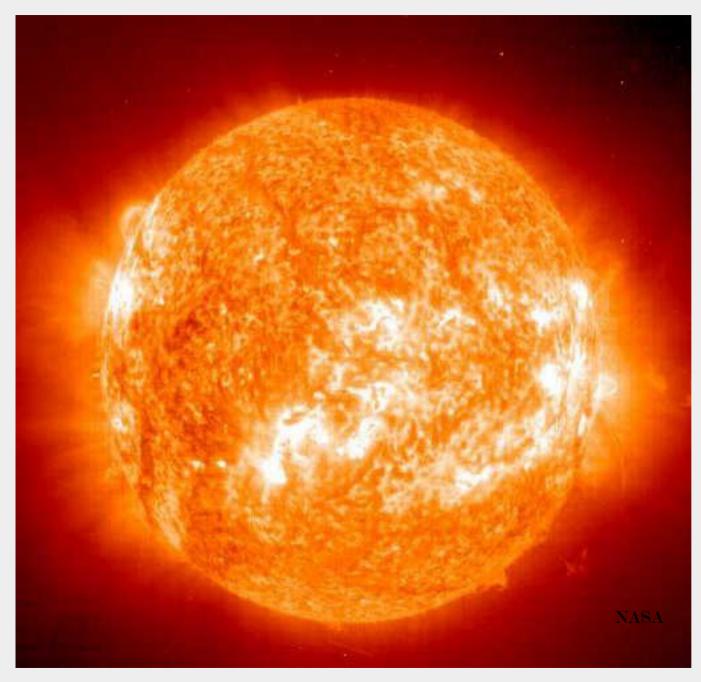
HANDOUT 1



SOLAR ENERGY...
SOLUTIONS
TO FUTURE
CHALLENGES...

ENERGY ENVIRONMENT ECONOMICS SECURITY RELIABILITY

PRESENTATION BY WILLIAM BALL bill@stellarsun.com



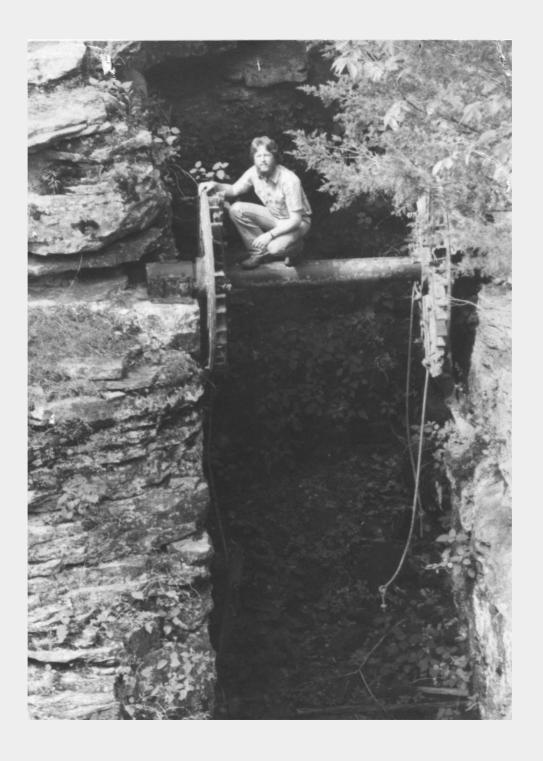






















METER AGGRIGATION?



22-061-U Testimony of Matthew S. Klucher, Entergy

RESPONSE TO WILLIAM BALL

Q. DO YOU HAVE A RESPONESE TO THE COMMENTS SUBMITTED BY MR. BALL?

A. Yes. Mr. Ball and I seem to be in agreement on a threshold concept that all customers should pay their fair share of costs required to serve those customers and support the grid. Mr. Ball suggests that rates should be redesigned in such a way that those costs are spread fairly across all customers, including those that net-meter. While Mr. Ball and I may disagree on the most appropriate method to achieve this objective, we appear to have the same goal in mind, which is that all customers pay their share of costs to provide service.

ACCURATELY CALCULATING AVOIDED COSTS CAN BE COMPLEX.

WILL THE VALUE OF TIME OF SOLAR PRODUCTION BE FAIRLY COMPENSATED?

									ANGEL	10 CH 98 CH 9	NO. 100 110 110 110	22 CP CE 25 C	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	50 32 66 88										
5/29/2022	61.6	49.47	27.04	16.7	28.58	32.01	8.26	35.68	45.89	65.11	73.26	101.1	82.31	83.46	126.01	154.74	150.25	122.7	104.78	157.3	73.59	74.36	61.42	50.84
<u>5/30/2022</u>	69.11	55.76	45.8	42.31	37.81	24.41	21.18	37.57	45.06	53.31	63.73	84.83	91.49	81.4	86.35	214.91	147.24	107.35	100.12	83.21	77.05	72.1	63.54	50.83
<u>5/31/2022</u>	52.61	46.31	42.97	43.09	44.44	46.3	56.59	57.5	70.53	81.04	109.27	85.19	120.85	95.66	97.24	106.31	122.44	96.01	97.07	91.14	90.85	94.9	71.46	69.45
<u>6/1/2022</u>	59.76	63.71	54.41	52.48	59.62	56.14	51.08	57.72	70.9	79.77	93.32	95.08	104.71	110.29	125.08	100.16	96.92	74.05	69.5	73.3	73.88	67.83	62.5	62.83
6/2/2022	60.34	61.01	51.23	51.33	48.52	56.43	56.95	61.86	72.41	73.72	84.36	74.82	91.87	86.18	80.49	92.22	82.31	80.87	70.69	71.18	90.21	75.92	61.26	68.78
<u>6/3/2022</u>	69.76	63.68	55.73	52.29	51.96	57.96	53.7	59.03	60.69	72.53	81.76	77.62	89.07	91.08	143.44	98.83	108.19	96.52	92.89	80.28	75.93	72.52	66.22	68.62
6/4/2022	59.59	56.71	55.32	61.5	56.48	54.38	51.69	69.18	74.05	71.84	59.14	70.68	79.38	81.12	79.57	86.75	95.78	88.62	78.86	78.54	72.93	54.65	52.82	56.72
<u>6/5/2022</u>	50.84	50.04	47.92	41.88	41.93	42.58	36.03	44.62	47.65	51.36	56.27	66.9	70.05	74.21	77.55	79.73	80.41	78.87	77.86	71.55	75.83	70.31	56.39	51.94
<u>6/6/2022</u>	56.59	50.25	46.71	47.67	48.4	58.31	63.1	69.03	72.47	81.78	78.99	82.19	90.09	89.84	123.53	117.12	88.71	92.69	107.09	91.83	80.14	72.95	67.77	67.71
<u>6/7/2022</u>	51.37	47.51	46.36	47.29	48.66	55.79	62.63	127.2	73.29	80.45	83.14	85.41	86.41	95.37	92.03	105.72	95.37	96.21	94.58	85.05	82.02	76.16	70.83	69.15
<u>6/8/2022</u>	60.37	54.67	53.77	54.68	56.85	57.6	58.9	60.19	65.57	75.6	78.28	82.8	83.73	83.71	86.19	84.82	84.74	85.63	84.25	85.27	84.14	74.16	68.71	66.14
6/9/2022	61.83	57.88	56.04	55.04	58.75	60.47	59.89	70.02	76.29	82.76	84.41	91.4	98.43	92.5	105.08	126.36	111.04	102.1	90.8	84.76	88.56	84.27	73.8	65.99
6/10/2022	55.45	51.38	49.99	46.87	48.13	53.24	55.72	62.9	68.79	63.1	71.58	71.54	75.78	73.3	73.54	72.56	75.42	73.95	67.93	64.75	61.87	56.9	50.07	46.83
<u>6/11/2022</u>	45.84	40.21	32.1	36.27	34.95	43.58	42.6	43.41	48.62	57.75	72.26	74.17	80.32	92.2	93.24	115.23	90.44	92.2	87.47	87.78	81.32	77.91	64.11	71.02
6/12/2022	55.27	58.83	57.86	50.66	47.46	44.1	44.34	50.61	58.98	64.18	76.34	82.03	94.03	111.51	127.42	120.32	216	274.04	145.57	99.32	90.99	77.07	72.51	59.73
<u>6/13/2022</u>	61.23	53.52	49.77	49.51	51.2	52.81	66.32	79.54	74.38	64.81	78.43	91.3	102.99	145.14	159.81	292.03	223.88	125.6	87.79	70.17	67.86	62.17	63.74	47.88
6/14/2022	47.86	51.93	53.42	51.37	51.96	52.39	50.75	60.39	75.2	82.52	85.93	93.86	104.37	112.91	107.01	116.76	102.45	93.46	93.62	84.55	72.25	69.83	65.86	61.32
<u>6/15/2022</u>	57.85	54.22	50.75	44.65	50.77	55.97	56.01	73.13	73.23	73.03	89.93	83.69	127.57	113.45	114.56	107.57	117.26	121.22	98.81	76.05	87.59	69.34	56.96	59.05
<u>6/16/2022</u>	62.7	59.78	58.16	55.55	52.2	60.16	64.15	63.32	69.79	72.95	68.88	94.22	112.11	113.23	119.3	99.74	106.69	90.83	84.39	83.32	79.27	71.67	73.47	73.64
C /17 /2022	C4 OC	EE C	EO 73	40.20	F7 47	E4.4C	E 4 1 7	C0 F0	CC 20	72 C4	77.02	77.22	. 00.74	. 00 C	102.44	101.00	102 10	107.00	101 02	00.00	02.27	71 (7	CC 20	F1 7F

HOW DOES MISSISSIPI TREAT NET EXCESS?

Excess generation is sold to the utility at avoided cost plus DG benefits adder (2.5 cents/kWh). An additional adder of 2.0 cents/kWh is available for customers with an annual household income of up to 225% of the federal poverty level. The energy credit value is carried over indefinitely.

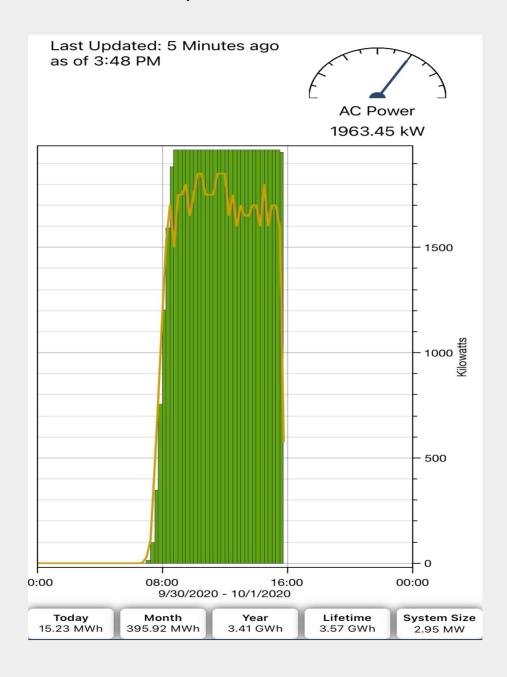
Act 278

(b)(1) A net-metering facility serving multiple meter locations under common ownership shall be located on a separate property from any other net-metering facility or only co-locate on a property with one (1) other net-metering facility within a single utility's allocated service territory.

(i)(a) The greater of twenty-five kilowatts (25 kW) or one For a residential customer for residential use, the lesser of twenty-five kilowatts (25 kW) alternating current or one hundred percent (100%) of the net-metering customer's highest monthly usage in the previous twelve (12) months for residential use unless an individual net-metering customer's net-metering facility with a greater amount is included in a standard interconnection agreement executed before December 31, 2022;

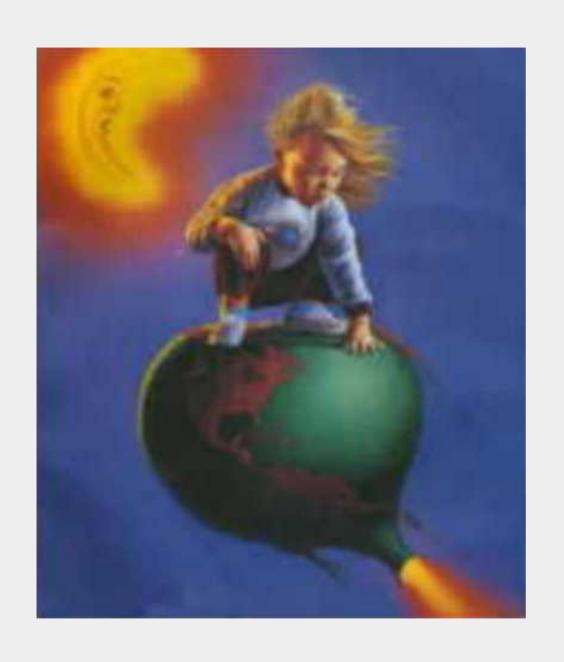
- (2) For a fixed-tilt solar photovoltaic system, the average annual output for a one-kilowatt *alternating* current solar photovoltaic solar system shall be:
- (A) Expressed in kilowatt hours; and
- (B) Determined using the National Renewable Energy Laboratory PV Watts Calculator using a direct current to alternating current (DC/AC) ratio of **one and one-tenth** (1.1) using a single location central to the electric utility's service territory.
- (3) For a single-axis tracking solar photovoltaic system, the average annual output for a one-kilowatt *alternating* current solar photovoltaic solar system shall be:
- (A) Expressed in kilowatt hours; and
- (B) Determined using the National Renewable Energy Laboratory PV Watts Calculator using a direct current to alternating current (DC/AC) ratio of **one and three-tenths** (1.3) using a single location central to the electric utility's service territory.

Snapshot at 3:58 PM



Peak production continued until after 6:30PM





We have lost 25% of the world's top soil and 33% of the forest cover over the last 50 years.

At present rate, 70% of the earth's coral reefs will be gone in our lifetime.

Freshwater ecosystems loss rate is 6% per year, 4% for marine.

In the past 3 decades, 1/3rd of the planets "natural" resources have been consumed.

