

### Landscape of Solar Energy Industry in Louisiana and Southeast USA

Professional Landman Association – New Orleans Chapter



Read Caver, PE

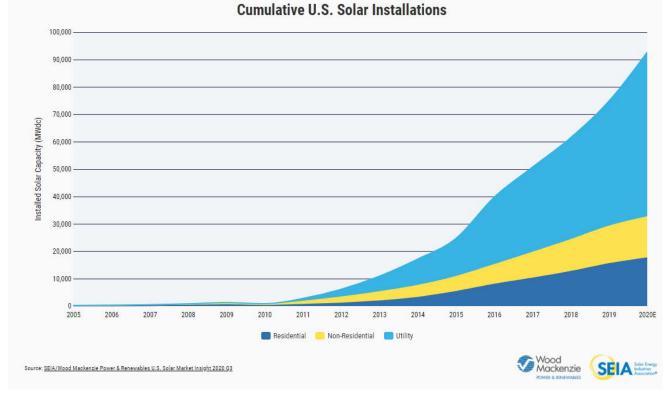
Manager, Project Management

Entergy Capital Projects - Transmission



Solar Capacity History and Trends

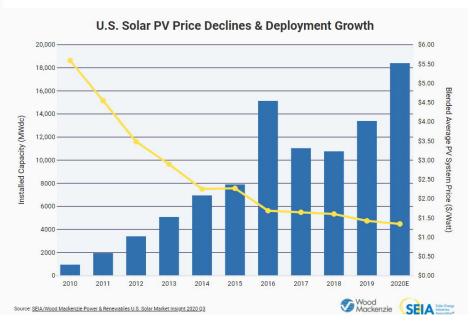
# Solar Cumulative Energy Capacity





### Growth of Solar Capacity

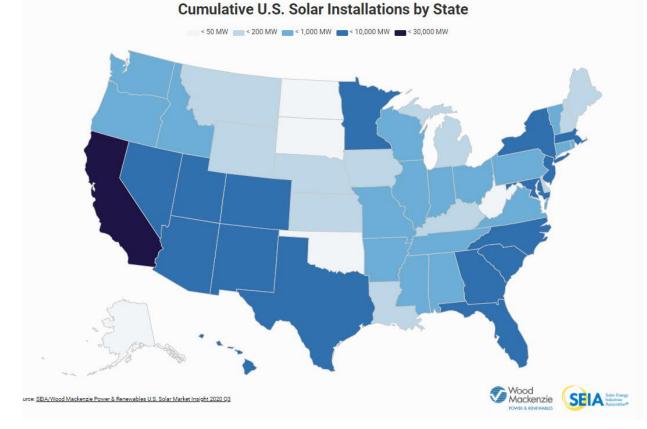
U.S. Annual Additions of New Electric Generating Capacity 100%-90% -80% sity Additions 70% -Capé of Total 40% nt Perce 30% --20%-10%-0% 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 YTD 2020 Solar 📕 Natural Gas 📕 Coal 📕 Wind 📕 Other Wood Mackenzie SEIA Solar Energy Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight 2020 03





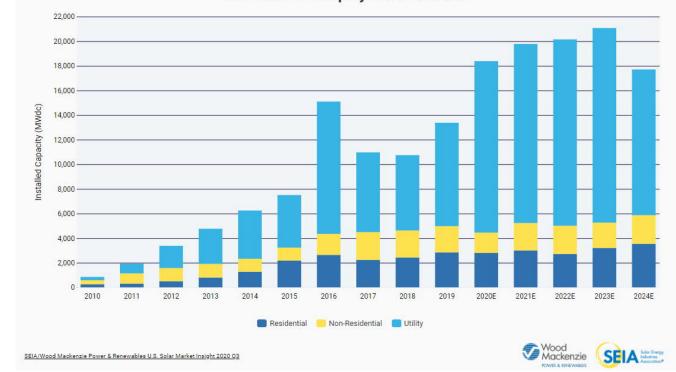
Solar PV History and Background

## State-by-State Solar Capacity





## **Future Growth**



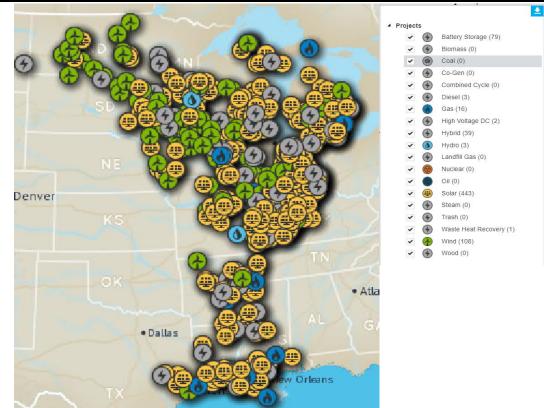
### **U.S. Solar PV Deployment Forecast**



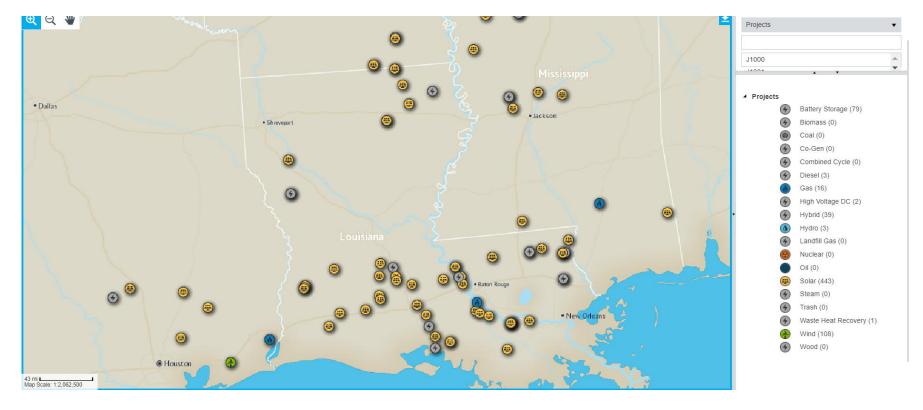


### **Grid Operations**

Midcontinent Independent System Operator (MISO) is Entergy's Regional Transmission Operator







Entergy, we power life



**Entergy Renewable Energy** 

We exist to grow a world-class energy business that creates sustainable value for our four stakeholders – customers, employees, communities and owners.

(11111)

# Well-positioned for continued value creation

- ✓ Strong growth trajectory supported by visible, executable utility investment plan
- ✓ Clarity on dividend growth strategy
- ✓ Progressive regulatory mechanisms

### ✓ <u>Positive regulatory relationships</u>

- $\checkmark$  Among the lowest retail rates in the U.S.
- $\checkmark$  Region that benefits from strong industrial growth
- ✓ Industry leader in critical measures of sustainability
- ✓ One of the cleanest large-scale generation fleets in the country
- $\checkmark$  Definitive agreements in place to sell remaining merchant nuclear assets
- $\checkmark$  Foundation on which we will continue to grow and innovate



## Entergy Current Generation Fleet – JUN20

Plant	Unit	Megawatt Capability *	Unit Role	Ownership	Primary Fuel	Generation	Commercial Operation Date	Location
Acadia	2 (CCGT)	534	Intermediate	100% ELL	Natural Gas	Fossil	2002	Eunice, LA
Attala	1 (CCGT)	450	Intermediate	100% EML	Natural Gas	Fossil	2001	Sallis, MS
Baxter Wilson	1	494	Intermediate	100% EML	Natural Gas	Fossil	1967	Vicksburg, MS
Big Cajun 2	3	139 103	Base	24.15% ELL 17.85% ETI	Coal	Fossil	1983	New Roads, LA
Calcasieu	1 (CT)	144	Peaking	100% ELL	Natural Gas	Fossil	2000	Sulphur, LA
	2 (CT)	160	Peaking	100% ELL	Natural Gas	Fossil	2001	Sulphur, LA
Carpenter	1	31	Peaking	100% EAL	Hydro	Renewable	1932	Hot Springs, AR
	2	31	Peaking	100% EAL	Hydro	Renewable	1932	Hot Springs, AR
hoctaw	1	796	Intermediate	100% EML	Natural Gas	Fossil	2003	French Camp, MS
Gerald Andrus	1	738	Intermediate	100% EML	Natural Gas	Fossil	1975	Greenville, MS
Hinds	1 (CCGT)	455	Intermediate	100% EML	Natural Gas	Fossil	2001	Jackson, MS
	2(CT)	29	Peaking	100% EML	Natural Gas	Fossil	2020	Jackson, MS
Hot Spring	2 (CCGT)	600	Intermediate	100% EAL	Natural Gas	Fossil	2002	Malvern, AR
Independence	10000	260	Base	31.5% EAL	Coal	Fossil	1983	Newark, AR
	1	206	Base	25% EML	Coal	Fossil	1983	Newark, AR
	2	211	Base	25% EML	Coal	Fossil	1984	Newark, AR
. Wayne Leonard	1 (CCGT)	926	Intermediate	100% ELL	Natural Gas	Fossil	2019	Montz, LA
ake Catherine	4	522	Peaking	100% EAL	Natural Gas	Fossil	1970	Malvern, AR
ake Charles	1	877	Intermediate	100% ELL	Natural Gas	Fossil	2020	West Lake, LA
ewis Creek	1	249	Intermediate	100% ETI	Natural Gas	Fossil	1970	Willis, TX
lewis creek	2	254	Intermediate	100% ETI	Natural Gas	Fossil	1971	Willis, TX
	2	415	Intermediate	100% ELL	Natural Gas	Fossil	1966	Montz, LA
Little Gypsy	3	517	Intermediate	100% ELL	Natural Gas	Fossil	1969	Montz, LA
LA Station 2	10	40	Reserve	100% ELL	Natural Gas	Fossil	1950	Baton Rouge, LA
	11	40	Reserve	100% ELL	Natural Gas	Fossil	1950	Baton Rouge, LA
	12	58	Reserve	100% ELL	Natural Gas	Fossil	1953	Baton Rouge, LA
	4	425	Reserve	100% ELL	Natural Gas	Fossil	1970	Westlake, LA
Nelson	6	211	Base	40.25% ELL	Coal	Fossil	1982	Westlake, LA
New Orleans	Contract of	156		29.75% ETI		101114		
Power Station	1	132	Intermediate	100% ENOI	Natural Gas	Fossil	2020	New Orleans, LA
Ninemile	4	730	Intermediate	100% ELL	Natural Gas	Fossil	1971	Westwego, LA
	5	744	Intermediate	100% ELL	Natural Gas	Fossil	1973	Westwego, LA
	6 (CCGT)	553	Intermediate	100% ELL	Natural Gas	Fossil	2014	Westwego, LA
Ouachita	1 (CCGT)	242	Intermediate	100% EAL	Natural Gas	Fossil	2002	Sterlington, LA
	2 (CCGT)	244	Intermediate	100% EAL	Natural Gas	Fossil	2002	Sterlington, LA
	3 (CCGT)	241	Intermediate	100% ELL	Natural Gas	Fossil	2002	Sterlington, LA
Perryville	1 (CCGT)	526	Intermediate	100% ELL	Natural Gas	Fossil	2002	Sterlington, LA
	2 (CT)	152	Peaking	100% ELL	Natural Gas	Fossil	2001	Sterlington, LA

Plant	Unit	Megawatt Capability *	Unit Role	Ownership	Primary Fuel	Generation	Commercial Operation Date	Location
Remmel	1	4	Peaking	100% EAL	Hydro	Renewable	1925	Maivern, AR
	2	4	Peaking	100% EAL	Hydro	Renewable	1925	Malvern, AR
	3	4	Peaking	100% EAL	Hydro	Renewable	1925	Malvern, AR
	1	212	Intermediate	100% ETI	Natural Gas	Fossil	1962	Orange, TX
Sabine	3	359	Intermediate	100% ETI	Natural Gas	Fossil	1966	Orange, TX
Sabine	4	513	Intermediate	100% ETI	Natural Gas	Fossi	1974	Orange, TX
	5	447	Intermediate	100% ETI	Natural Gas	Fossil	1979	Orange, TX
Sterlington	7A (CT)	47	Peaking	100% ELL	Natural Gas	Fossil	1974	Sterlington, LA
	1 (CCGT)	507	Intermediate	100% ENOI	Natural Gas	Fossil	2003	El Dorado, AR
Union	2 (CCGT)	498	Intermediate	100% EAL	Natural Gas	Fossil	2003	El Dorado, AR
	3 (CCGT)	506	Intermediate	100% ELL	Natural Gas	Fossil	2003	El Dorado, AR
	4 (CCGT)	503	Intermediate	100% ELL	Natural Gas	Fossil	2003	El Dorado, AR
Waterford	1	411	Intermediate	100% ELL	Natural Gas	Fossil	1975	Killona, LA
	2	417	Intermediate	100% ELL	Natural Gas	Fossil	1975	Killona, LA
	4 (CT)	33	Peaking	100% ELL	Oil	Fossil	2009	Killona, LA
White Bluff	1	464	Base	57% EAL	Coal	Fossil	1980	Redfield, AR
white bluff	2	469	Base	57% EAL	Coal	Fossil	1981	Redfield, AR
Brookhaven Solar	1	0.5		100% EML	Solar	Renewable	2015	Brookhaven, MS
DeSoto Solar	1	0.5		100% EML	Solar	Renewable	2015	Lake Cormorant, M
Hinds Solar	1	0.5		100% EML	Solar	Renewable	2015	Jackson, MS
New Orleans Solar	1	1		100% ENOI	Solar	Renewable	2015	New Orleans, LA

- 2219 MW of installed Coal Capacity
- 5420 MW of installed Natural Gas Capacity 40+ years old
- 3331 MW of installed Natural Gas Capacity 50+ years old



# Entergy Renewable Portfolio – AUG20

Entergy Renewable Generation Projects In Service or In Development as of 8/18/2020								
Project Name	Capacity (MW) <sup>1</sup>	Technology	Туре	Operating Co.	Location	Commercial Operation Date		
2019 ETI Solar RFP <sup>2</sup>	200 (targeted)	Solar	Owned or PPA	ETI	ТХ	2023 (targeted)		
2020 ELL Solar RFP <sup>2</sup>	300 (targeted)	Solar	Owned or PPA	ELL	LA	2023 (targeted)		
2019 EAL Solar RFP <sup>2</sup>	100 (targeted)	Solar	Owned	EAL	AR	2022 (targeted)		
Walnut Bend Solar <sup>2</sup>	100	Solar	Owned	EAL	Lee County, AR	2022 (expected)		
Iris Solar	50	Solar	PPA	ENOL	Franklinton, LA	2021 (expected)		
St. James Solar	20	Solar	PPA	ENOL	Vacherie, LA	2021 (expected)		
Sunflower County Solar	100	Solar	Owned	EML	Sunflower County, MS	2021 (expected)		
Searcy Solar (+ Battery)	100 (30 MWh)	Solar / Storage	Owned	EAL	Searcy, AR	2021 (expected)		
Capital Region Solar	50	Solar	PPA	ELL	Port Allen, LA	2020 (expected)		
New Orleans Solar Station	20	Solar	Owned	ENOL	New Orleans, LA	2020 (expected)		
Chicot Solar	100	Solar	PPA	EAL	Lake Village, AR	2020 (expected)		
New Orleans Commercial Rooftop Solar	5	Solar	Owned	ENOL	New Orleans, LA	2020 (expected)		
South Alexander Solar	29.5	Solar	PPA	ELL	LA	2020 (expected)		
New Orleans Residential Rooftop Solar	0.5	Solar	Owned	ENOL	New Orleans, LA	2020		
ECO Services	6	Waste Heat	PPA	ELL	Baton Rouge, LA	2019		
Stuttgart Solar	81	Solar	PPA	EAL	Stuttgart, AR	2018		
Brookhaven Solar	0.5	Solar	Owned	EML	Brookhaven, MS	2016		
DeSoto Solar	0.5	Solar	Owned	EML	Lake Cormorant, MS	2016		
Hinds Solar	0.5	Solar	Owned	EML	Jackson, MS	2016		
New Orleans Solar Power Plant (+ Battery)	1 (500 kWh)	Solar / Storage	Owned	ENOL	New Orleans, LA	2016		



### Entergy Commits to Achieving Net-Zero Carbon Emissions by 2050

09/24/2020



*Company advances new technologies and innovative climate solutions through new partnerships* 

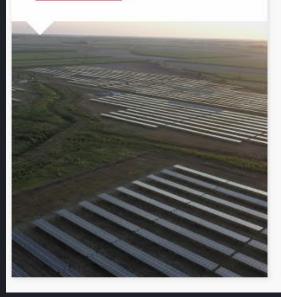
#### NEWS > GROWTH, ENERGY EFFICIENCY, ENVIRONMENT

Capital Region Solar Facility Serving Entergy Louisiana Customers

#### 10/21/2020

Entergy Louisiana customers are now receiving power from the largest solar facility in the state.







#### NEWS > GRID MODERNIZATION, GROWTH, ENVIRONMENT

Second Entergy Arkansas Solar Project Begins Operation

#### 10/08/2020

The Chicot Solar Energy Center began operation Sept. 30. The facility has a peak capacity of 100 megawatts of energy powered by the sun, enough to power 18,000 Entergy Arkansas customers' homes.

READ MORE

#### INSIGHTS > OUR FUTURE

Solar Energy Purchase Option B Approved for Tax-exempt Entities

#### 10/07/2020

The future is brighter for 61 Entergy Arkansas taxexempt customers who will soon reap the benefits of emissions-free solar power without the burden of buying, contracting, installing or maintaining solar panels on their properties.



