

DOE High Penetration PV

Virginia Tech / EPRI

20 August 2012



Measurement Data from Field Monitoring Sites: Single Modules on Poles and PV Plants

Native Resolution:	1 sec
Summary Intervals:	1 min, 15 min, 1 hour averages
Duration:	9 days
Beginning:	6/16/2012 07:00 UTC
Ending:	6/25/2012 02:00 UTC

PV System Information and Measures

PV System Name	AC Rating (kW)	Tilt Angle (°)	Orientation	AC Real Power (kW)	AC Reactive Power (kVAR)	Irradiance Plane-of-Array (W/m ²)	Known Issues
J1 Plant 1	285.00	20	South	Y	Y	Y	1 inverter down starting June 20
J1 Plant 2	190.00	20	South	Y	Y		
J1 Plant 3	475.00	20	South	Y	Y		pyranometer misalignment (omitted)
J1 Plant 4	760.00	20	South	Y	Y		pyranometer misalignment (omitted)
J1 Pole 1	0.18	30	South	Y		Y	
J1 Pole 2	0.18	30	South	Y		Y	
J1 Pole 3	0.18	30	South	Y		Y	
J1 Pole 4	0.18	30	South	Y		Y	
J1 Pole 5	0.18	30	South	Y		Y	
J1 Pole 6	0.18	30	South	Y		Y	
J1 Pole 7	0.18	30	South				no data (not uploading)
J1 Pole 8	0.18	30	South				partial no data (intermittent uploads)
K1 Plant 1	1040.00	25	South	Y	Y	Y	
K1 Pole 1	0.18	30	South	Y		Y	
K1 Pole 2	0.18	30	South	Y		Y	
K1 Pole 3	0.18	30	South	Y		Y	morning shade, tree from east
K1 Pole 4	0.18	30	South	Y		Y	
K1 Pole 5	0.18	30	South	Y		Y	
K1 Pole 6	0.19	30	South	Y		Y	

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Measurement Data Channels

PV System Name	Channel ID	Channel Type	Units
J1 Plant 1	02502	AC Power Sum	kW
J1 Plant 2	02522	AC Power Sum	kW
J1 Plant 3	02540	AC Power Sum	kW
J1 Plant 4	02560	AC Power Sum	kW
J1 Pole 1	03270	AC Power Sum	kW
J1 Pole 2	03283	AC Power Sum	kW
J1 Pole 3	03296	AC Power Sum	kW
J1 Pole 4	03309	AC Power Sum	kW
J1 Pole 5	03322	AC Power Sum	kW
J1 Pole 6	03335	AC Power Sum	kW
K1 Plant 1	01537	AC Power Sum	kW
K1 Pole 1	03218	AC Power Sum	kW
K1 Pole 2	03231	AC Power Sum	kW
K1 Pole 3	03192	AC Power Sum	kW
K1 Pole 4	03244	AC Power Sum	kW
K1 Pole 5	03205	AC Power Sum	kW
K1 Pole 6	00927	AC Power Sum	kW
J1 Plant 1	02503	AC Reactive Power Sum	kVAR
J1 Plant 2	02523	AC Reactive Power Sum	kVAR
J1 Plant 3	02541	AC Reactive Power Sum	kVAR
J1 Plant 4	02561	AC Reactive Power Sum	kVAR
K1 Plant 1	01538	AC Reactive Power Sum	kVAR
J1 Plant 1	02520	Irradiance Plane of Array	W/m ²
J1 Pole 1	03278	Irradiance Plane of Array	W/m ²
J1 Pole 2	03291	Irradiance Plane of Array	W/m ²
J1 Pole 3	03304	Irradiance Plane of Array	W/m ²
J1 Pole 4	03317	Irradiance Plane of Array	W/m ²
J1 Pole 5	03330	Irradiance Plane of Array	W/m ²
J1 Pole 6	03343	Irradiance Plane of Array	W/m ²
K1 Plant 1	01531	Irradiance Plane of Array	W/m ²
K1 Pole 1	03226	Irradiance Plane of Array	W/m ²
K1 Pole 2	03239	Irradiance Plane of Array	W/m ²
K1 Pole 3	03200	Irradiance Plane of Array	W/m ²
K1 Pole 4	03252	Irradiance Plane of Array	W/m ²
K1 Pole 5	03213	Irradiance Plane of Array	W/m ²
K1 Pole 6	00935	Irradiance Plane of Array	W/m ²