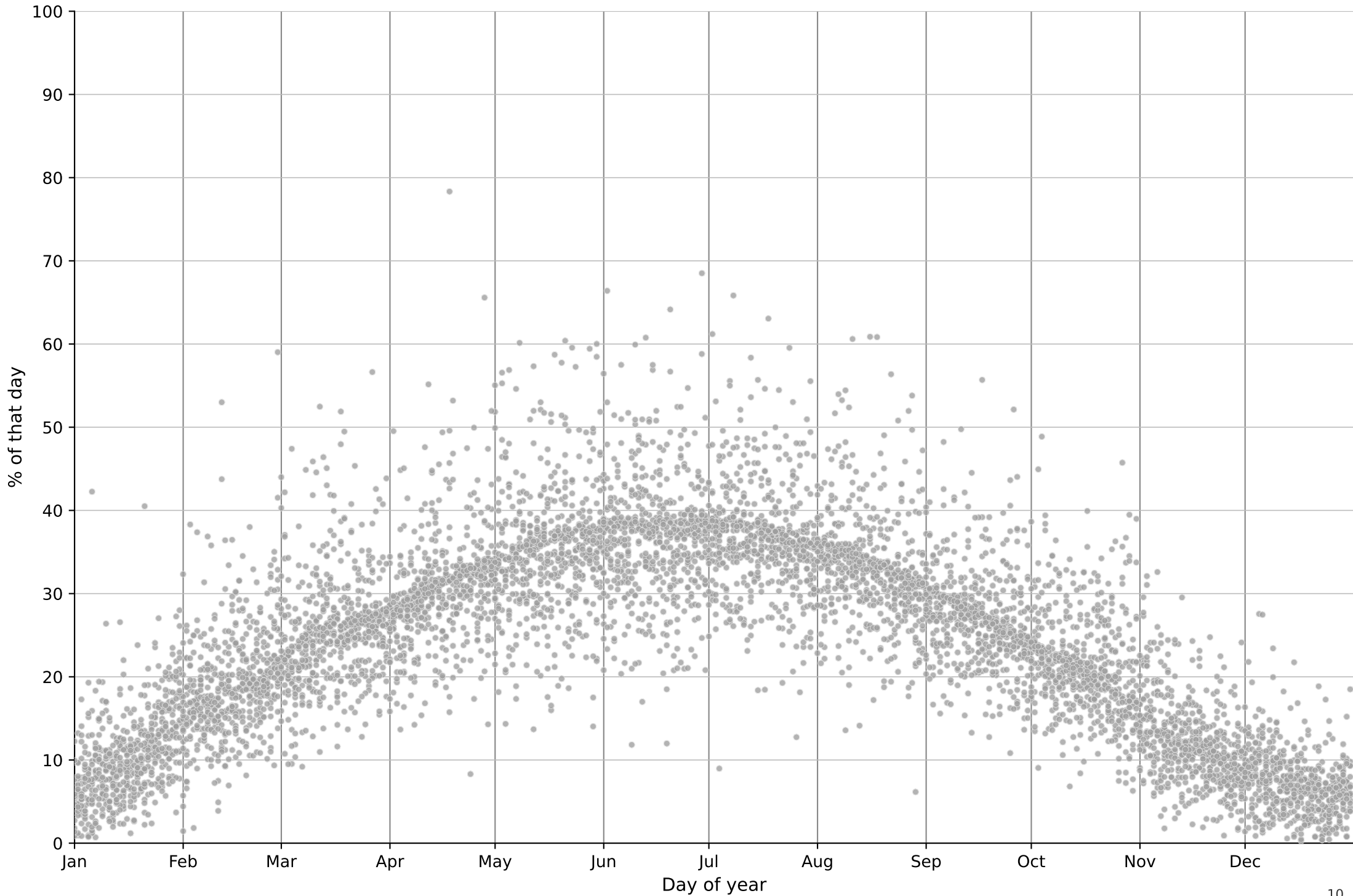
Yield distribution for each day — W_h / W_p of all PV together — 15:00–23:59
Austria - Inning 48.182, 15.417



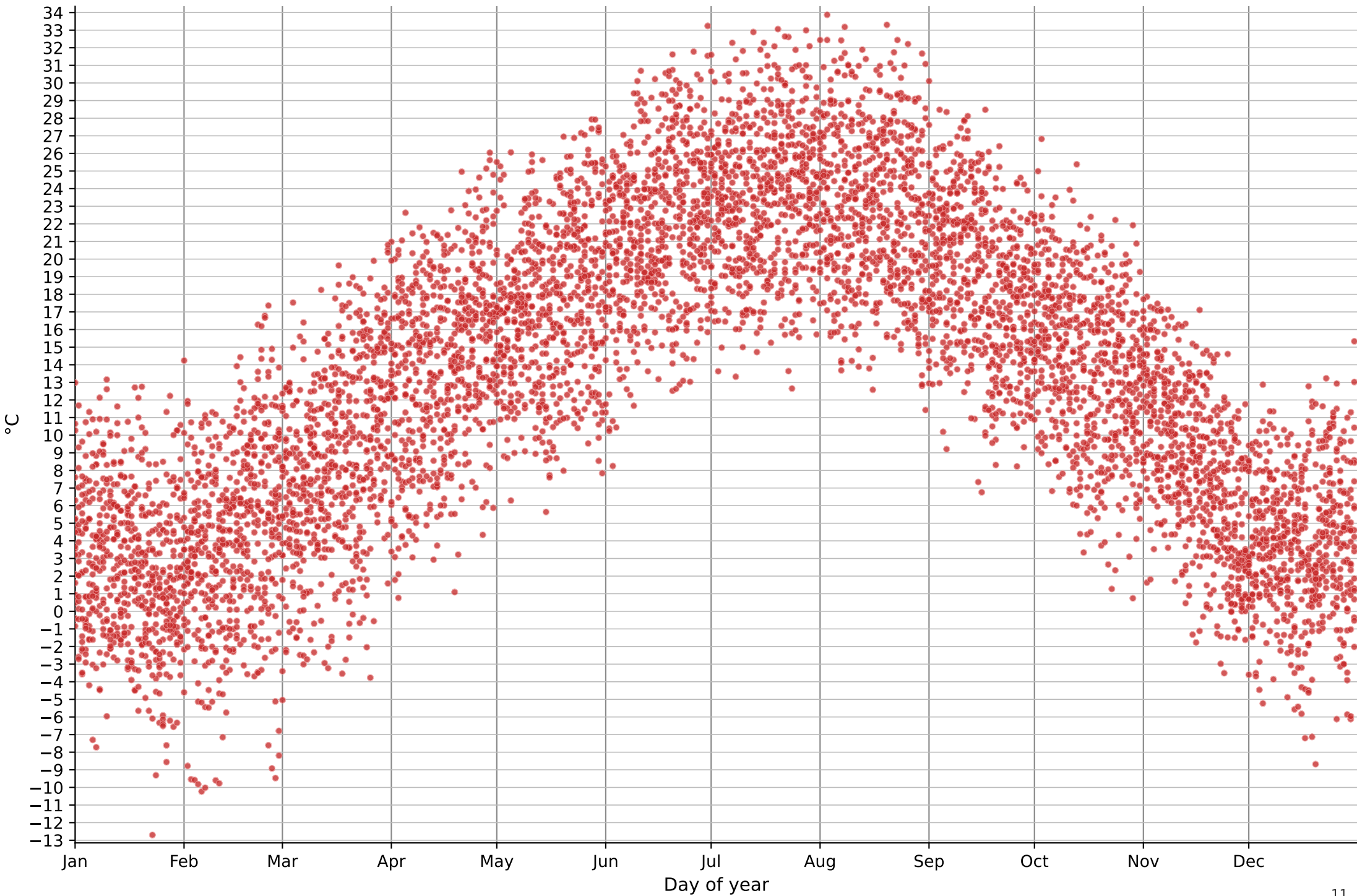
Share of the day's yield in 09:00-15:00 winter time
Austria - Inning 48.182, 15.417



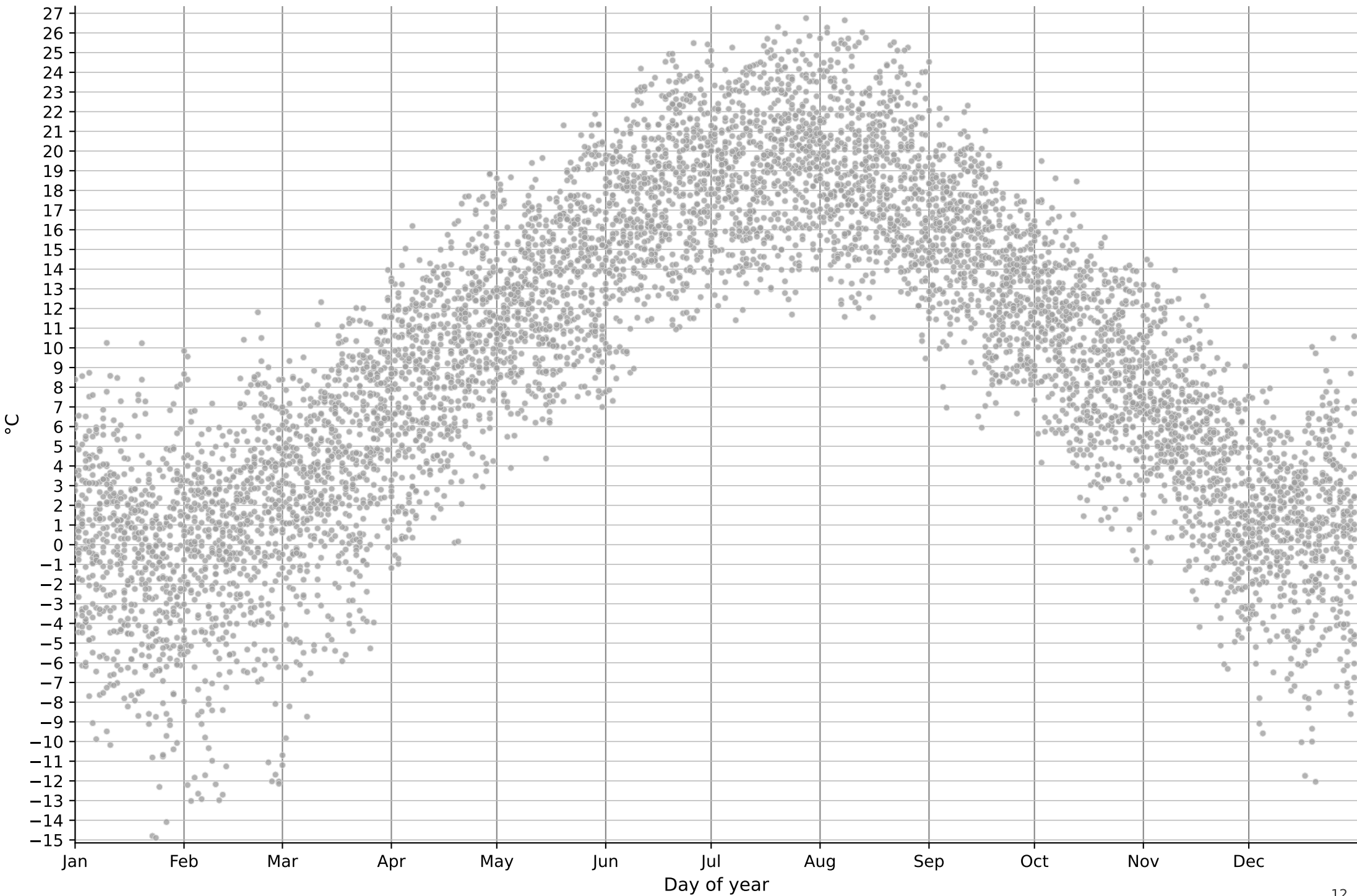
Share of the day's yield outside 09:00-15:00 winter time
Austria - Inning 48.182, 15.417



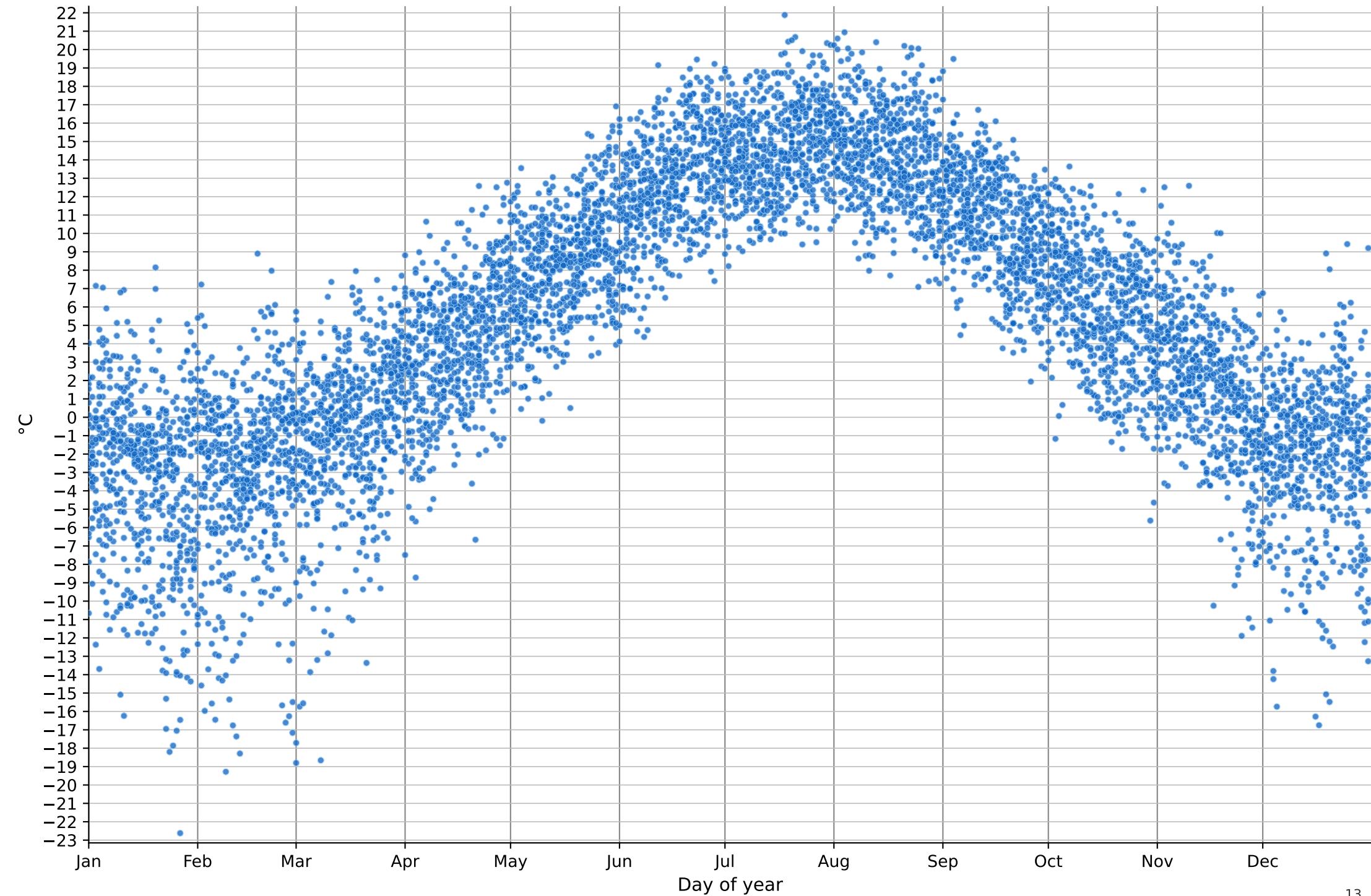
Highest temperature of each day
Austria - Inning 48.182, 15.417



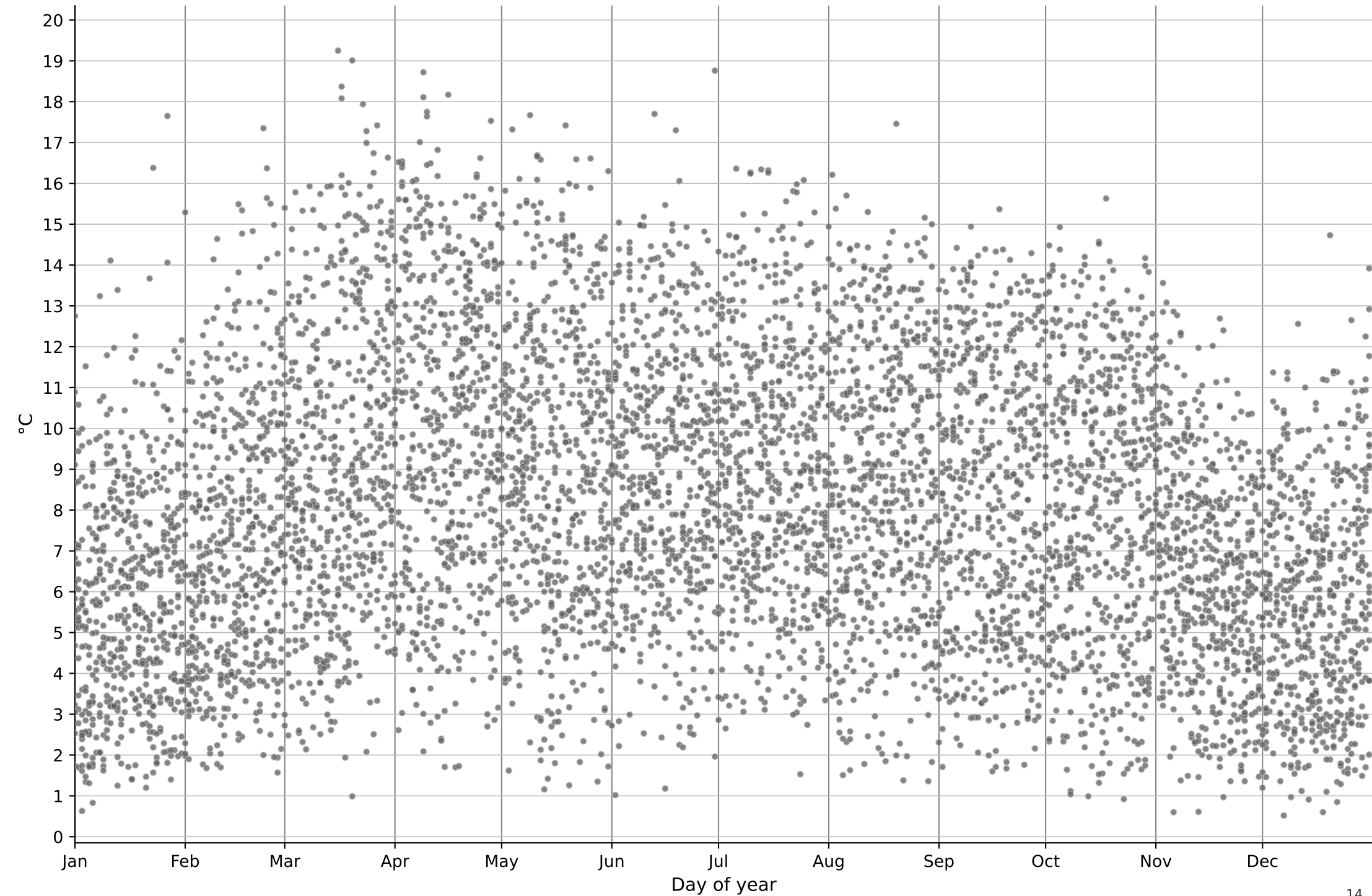
Average temperature of each day
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Lowest temperature of each day
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Difference between highest and lowest temperature of each day
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Monthly and yearly specific yield (kWh/kWp = Wh/Wp)
Austria - Inning 48.182, 15.417

Month / year		Roof East 22°/-90° 19800 Wp	Roof West 22°/-90° 19800 Wp	Terrace railing south 90°/0° 4620 Wp	Terrace railing north 90°/180° 4620 Wp	Share central structure east 8°/-90° 20460 Wp	Share central structure west 8°/90° 20460 Wp	All together
January	Maximum	36.85	30.08	7.26	7.26	33.23	30.45	29.83
	average	23.58	23.23	5.26	5.26	23.06	22.94	21.35
	minimum	16.80	18.03	4.09	4.09	17.27	18.14	16.45
February	Maximum	49.26	49.87	9.78	9.78	49.86	50.11	45.45
	average	40.22	41.12	8.23	8.23	40.57	40.99	37.38
	minimum	30.48	29.89	7.01	7.01	30.25	30.06	28.00
March	Maximum	99.75	99.70	40.02	16.17	101.33	101.42	92.90
	average	74.39	76.61	32.13	14.12	76.26	77.31	70.70
	minimum	59.28	58.23	23.96	12.21	60.47	59.76	55.56
April	Maximum	133.40	131.91	85.87	20.80	136.80	136.19	126.06
	average	105.31	106.56	68.54	18.98	108.84	109.36	100.98
	minimum	82.02	84.70	54.04	16.79	85.47	86.54	79.66
May	Maximum	137.57	139.02	75.98	26.21	142.58	143.40	131.23
	average	118.60	118.75	66.13	24.16	122.60	122.86	112.95
	minimum	87.34	88.28	48.94	22.30	90.46	90.92	83.78
June	Maximum	156.95	153.86	73.17	28.27	162.28	161.05	147.38
	average	128.94	130.27	62.75	26.40	134.18	134.75	123.07
	minimum	103.92	106.46	51.97	24.08	108.04	109.08	99.91
July	Maximum	152.09	151.66	77.19	27.83	157.42	157.25	143.88
	average	131.40	132.40	67.74	25.64	136.65	137.14	125.41
	minimum	97.26	99.10	50.02	23.06	101.57	102.08	93.52
August	Maximum	126.69	125.59	79.19	22.99	130.41	130.16	120.11
	average	111.62	113.81	70.61	19.99	115.74	116.75	107.39
	minimum	94.28	100.43	60.77	17.60	100.63	102.14	94.11
September	Maximum	98.66	103.01	59.73	16.42	101.99	103.90	95.22
	average	82.54	84.24	49.11	14.08	84.84	85.71	78.92
	minimum	67.58	67.69	40.19	11.80	68.91	69.01	64.06
October	Maximum	60.47	74.56	11.30	11.26	63.47	70.20	61.02
	average	50.79	54.92	9.83	9.80	52.48	54.25	48.66
	minimum	35.78	37.36	8.60	8.60	36.64	37.26	33.86
November	Maximum	32.08	33.83	6.47	6.47	32.07	32.85	29.93
	average	25.23	26.53	5.75	5.75	25.59	26.15	23.80
	minimum	19.79	20.38	5.33	5.33	19.74	20.05	18.49
December	Maximum	24.73	25.32	5.19	5.19	24.10	24.35	22.47
	average	18.98	19.08	4.19	4.19	18.56	18.63	17.30
	minimum	15.07	15.87	2.90	2.90	14.96	15.59	14.20
All years	Maximum	966.9	966.2	478.1	182.9	991.6	990.1	910.7
	average	911.6	927.5	450.3	176.6	939.4	946.8	867.9
	minimum	855.5	881.1	423.9	171.8	892.1	899.1	825.1

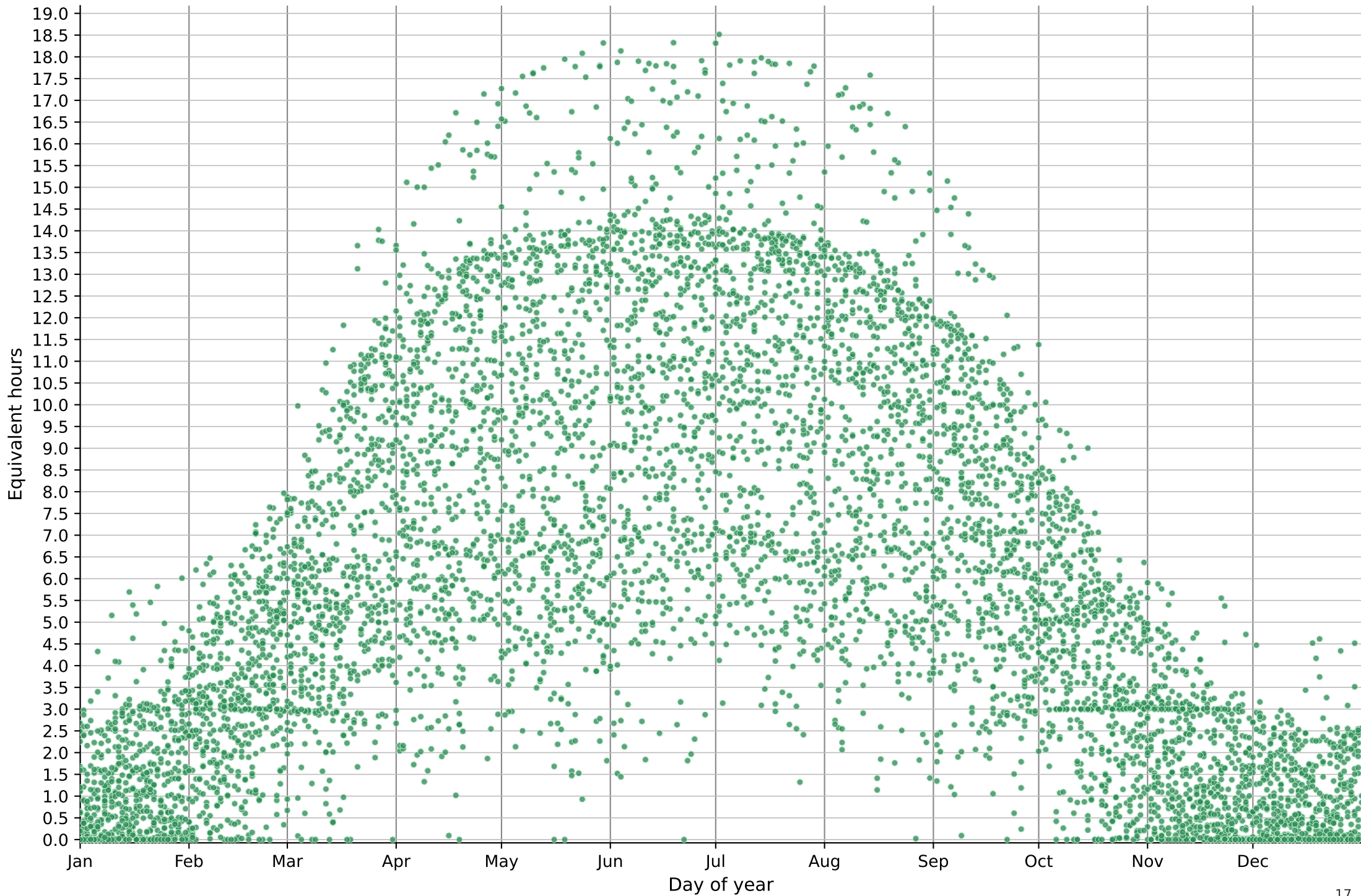
Highest combined yield hour: 2009-06-13 11:10 UTC 62651.9 W (0.698 W/Wp) of 89760 Wp installed. Use this hour to size battery charge power.

Monthly and yearly total yield (kWh)
Austria - Inning 48.182, 15.417

Month / year		Roof East 22°/-90° 19800 Wp	Roof West 22°/-90° 19800 Wp	Terrace railing south 90°/0° 4620 Wp	Terrace railing north 90°/180° 4620 Wp	Share central structure east 8°/-90° 20460 Wp	Share central structure west 8°/90° 20460 Wp	All together
January	Maximum	729.6	595.6	33.5	33.5	679.9	622.9	2677.2
	average	466.9	459.9	24.3	24.3	471.7	469.3	1916.5
	minimum	332.6	356.9	18.9	18.9	353.2	371.2	1476.4
February	Maximum	975.3	987.5	45.2	45.2	1020.2	1025.2	4079.9
	average	796.4	814.2	38.0	38.0	830.1	838.6	3355.4
	minimum	603.4	591.9	32.4	32.4	618.9	615.0	2513.1
March	Maximum	1975.1	1974.1	184.9	74.7	2073.2	2075.1	8338.8
	average	1473.0	1517.0	148.4	65.2	1560.3	1581.7	6345.7
	minimum	1173.7	1153.0	110.7	56.4	1237.2	1222.7	4986.7
April	Maximum	2641.2	2611.9	396.7	96.1	2798.9	2786.4	11314.8
	average	2085.2	2109.9	316.6	87.7	2226.9	2237.6	9063.8
	minimum	1624.0	1677.1	249.7	77.6	1748.7	1770.6	7150.0
May	Maximum	2723.9	2752.5	351.0	121.1	2917.3	2933.9	11779.4
	average	2348.2	2351.2	305.5	111.6	2508.4	2513.8	10138.7
	minimum	1729.4	1748.0	226.1	103.0	1850.8	1860.3	7520.4
June	Maximum	3107.7	3046.3	338.0	130.6	3320.3	3295.1	13228.8
	average	2553.0	2579.3	289.9	122.0	2745.4	2757.0	11046.6
	minimum	2057.6	2107.9	240.1	111.3	2210.5	2231.9	8968.1
July	Maximum	3011.4	3002.9	356.6	128.6	3220.7	3217.2	12914.5
	average	2601.8	2621.5	313.0	118.5	2795.9	2805.9	11256.5
	minimum	1925.8	1962.3	231.1	106.6	2078.0	2088.7	8394.2
August	Maximum	2508.4	2486.6	365.8	106.2	2668.1	2663.2	10781.1
	average	2210.0	2253.5	326.2	92.3	2368.1	2388.7	9638.9
	minimum	1866.7	1988.4	280.8	81.3	2058.9	2089.8	8447.5
September	Maximum	1953.4	2039.7	275.9	75.9	2086.8	2125.8	8546.9
	average	1634.2	1667.9	226.9	65.0	1735.9	1753.7	7083.6
	minimum	1338.2	1340.3	185.7	54.5	1409.9	1411.9	5749.8
October	Maximum	1197.2	1476.2	52.2	52.0	1298.6	1436.3	5477.1
	average	1005.7	1087.5	45.4	45.3	1073.7	1110.0	4367.6
	minimum	708.5	739.7	39.7	39.7	749.7	762.3	3039.6
November	Maximum	635.3	669.8	29.9	29.9	656.2	672.2	2686.8
	average	499.6	525.4	26.6	26.6	523.5	535.0	2136.7
	minimum	391.8	403.6	24.6	24.6	403.9	410.2	1659.8
December	Maximum	489.6	501.3	24.0	24.0	493.1	498.3	2017.2
	average	375.8	377.8	19.3	19.3	379.6	381.2	1553.0
	minimum	298.3	314.2	13.4	13.4	306.1	318.9	1275.0
All years	Maximum	19145	19132	2209	845	20289	20257	81745
	average	18050	18365	2080	816	19220	19372	77903
	minimum	16939	17445	1958	794	18253	18396	74063

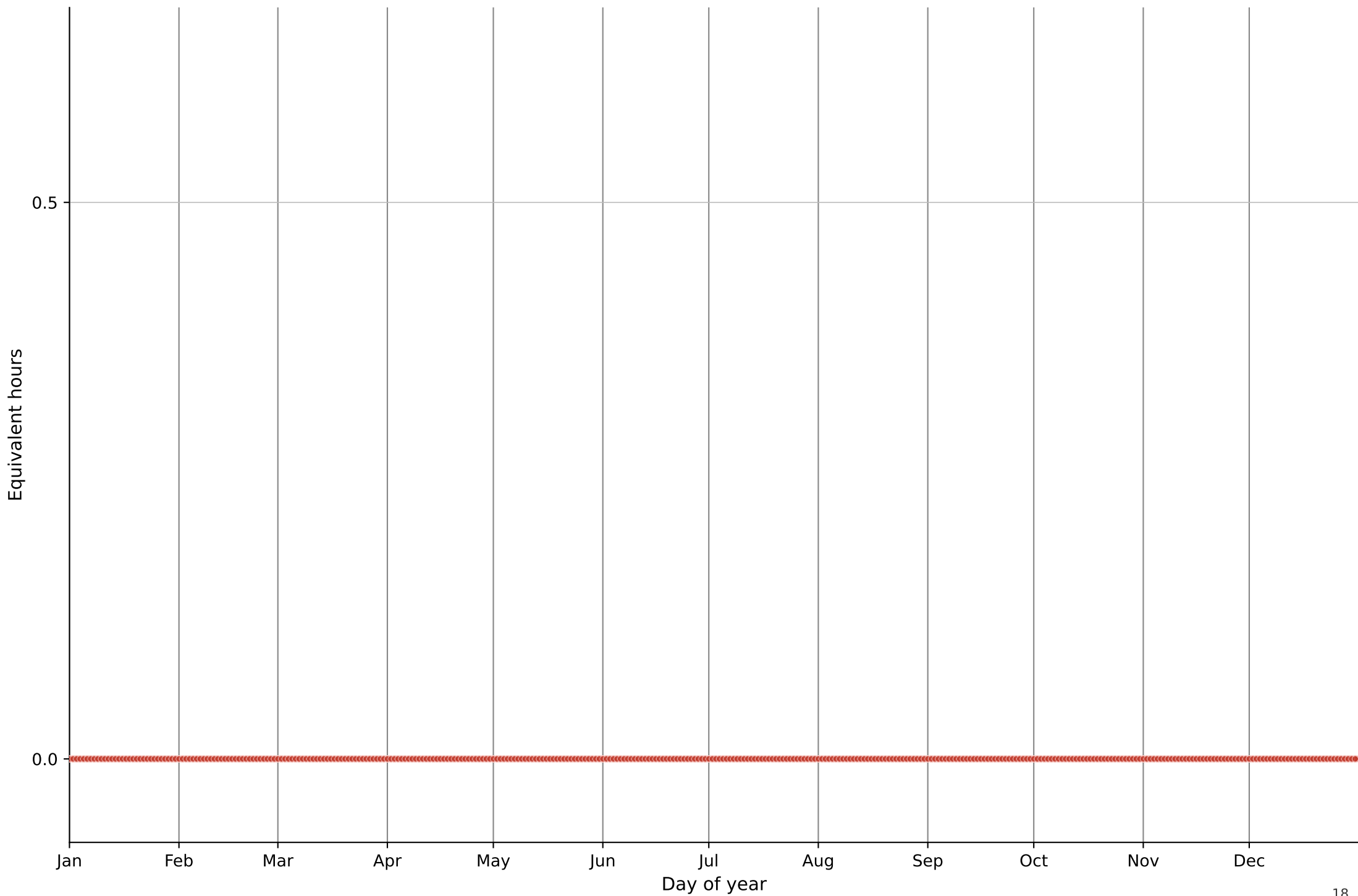
Highest combined yield hour: 2009-06-13 11:10 UTC 62651.9 W (0.698 W/Wp) of 89760 Wp installed. Use this hour to size battery charge power.

Export energy as equivalent hours (kWh / grid kW)
Austria - Inning 48.182, 15.417

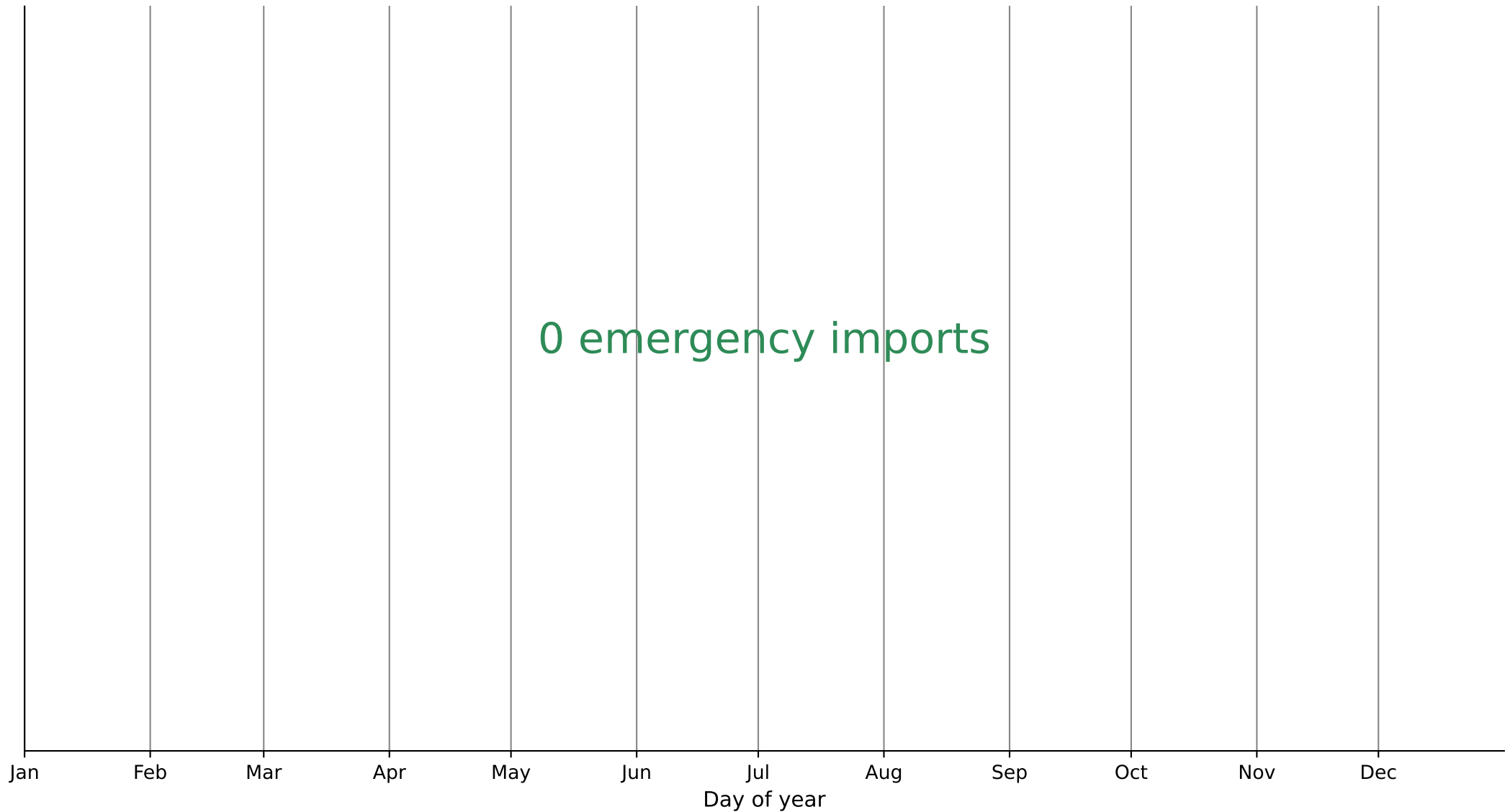


Import energy as equivalent hours (kWh / grid kW)

Austria - Inning 48.182, 15.417



Emergency import hours: 0 days with an emergency: 0
Austria - Inning 48.182, 15.417



Emergency = this hour's grid import is above the month's max import kW. 2 kW means up to 48 kWh in 24 hours. More than 2 kW in an hour is the higher grid fee. Import inside that cap is not an emergency. Preferred cheap hours are 00:00-06:00 and 09:00-15:00 winter time.

Energy in kWh

Austria - Inning 48.182, 15.417

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
Export to grid													
month Maximum	1782	3224	7062	8693	8972	9701	9992	8591	7000	4406	1805	1219	62123
month average	1093	2545	5242	7103	7689	8386	8653	7720	5847	3379	1318	758	59733
month minimum	685	1722	3977	5346	5966	6926	6318	6796	4611	2146	889	437	56732
day Maximum	162.3	215.1	378.8	466.3	494.6	494.8	500.0	474.6	408.9	307.3	159.5	124.6	500.0
day average	35.3	90.2	169.1	236.8	248.0	279.5	279.1	249.0	194.9	109.0	43.9	24.5	163.6
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	35.7	0.6	0.0	0.0	0.0	0.0	0.0
Import from grid													
month Maximum	0	0	0	0	0	0	0	0	0	0	0	0	0
month average	0	0	0	0	0	0	0	0	0	0	0	0	0
month minimum	0	0	0	0	0	0	0	0	0	0	0	0	0
day Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total energy used for house													
month Maximum	735	683	681	604	582	519	519	524	546	620	649	723	7190
month average	690	621	650	578	558	501	500	502	521	591	619	676	7007
month minimum	655	590	622	540	526	483	488	483	491	559	600	647	6881
day Maximum	26.7	26.1	25.5	22.4	23.0	22.3	21.5	20.3	20.2	22.2	23.8	25.6	26.7
day average	22.3	22.0	21.0	19.3	18.0	16.7	16.1	16.2	17.4	19.1	20.6	21.8	19.2
day minimum	15.9	18.5	17.8	15.4	15.3	15.3	15.2	15.2	15.2	16.1	17.5	18.9	15.2

Month rows: kWh in that month. Day rows: best / average / worst day.

Total energy used for house = household + car + heating + cooling + DHW + direct electric.

PV not exported and not marked wasted is still in the battery, or could not leave because the grid was already full. It is not house use.

Energy by price
Austria - Inning 48.182, 15.417

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
Export													
month Maximum	351	599	996	907	941	917	976	960	886	754	358	254	8007
month average	219	477	817	830	846	867	906	885	794	604	266	155	7665
month minimum	138	343	686	711	742	766	758	818	694	401	186	81	7315
day Maximum	35.0	37.9	47.0	47.4	47.9	49.4	49.0	44.8	43.6	43.6	35.1	27.4	49.4
day average	7.0	16.9	26.3	27.7	27.3	28.9	29.2	28.6	26.5	19.5	8.9	5.0	21.0
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.1	0.0	0.0	0.0	0.0	0.0
Import													
month Maximum	0	0	0	0	0	0	0	0	0	0	0	0	0
month average	0	0	0	0	0	0	0	0	0	0	0	0	0
month minimum	0	0	0	0	0	0	0	0	0	0	0	0	0
day Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Peak grid fee													
month Maximum	0	0	0	0	0	0	0	0	0	0	0	0	0
month average	0	0	0	0	0	0	0	0	0	0	0	0	0
month minimum	0	0	0	0	0	0	0	0	0	0	0	0	0
day Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Import incl. peak fee													
month Maximum	0	0	0	0	0	0	0	0	0	0	0	0	0
month average	0	0	0	0	0	0	0	0	0	0	0	0	0
month minimum	0	0	0	0	0	0	0	0	0	0	0	0	0
day Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Balance													
month Maximum	351	599	996	907	941	917	976	960	886	754	358	254	8007
month average	219	477	817	830	846	867	906	885	794	604	266	155	7665
month minimum	138	343	686	711	742	766	758	818	694	401	186	81	7315
day Maximum	35.0	37.9	47.0	47.4	47.9	49.4	49.0	44.8	43.6	43.6	35.1	27.4	49.4
day average	7.0	16.9	26.3	27.7	27.3	28.9	29.2	28.6	26.5	19.5	8.9	5.0	21.0
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.1	0.0	0.0	0.0	0.0	0.0

Currency in Your units. Import and export use the cent/kWh of that hour. Peak fee 6.33 / kW / month is the highest import hour of the month (hourly stand-in for the 15-minute peak) and is added to that month's Sell only when export is above 0. At 0 cent, export PV yield only, not the battery. Do not sell when the earning is negative.

Export in kWh during price hours
Austria - Inning 48.182, 15.417

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
Export total													
month Maximum	1782	3224	7062	8693	8972	9701	9992	8591	7000	4406	1805	1219	62123
month average	1093	2545	5242	7103	7689	8386	8653	7720	5847	3379	1318	758	59733
month minimum	685	1722	3977	5346	5966	6926	6318	6796	4611	2146	889	437	56732
day Maximum	162.3	215.1	378.8	466.3	494.6	494.8	500.0	474.6	408.9	307.3	159.5	124.6	500.0
day average	35.3	90.2	169.1	236.8	248.0	279.5	279.1	249.0	194.9	109.0	43.9	24.5	163.6
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	35.7	0.6	0.0	0.0	0.0	0.0	0.0
Export during high price hours													
month Maximum	1729	2994	3891	3307	3246	3032	3179	3629	3564	3602	1778	1219	31969
month average	1050	2343	3476	3116	2993	2855	3030	3228	3342	2891	1301	751	30378
month minimum	657	1658	3117	2896	2693	2647	2827	3071	2934	2076	841	413	29011
day Maximum	157.2	162.0	154.1	149.4	152.2	152.2	151.9	150.5	155.5	158.0	159.5	124.6	162.0
day average	33.9	83.0	112.1	103.9	96.6	95.2	97.8	104.1	111.4	93.3	43.4	24.2	83.2
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	35.7	0.6	0.0	0.0	0.0	0.0	0.0
Export during medium price hours													
month Maximum	71	326	2771	4469	4759	5471	5668	4350	3055	805	48	24	26911
month average	42	202	1558	3289	3823	4486	4598	3735	2219	486	17	7	24461
month minimum	21	64	640	2021	2469	3376	2851	3134	1321	70	3	0	22398
day Maximum	11.4	78.8	220.3	295.1	317.9	318.1	319.6	299.4	245.6	184.6	9.8	8.2	319.6
day average	1.4	7.2	50.3	109.6	123.3	149.5	148.3	120.5	74.0	15.7	0.6	0.2	67.0
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0
Export during low price hours													
month Maximum	0	0	507	1260	1305	1584	1452	1124	433	29	0	0	5665
month average	0	0	208	698	873	1046	1024	757	286	2	0	0	4895
month minimum	0	0	27	223	453	595	467	418	158	0	0	0	4192
day Maximum	0.0	0.0	54.0	81.0	108.0	108.0	102.9	81.0	56.0	18.0	0.0	0.0	108.0
day average	0.0	0.0	6.7	23.3	28.2	34.9	33.0	24.4	9.5	0.1	0.0	0.0	13.4
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

kWh exported while that price band was active. Not the money. Winter time. High 06:00–09:00 and 17:00–20:00, sold first. Low 09:00–15:00, sold last. Medium is the rest.

Heat pump
Austria - Inning 48.182, 15.417

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
Heating													
month Maximum	242	222	188	133	97	54	42	46	81	133	176	234	1478
month average	198	173	159	108	75	38	25	27	58	106	147	187	1299
month minimum	162	145	131	74	47	22	14	8	31	76	128	158	1182
day Maximum	10.8	10.2	9.6	6.6	7.3	6.6	6.1	5.0	4.5	6.5	8.1	9.8	10.8
day average	6.4	6.1	5.1	3.6	2.4	1.3	0.8	0.9	1.9	3.4	4.9	6.0	3.6
day minimum	0.0	2.8	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.0	3.2	0.0
Cooling													
month Maximum	0.00	0.00	0.00	0.00	0.00	0.00	2.96	1.48	0.00	0.00	0.00	0.00	2.96
month average	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.16	0.00	0.00	0.00	0.00	0.39
month minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
day Maximum	0.00	0.00	0.00	0.00	0.00	0.00	2.96	1.48	0.00	0.00	0.00	0.00	2.96
day average	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
day minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DHW													
month Maximum	59	55	58	52	51	45	43	44	45	54	53	55	601
month average	59	53	58	50	49	43	41	41	43	51	52	55	595
month minimum	58	52	57	46	46	41	39	40	40	49	51	55	583
day Maximum	1.9	1.9	1.9	1.8	1.8	1.8	1.6	1.6	1.7	1.8	1.8	1.8	1.9
day average	1.9	1.9	1.9	1.7	1.6	1.4	1.3	1.3	1.4	1.7	1.7	1.8	1.6
day minimum	1.8	1.7	1.6	1.3	1.3	1.3	1.2	1.2	1.2	1.4	1.5	1.7	1.2
Direct electric													
month Maximum	0	0	0	0	0	0	0	0	0	0	0	0	0
month average	0	0	0	0	0	0	0	0	0	0	0	0	0
month minimum	0	0	0	0	0	0	0	0	0	0	0	0	0
day Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

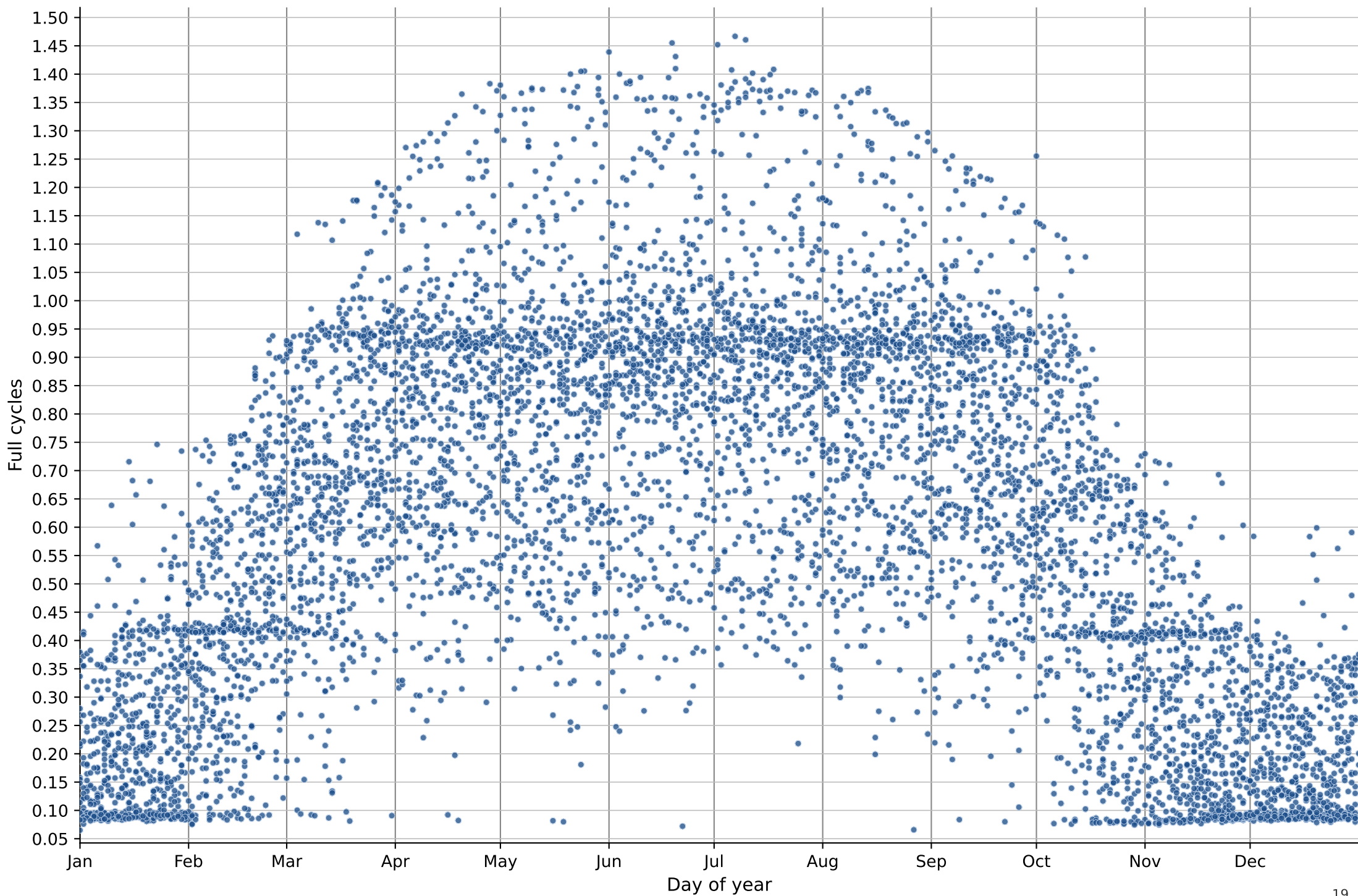
Heating, cooling and DHW are electricity. Direct electric is the part the heat pump could not cover.

Battery
Austria - Inning 48.182, 15.417

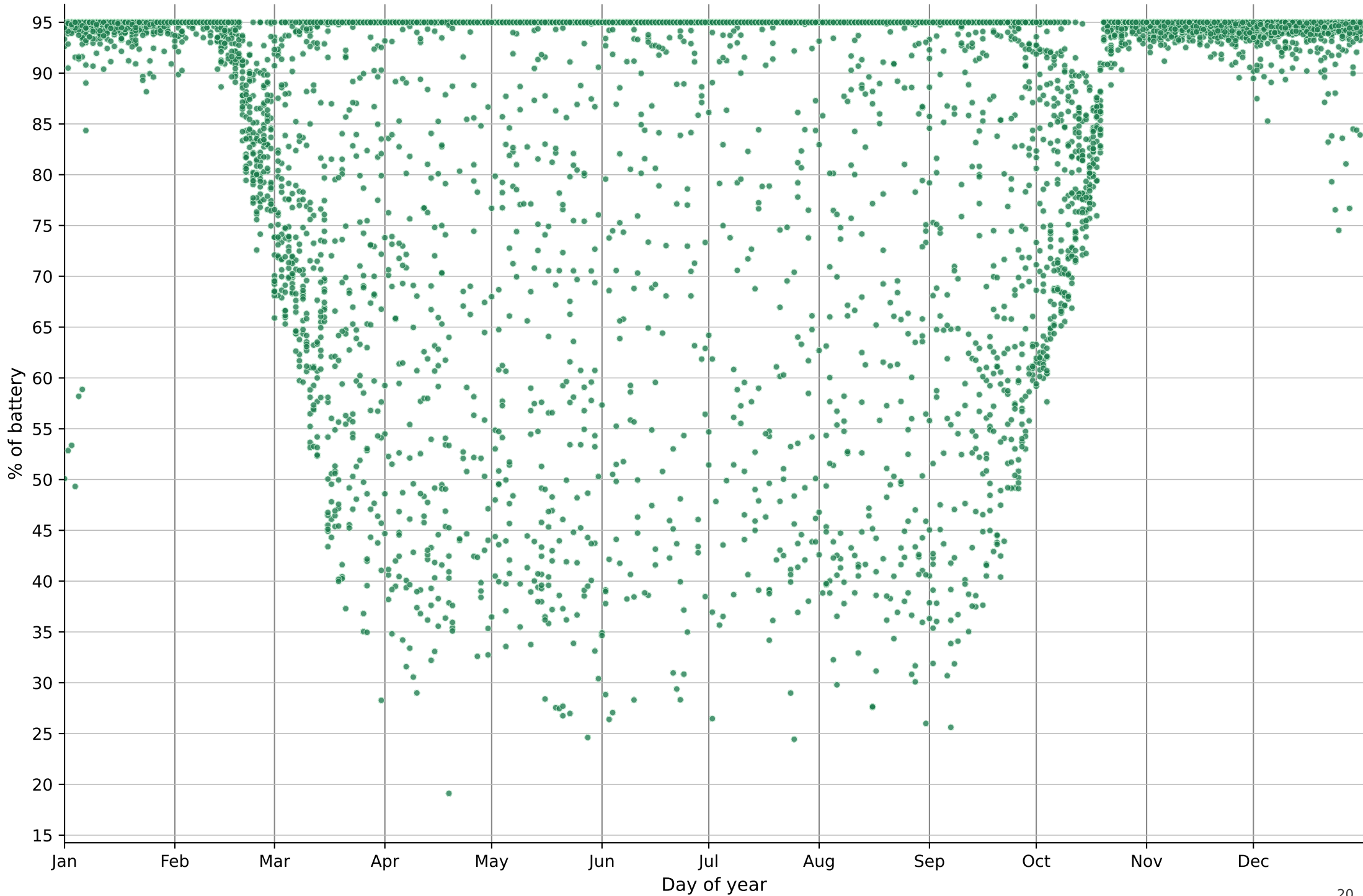
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
Wasted													
month Maximum	0	0	131	1588	1891	2452	2065	1227	380	0	0	0	8085
month average	0	0	58	881	1368	1614	1544	892	209	0	0	0	6566
month minimum	0	0	6	380	511	949	1049	500	31	0	0	0	5473
day Maximum	0.0	0.0	24.7	176.0	206.7	216.4	190.3	173.4	80.2	0.0	0.0	0.0	216.4
day average	0.0	0.0	1.9	29.4	44.1	53.8	49.8	28.8	7.0	0.0	0.0	0.0	18.0
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full cycles													
month Maximum	10.03	15.14	26.04	26.75	28.06	27.56	28.98	27.71	25.61	19.76	9.70	7.63	227.74
month average	7.07	12.51	21.47	24.16	25.28	26.01	26.78	25.42	22.37	15.94	7.83	5.82	220.66
month minimum	5.41	9.31	18.12	20.43	21.96	23.25	22.35	23.72	18.77	11.06	6.01	4.54	211.40
day Maximum	0.75	0.94	1.21	1.38	1.41	1.46	1.47	1.37	1.26	1.26	0.73	0.60	1.47
day average	0.23	0.44	0.69	0.81	0.82	0.87	0.86	0.82	0.75	0.51	0.26	0.19	0.60
day minimum	0.07	0.08	0.08	0.08	0.08	0.07	0.22	0.07	0.08	0.07	0.07	0.08	0.07
Charge C													
month Maximum	0.11	0.16	0.20	0.23	0.23	0.23	0.22	0.22	0.20	0.16	0.11	0.08	2.07
month average	0.10	0.14	0.20	0.22	0.22	0.22	0.22	0.21	0.19	0.15	0.11	0.08	2.04
month minimum	0.08	0.13	0.18	0.21	0.21	0.21	0.21	0.20	0.19	0.14	0.10	0.07	2.01
day Maximum	0.11	0.16	0.20	0.23	0.23	0.23	0.22	0.22	0.20	0.16	0.11	0.08	0.23
day average	0.05	0.09	0.13	0.17	0.17	0.18	0.18	0.16	0.14	0.10	0.06	0.04	0.12
day minimum	0.01	0.01	0.01	0.03	0.02	0.03	0.02	0.03	0.02	0.01	0.01	0.01	0.01
Discharge C													
month Maximum	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	1.40
month average	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	1.40
month minimum	0.11	0.11	0.12	0.12	0.12	0.11	0.11	0.12	0.12	0.12	0.11	0.11	1.39
day Maximum	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
day average	0.07	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.06	0.10
day minimum	0.00	0.01	0.01	0.01	0.01	0.01	0.09	0.00	0.01	0.01	0.01	0.01	0.00

Wasted = PV left when the export price is negative and the battery is full. Full cycles = discharge kWh / 257.2 kWh. Battery export only into hours whose export price is above 0, highest price first. At 0 cent on

Battery cycles per day (discharge / 257.2 kWh)
Austria - Inning 48.182, 15.417



Battery max charge state per day (257.2 kWh = 100 %)
Austria - Inning 48.182, 15.417



Battery min charge state per day (257.2 kWh = 100 %)
Austria - Inning 48.182, 15.417

