

# Entergy Arkansas, Inc. 2018 Integrated Resource Plan



Modeling Update  
October 4, 2018  
[entergy-arkansas.com/IRP](http://entergy-arkansas.com/IRP)

# Modeling Update to the 2018 IRP Stakeholder Meeting

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The following AURORA modeling update is provided as a supplement to the information presented during the June 6<sup>th</sup> Stakeholder Meeting and in response to stakeholder questions and feedback received.

Additional requests for information may be sent to EAI at [EIIRP@entergy.com](mailto:EIIRP@entergy.com).

2018 Integrated Resource Plan

## **MODELING UPDATE**

# Assumptions By Future

	FUTURE A	FUTURE B	FUTURE C
	REFERENCE	LOWER GROWTH	HIGHER GROWTH
<b>Peak and Energy Load Growth</b>	Reference	Low	High
<b>Natural Gas Prices</b>	Reference	Low	High
<b>CO<sub>2</sub> Price Forecast</b>	Reference	Low	High
<b>Market Coal Deactivations</b>	Reference (60 years)	Accelerated (55 years)	Accelerated (50 years)
<b>Market Legacy Gas Fleet Deactivations</b>	Reference (60 years)	Accelerated (55 years)	Accelerated (50 years)
<b>Magnitude of Market Coal &amp; Legacy Gas Deactivations</b>	12% by 2028 54% by 2038	31% by 2028 88% by 2038	54% by 2028 91% by 2038
<b>Market Renewables / Gas Mix*</b>	34% / 66%	25% / 75%	50% / 50%
EAI Sensitivity	SENSITIVITY A-1	SENSITIVITY B-1	SENSITIVITY C-1
<b>Input Assumption Changes</b>	Low Load Growth Extend CCGTs & ISES	Reference Load Growth Extend CCGTs & ISES	Modified Load Growth

\* Renewables / gas percentages apply only to incremental generation in MISO South.

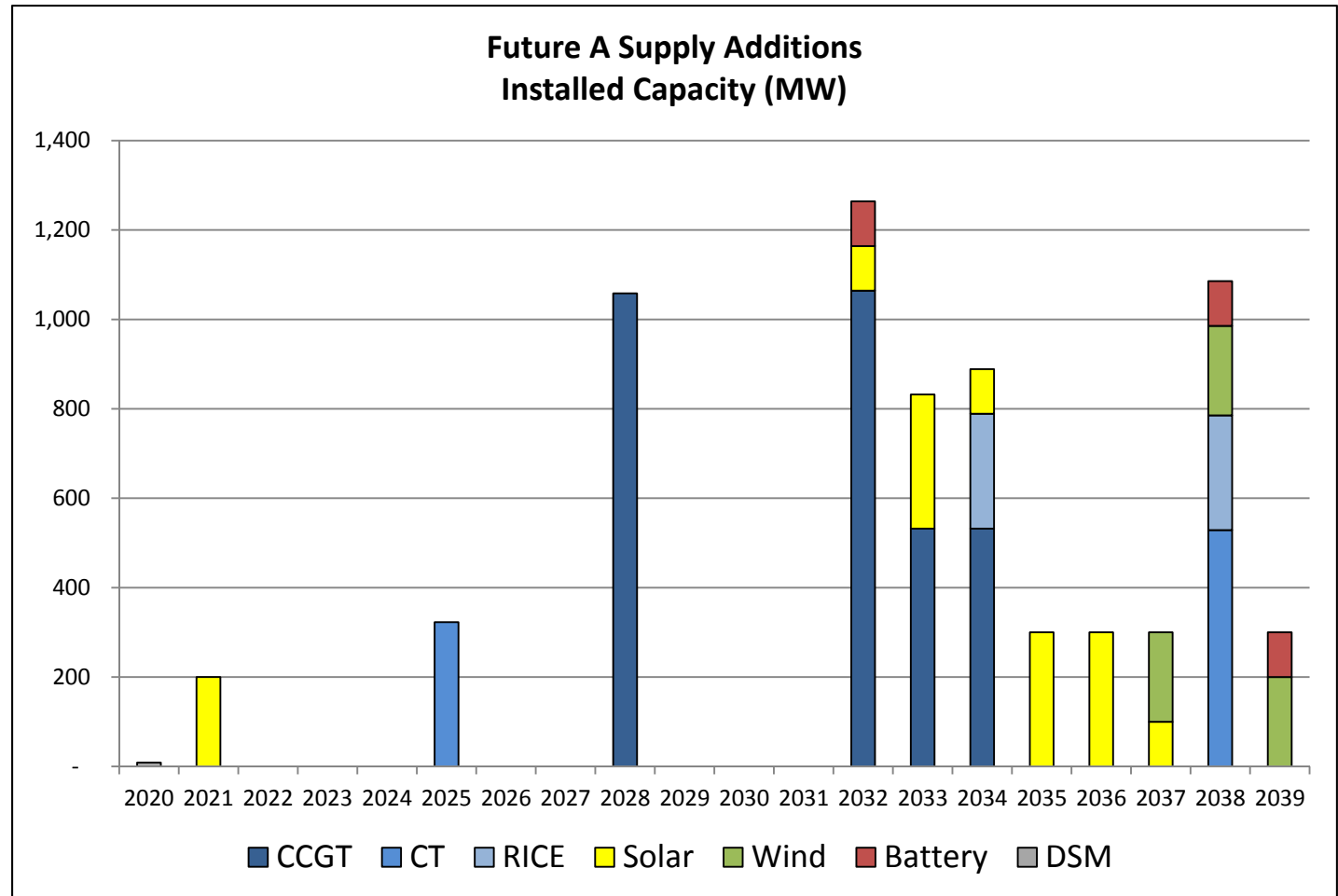
# Future A - Capacity Expansion Modeling Results

**Total Installed Capacity Additions: 6,660 MW**

**Total Effective Capacity Additions: 5,545 MW\***

## Installed Capacity

Type	MW
CCGT	3,187
CT	851
RICE	514
Solar	1,200
Wind	600
Battery	300
DSM	9



2021 Solar capacity additions did not originate from the capacity expansion model.

\*Effective capacity is 50% of installed capacity for solar resources, 15.6% for wind resources and 100% for conventional resources.

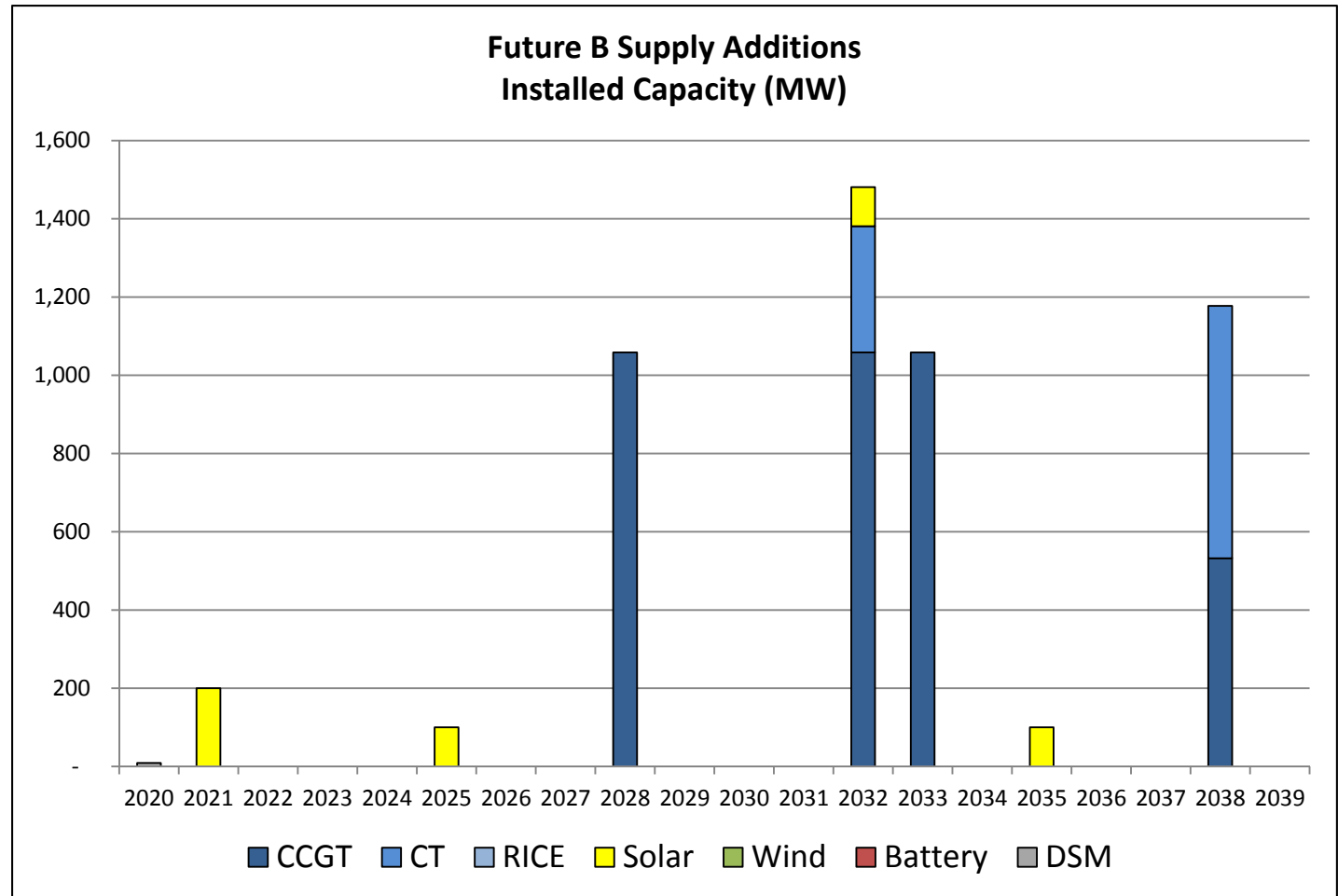
# Future B - Capacity Expansion Modeling Results

**Total Installed Capacity Additions: 4,984 MW**

**Total Effective Capacity Additions: 4,825 MW\***

## Installed Capacity

Type	MW
CCGT	3,707
CT	968
RICE	-
Solar	300
Wind	-
Battery	-
DSM	9



*2021 Solar capacity additions did not originate from the capacity expansion model.*

*\*Effective capacity is 50% of installed capacity for solar resources, 15.6% for wind resources and 100% for conventional resources.*

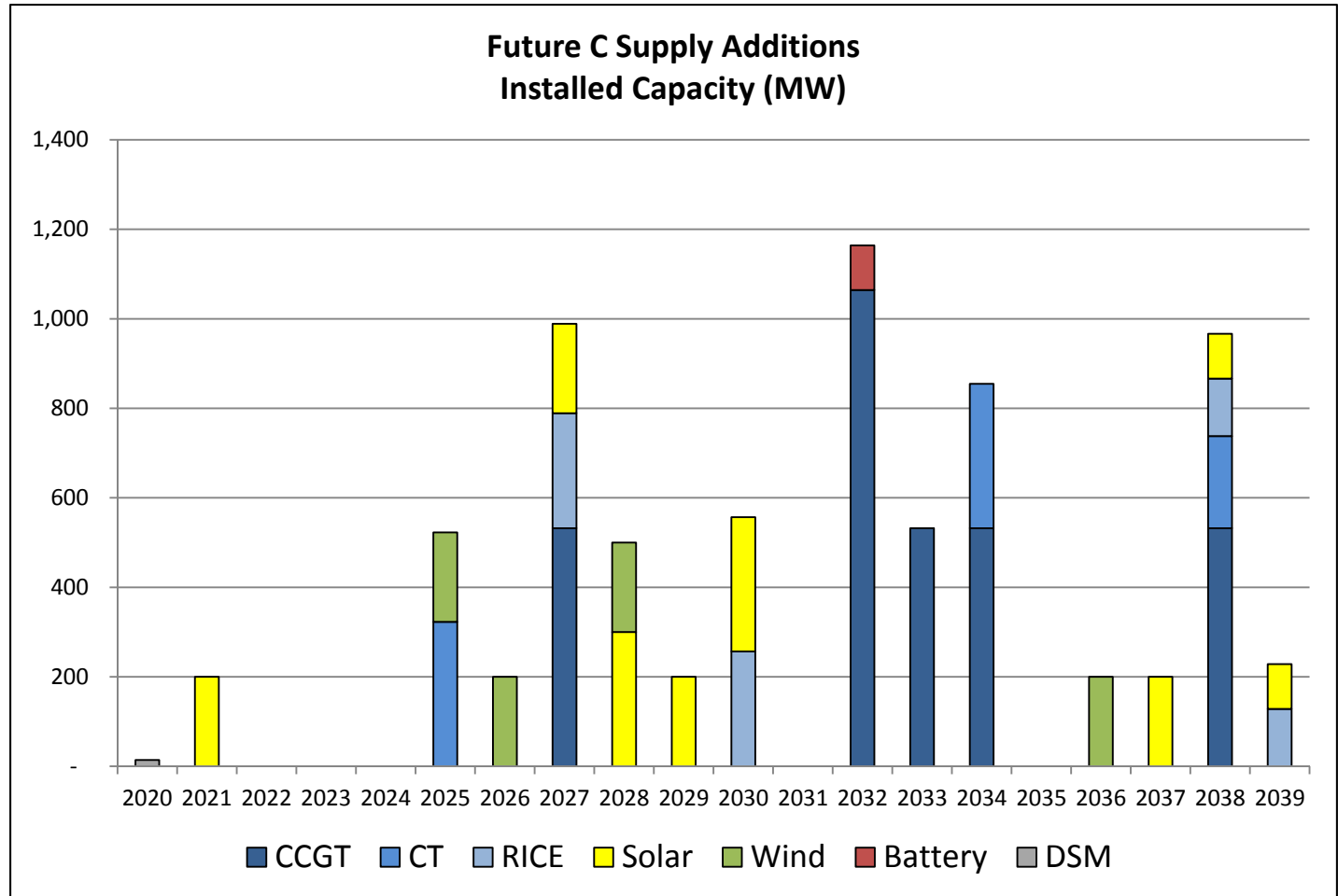
# Future C - Capacity Expansion Modeling Results

**Total Installed Capacity Additions: 7,128 MW**

**Total Effective Capacity Additions: 5,739 MW\***

## Installed Capacity

Type	MW
CCGT	3,192
CT	851
RICE	770
Solar	1,400
Wind	800
Battery	100
DSM	14



2021 Solar capacity additions did not originate from the capacity expansion model.

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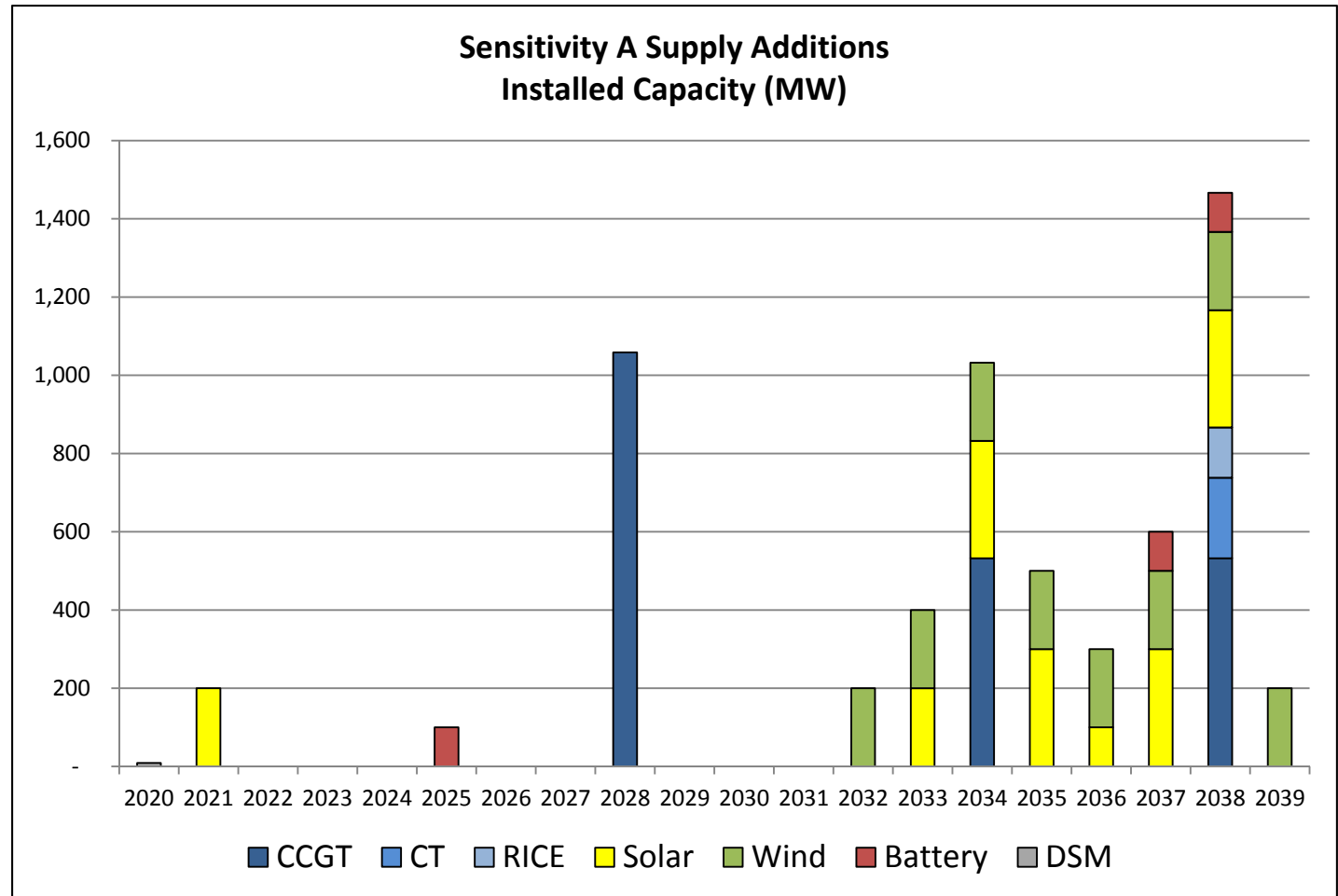
# Future A Sensitivity - Capacity Expansion Modeling Results

**Total Installed Capacity Additions: 5,866 MW**

**Total Effective Capacity Additions: 3,756 MW\***

## Installed Capacity

Type	MW
CCGT	2,123
CT	206
RICE	128
Solar	1,500
Wind	1,600
Battery	300
DSM	9



2021 Solar capacity additions did not originate from the capacity expansion model.

\*Effective capacity is 50% of installed capacity for solar resources, 15.6% for wind resources and 100% for conventional resources.



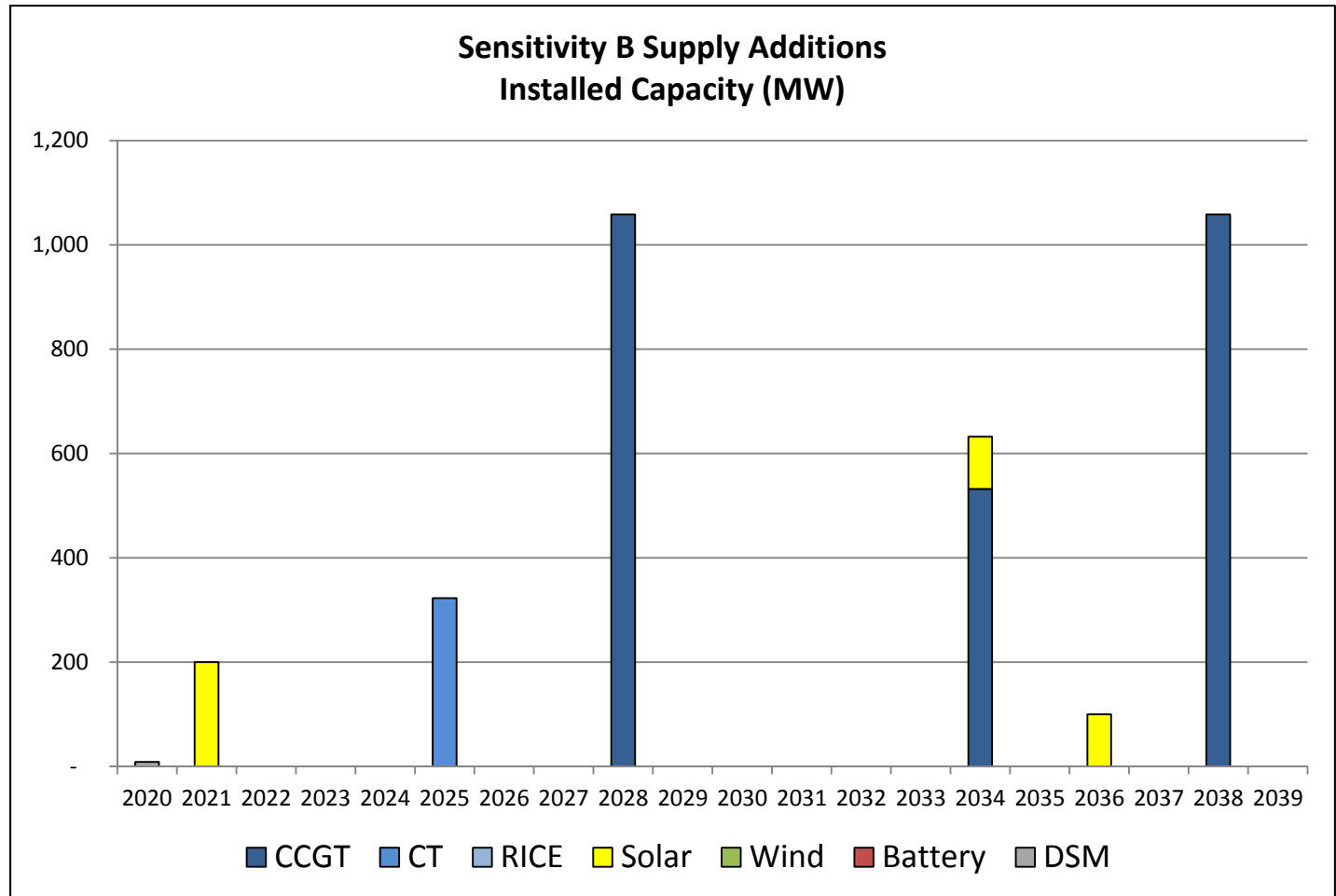
# Future B Sensitivity - Capacity Expansion Modeling Results

**Total Installed Capacity Additions: 3,180 MW**

**Total Effective Capacity Additions: 3,071 MW\***

## Installed Capacity

Type	MW
CCGT	2,649
CT	323
RICE	-
Solar	200
Wind	-
Battery	-
DSM	9



*2021 Solar capacity additions did not originate from the capacity expansion model.*

*\*Effective capacity is 50% of installed capacity for solar resources, 15.6% for wind resources and 100% for conventional resources.*

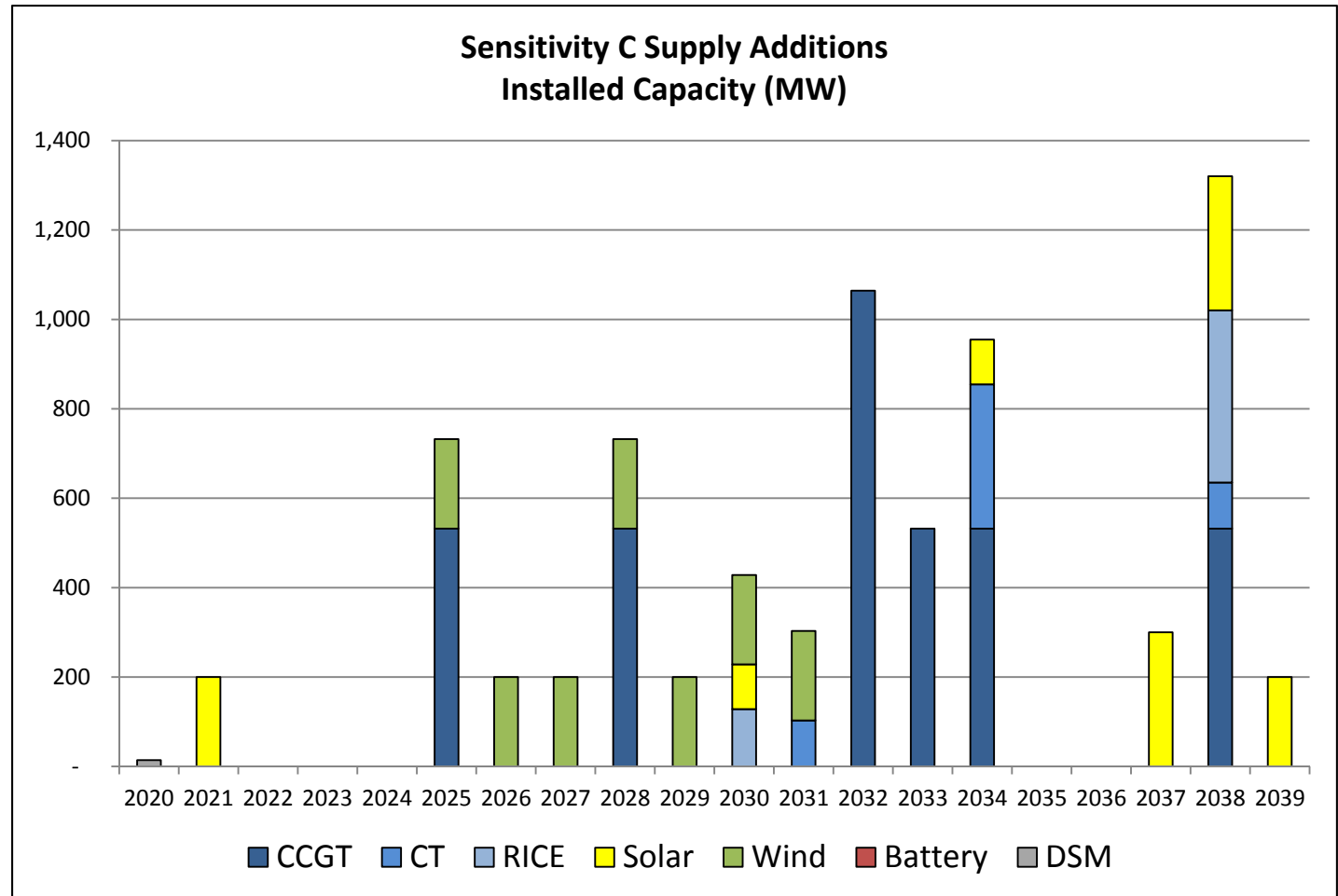
# Future C Sensitivity - Capacity Expansion Modeling Results

**Total Installed Capacity Additions: 7,181 MW**

**Total Effective Capacity Additions: 5,485 MW\***

## Installed Capacity

Type	MW
CCGT	3,725
CT	529
RICE	514
Solar	1,000
Wind	1,400
Battery	-
DSM	14



2021 Solar capacity additions did not originate from the capacity expansion model.

\*Effective capacity is 50% of installed capacity for solar resources, 15.6% for wind resources and 100% for conventional resources.