

Milestone D 6.2 – Attachment F:

- **Page 1 - Energy availability v's consumption (solar and grid) and water applied (ML/ha)**
- **Page 2 - Pump to solar capacity operating threshold**

Weather site data	July to December 2018 (for 2019 harvest)	January 2019 to June 2019 (for 2019 harvest)	July to December 2019 (for 2020 harvest)
Available bright sunshine hours	2239	2134	2283
Pump operational threshold (W/m ²)	400	400	400
Available bright sunshine hours equal to threshold	1100	896	1105

Pumping data	July to December 2018 (for 2019 harvest)	January 2019 to June 2019 (for 2019 harvest)	July to December 2019 (for 2020 harvest)
Total time pumping (hours)	595	841	751
Daytime pumping hrs (estimate)	416	589	578
Night time pumping hrs (estimate)	179	252	173
Percent of available solar hours utilised	37%	66%	68%

Calculated energy mix	July to December 2018 (for 2019 harvest)	January 2019 to June 2019 (for 2019 harvest)	July to December 2019 (for 2020 harvest)
Average hourly pump demand (kWh)	27.31	28.66	30.11
Solar input (kWh)	11977	16689	17356
Grid input (kWh)	4302	7486	5259
Total pump energy use (grid+solar) kWh	16279	24144	22615

System utilisation	July to December 2018 (for 2019 harvest)	January 2019 to June 2019 (for 2019 harvest)	July to December 2019 (for 2020 harvest)
Annual nominal water allocation (ML/ha)*	3.6	3.6	3.6
Annual farm area (ha)	55	55	55
Annual total water allocation (ML)	198	198	198
Irrigation volume applied per period (ML)	56.28	79.48	65
Percent of allocation applied per period	28.4%	40.1%	32.8%

Pump / solar operational threshold July to December 2019

