



Central Region Generator Interconnection Studies

1st Central Subregional Planning Meeting
January 31, 2022

Purpose and Key Takeaways



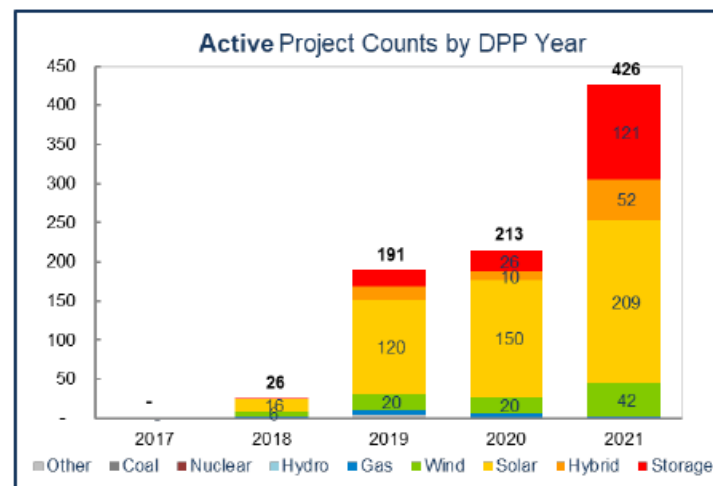
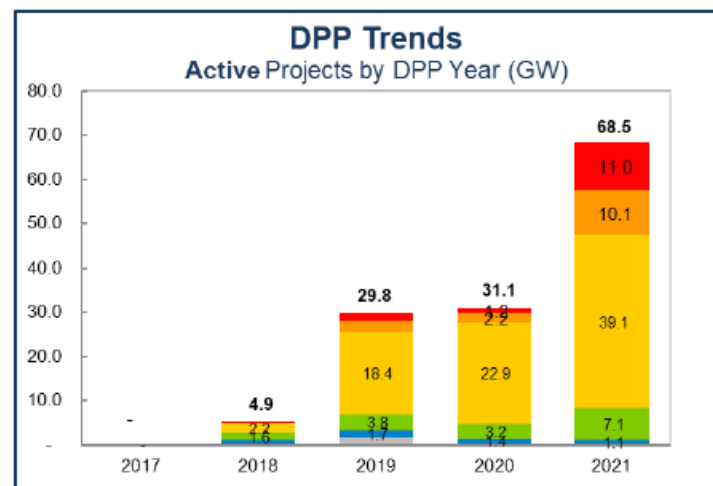
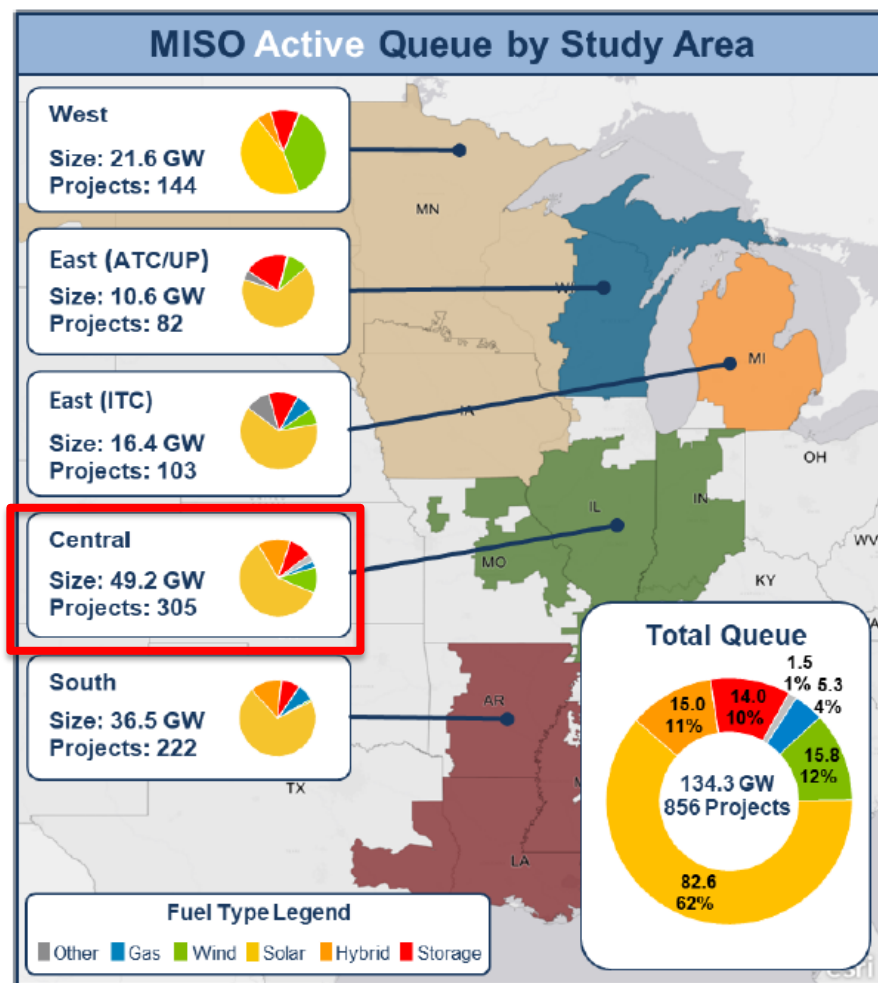
Purpose: Review statuses of recently completed, on-going, and upcoming Central DPP cycles

Key Takeaways:

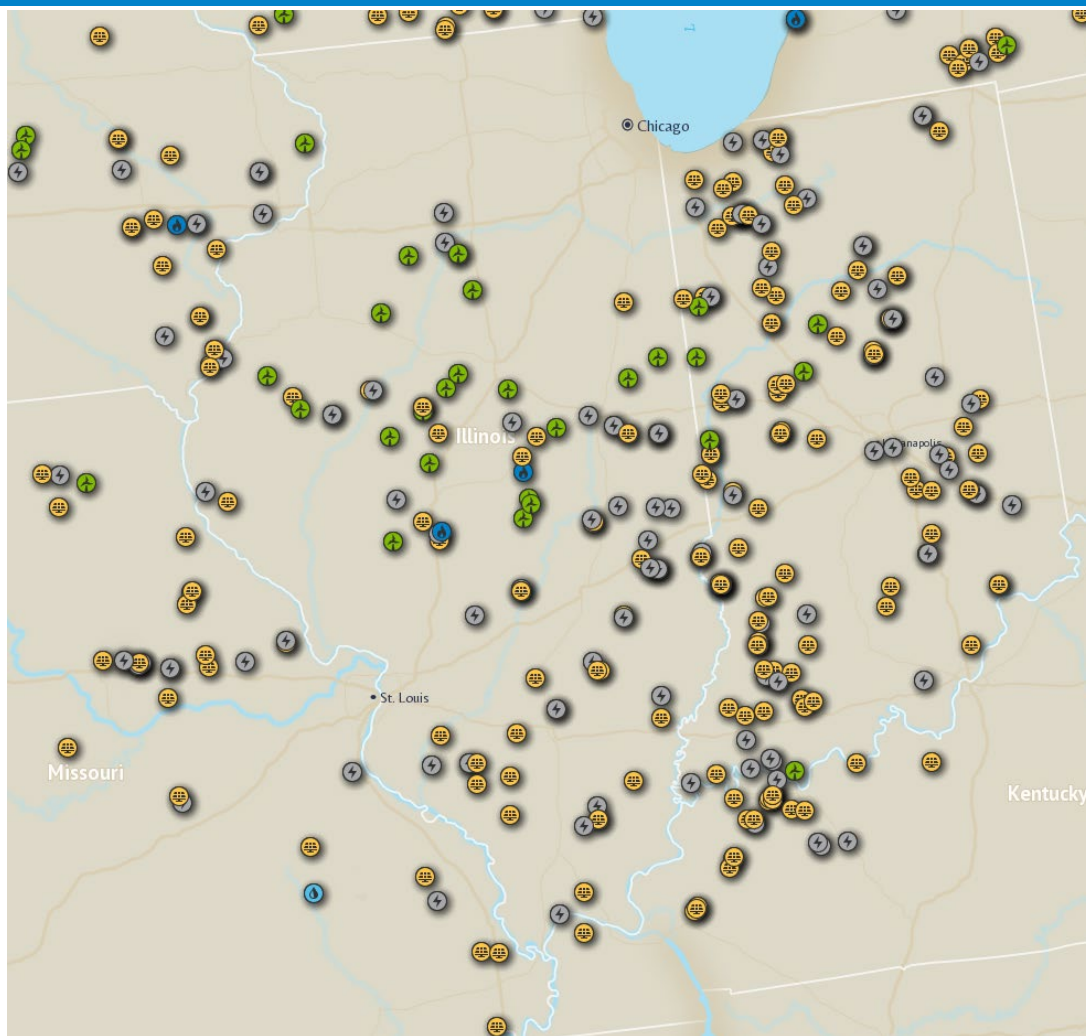
- **DPP-2018-APR Study Cycle**
 - 33 Active Projects (~7,144 MW)
 - Current Status = GIA Negotiation/NUFS
- **DPP-2019-Cycle Study**
 - 81 Projects (~13,215 MW)
 - Current Status = DPP Phase 2
- **DPP-2020-Cycle Study**
 - 85 Projects (~13,180 MW)
 - Current Status = DPP Phase 1
- **DPP-2021-Cycle Study**
 - 126 Projects (~19,300 MW)
 - Current Status = Phase 1 Model Build

Generator Interconnection: Overview

The current generator interconnection active queue consists of **856** projects totaling **134.3** GW



MISO Queue Central Study Area



Projects

	Battery Storage (172)
	Biomass (0)
	Coal (1)
	Co-Gen (0)
	Combined Cycle (0)
	Diesel (1)
	Gas (15)
	High Voltage DC (2)
	Hybrid (79)
	Hydro (2)
	Landfill Gas (0)
	Nuclear (0)
	Oil (0)
	Solar (495)
	Steam (0)
	Trash (0)
	Waste Heat Recovery (1)
	Wind (88)
	Wood (0)

Showing Active projects between DPP-2018-APR through DPP-2021 Cycles

MISO Queue Schedule / Central Summary

Current DPP Schedule version:

1/1/2022

Region	Study Cycle	Number of Projects	MWs	DPP 1 Start	DPP 1 Completion	DPP 2 Completion	DPP 3 Completion	GIA Execution	Current Stage/Status
Central	DPP-2018-APR	33	7,144	4/22/2019	1/7/2020	3/10/2021	2/1/2022	7/1/2022	DPP 3
	DPP-2019-Cycle	81	13,216	6/23/2020	8/5/2021	2/28/2022	7/12/2022	12/9/2022	DPP 2
	DPP-2020-Cycle	85	13,173	3/15/2021	2/18/2022	5/12/2022	9/23/2022	2/21/2023	DPP 1
	DPP-2021-Cycle	126	19,400	12/8/2021	6/21/2022	9/13/2022	1/25/2023	6/26/2023	DPP 1
	DPP-2022-Cycle	-	-	12/14/2022	5/4/2023	7/25/2023	12/6/2023	5/6/2024	

Central Updates - Summary:

- **DPP-2018-APR Study Cycle** → GIA Negotiation/Network Upgrade Facility Studies
- **DPP-2019-Cycle** → DPP Phase II Study (Stability)
- **DPP-2020-Cycle** → DPP Phase I Study (Steady-state Mitigations)
- **DPP-2021-Cycle** → DPP Phase I Model Build
- **DPP-2022-Cycle** → Application and Site Control Deadlines set for **9/15/2022**

Issues and Concerns:

- Queue Sizes (2019, 2020, & 2021)
 - Model Building, Mitigation Development, Regional LPC's
- Affected Systems Studies Delays

This information can be found on the MISO webpage (Definitive Planning Phase Schedule):

https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/

DPP Study Cycle Cost Breakdown - Central

Cost Breakdown	DPP 2018 APR (DPP Phase III Results)	DPP 2019 (DPP Phase I Results, Phase II Costs Soon)	DPP 2020 (DPP Phase I Analysis)	DPP 2021 (Phase I Model Build)
# of Projects (~Total NRIS MW's)	33 (7,144 MW)	81 (~13,215 MW)	85 (~13,180 MW)	126 (~19,300 MW)
ERIS Network Upgrades	\$27,260,800	\$768,819,758	TBD	TBD
Affected System Network Upgrades	\$68,816,370	TBD	TBD	TBD
NRIS Network Upgrades	\$74,454,200	\$553,290,000	TBD	TBD
Interconnection Facility Network Upgrades	\$198,912,356	\$625,807,000	TBD	TBD
Total Network Upgrade Cost (excluding Affected System & TOIF)	\$300,627,356	\$1,947,916,758	TBD	TBD

A study cycle summary page, a complete project list, & the SIS network upgrade cost table for each project (For applicable study cycles) can be found in the following appendices at the end of the presentation:

- **Appendix A:** DPP-2018-APR Study Cycle
- **Appendix B:** DPP-2019 Study Cycle
- **Appendix C:** DPP-2020 Study Cycle
- **Appendix D:** DPP-2021 Study Cycle

DPP 2018 April – Central – Update/Summary

DPP-2018-APR Central Phase III Update:

- 1) Phase II kicked off with 38 projects, totaling 7,588.95 MW (NRIS):
 - 4 Projects withdrew in DP2
 - 400 MW (NRIS)
- 2) Central Phase III kicked-off with 34 Projects:
 - 7,153.95 MW (NRIS)
- 3) Phase III Study is complete.
 - 1) Projects without any SIS Network Upgrades are in GIA Negotiation.
 - 2) Projects with assigned SIS NUs are undergoing Network Upgrade Facility Studies.

DPP 2019 – Central – Update/Summary

DPP-2019-Cycle Central Phase II Updates:

- 1) DPP Phase I kicked off with 102 projects, totaling 15,725.6 MW (NRIS).
- 2) DPP Phase I System Impact Study Report was Posted.
 - 86 ERIS Network Upgrades
 - 25 NRIS Network Upgrades
- 3) DPP Phase II kicked off with 85 projects, totaling ~13,200 MW (NRIS).
 - 17 projects withdrew at DP1, for ~2,500 MW
- 4) DPP Phase II results and costs are pending the System Impact Study Report.
 - Awaiting final AFS and Stability costs.

DPP 2020 – Central – Update/Summary

DPP-2020-Cycle Central Phase I Update:

- 1) A10 Model Review period has closed
 - All project feedback is being processed, the large cycle size and volume of model updates has led to delays
- 2) Phase I Model Package has been finalized and posted
 - Central contingency files are being corrected to account for topology changes due to addition of 2020 projects.
 - Corrections made to the input files.
- 3) Phase I Analysis
 - ERIS Thermal, Voltage, and LPC mitigations are underway.
 - NRIS/Deliverability mitigations will follow.

DPP 2021 – Central – Update/Summary

DPP-2021-Cycle Central Phase I Update:

1) Phase 1 Model Build is underway.

- Next step is A10 Model Review for all active projects.
 - 2021 Pre-screen model comments and revisions have been captured as best possible;
 - However, the A10 review is the formal process for making necessary model corrections (e.g. MW size updates, POI, collector system or generator parameters, etc).
 - Verify that all project updates resulting from Scoping Calls or other updates prior to Phase 1 Kick-off are present in the models, or document on the A10 what is still needed.

Questions?

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Curious about the MISO Generator Interconnection Queue?

Great place to start:

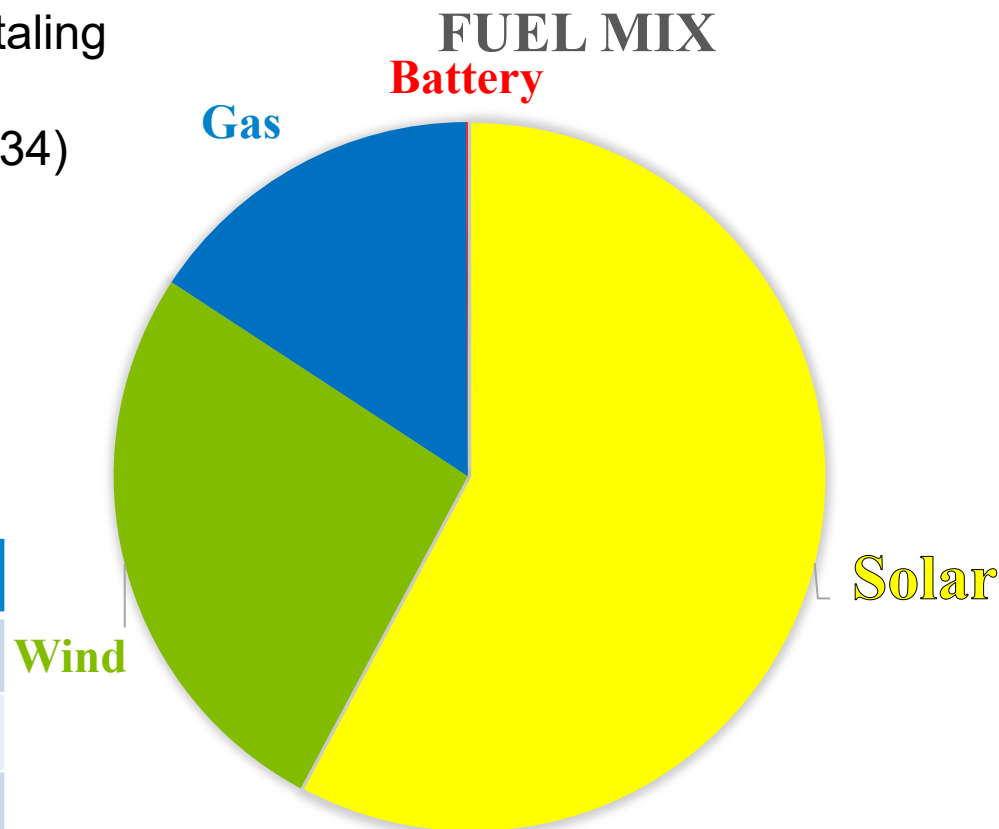
https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/

Appendix A: DPP 2018 April - Central

Summary DPP-2018-APR Central DP1:

- Phase 1 kicked off with 48 projects, totaling 9,348.23 MW (NRIS);
- 10 Projects withdrew in DP2 (Leaving 34)
 - 400 MW (NRIS)
- Central Phase 2 kicked off with:
 - 7,135.95 MW (NR)
- Phase 3 System Impact Study Report work is underway.

Fuel Type	Total MW's (NRIS)
Solar	4290
Wind	1959
Gas	1165
Battery	4.95



Appendix A: DPP 2018 April – Central (Active Project List)

Project #	Transmission Owner	Service Type	Fuel	Decision Point 2 ERIS MW	Decision Point 2 NRIS MW	Project #	Transmission Owner	Service Type	Fuel	Decision Point 2 ERIS MW	Decision Point 2 NRIS MW
J1022	Ameren Illinois	ERIS	Wind	150	0	J1063	Duke Energy	NRIS	Solar	195	195
J1025	Ameren Transmission Company of Illinois	NRIS	Wind	290	290	J1067	Northern Indiana Public Service Company	NRIS	Solar	240	240
J1026	Ameren Missouri	NRIS	Wind	380	265	J1069	Northern Indiana Public Service Company	NRIS	Wind	200	200
J1027	Hoosier Energy	NRIS	Solar	150	150	J1074	Southern Indiana Gas & Electric Company	NRIS	Solar	200	200
J1028	Hoosier Energy	NRIS	Solar	150	150	J1087	Ameren Missouri	NRIS	Solar	200	200
J1034	Ameren Missouri	NRIS	Solar	225	225	J1094	Ameren Illinois	NRIS	Solar	150	150
J1055	Ameren Illinois	NRIS	Wind	144	144	J1096	Ameren Illinois	NRIS	Solar	150	150
J1058	Northern Indiana Public Service Company	NRIS	Solar	200	200	J1102	Ameren Illinois	NRIS	Solar	70	70

This information can be found at the following (“Filter Queue By” Section or Download all to CSV for master list):

https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/

Appendix A: DPP 2018 April – Central (Active Project List)

Project #	Transmission Owner	Service Type	Fuel	Decision Point 2 ERIS MW	Decision Point 2 NRIS MW	Project #	Transmission Owner	Service Type	Fuel	Decision Point 2 ERIS MW	Decision Point 2 NRIS MW
J1107	Ameren Missouri	NRIS	Solar	200	200	J955	Ameren Transmission Company of Illinois	NRIS	Gas	1165	1165
J1115	Ameren Illinois	NRIS	Wind	200	200	J956	Ameren Missouri	NRIS	Solar	200	200
J1139	Ameren Illinois	NRIS	Solar	135	135	J968	Northern Indiana Public Service Company	NRIS	Wind	200	200
J1145	Ameren Missouri	NRIS	Solar	250	250	J974	Ameren Illinois	NRIS	Wind	225	225
J1152	Indianapolis Power & Light Company	NRIS	Solar	200	200	J976	Ameren Missouri	NRIS	Solar	300	300
J1180	Ameren Illinois	NRIS	Solar	75	75	J979	Ameren Transmission Company of Illinois	NRIS	Wind	170	170
J1182	Ameren Transmission Company of Illinois	NRIS	Solar	250	250	J987	Ameren Missouri	NRIS	Solar	100	100
J1189	Duke Energy Indiana	NRIS	Battery Storage	4.95	4.95	J991	Ameren Illinois	NRIS	Solar	150	150

This information can be found at the following (“Filter Queue By” Section or Download all to CSV for master list):

https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/

Appendix A: DPP 2018 April – Central (Active Project List)

Project #	Transmission Owner	Service Type	Fuel	Decision Point 2 ERIS MW	Decision Point 2 NRIS MW
J992	Duke Energy Indiana	NRIS	Solar	200	200
J993	Indianapolis Power & Light Company	NRIS	Solar	200	200
J994	Ameren Missouri	NRIS	Solar	100	100

This information can be found at the following (“Filter Queue By” Section or Download all to CSV for master list):

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Appendix A: DPP 2018 April – Central (Phase II SIS)

Total Cost of Network Upgrades for DPP 2018 April Central Phase II Projects:

Project #	ERIS Network Upgrades (\$)				NRIS Network Upgrades (\$)	Interconnection Facilities (\$)		Shared Network Upgrade (\$)	Total Cost (TOIF not included) (\$)
	Steady State	Stability	Short Circuit	Affected System	Deliverability	TO Network Upgrades	TO - Owned Direct Assigned		
J955	0	0	0	26,318,100	0	884,000	1,346,000	0	884,000
J956	0	0	0	0	8,734,641	1,170,000	1,626,000	0	9,904,641
J968	0	0	0	0	0	1,102,243	810,385	0	1,102,243
J974	0	0	0	4,777,168	0	1,596,000	1,092,000	0	1,596,000
J976	0	0	0	0	5,265,682	4,906,500	494,000	0	10,172,182
J979	0	0	0	3,275,500	0	4,042,000	1,519,000	0	4,042,000
J987	0	0	0	0	1,801,909	831,000	1,229,000	0	2,632,909
J991	0	0	0	298,000	0	2,391,000	1,199,000	0	2,391,000
J992	0	0	0	0	0	4,509,448	1,474,438	0	4,509,448
J993	0	0	0	0	0	16,350,303	569,301	0	16,350,303
J994	0	0	0	0	1,426,381	896,000	762,000	0	2,322,381
J1022	0	0	0	151,000	0	1,970,000	876,000	0	1,970,000
J1025	17,500,764	0	0	0	0	9,957,000	1,024,000	0	27,457,764
J995	2,068,029	TBD	TBD	TBD	0	700,000	800,000		2,768,029

Appendix A: DPP 2018 April – Central (Phase II SIS Cont.)

Project #	ERIS Network Upgrades (\$)				NRIS Network Upgrades (\$)	Interconnection Facilities (\$)		Shared Network Upgrade (\$)	Total Cost (TOIF not included) (\$)
	Steady State	Stability	Short Circuit	Affected System	Deliverability	TO Network Upgrades	TO - Owned Direct Assigned		
J1026	12,839,254	0	0	4,037,000	16,443,844	1,170,000	1,626,000	0	30,453,098
J1027	0	0	0	0	10,155,153	717,200	2,919,300	0	10,872,353
J1028	0	0	0	0	12,045,819	9,916,400	1,819,200	0	21,962,219
J1033	0	0	0	436,000	335,070	3,054,500	310,500	0	3,389,570
J1034	0	0	0	1,959,000	1,507,815	3,054,500	310,500	0	4,562,315
J1039	0	0	0	0	877,614	4,906,500	494,000	0	5,784,114
J1055	0	0	0	149,800	0	1,156,000	881,000	0	1,156,000
J1058	0	0	0	6,280,000	0	24,582,234	1,246,580	0	24,582,234
J1063	11,260,800	0	0	5,655,000	18,954,200	12,954,151	1,164,322	0	43,169,151
J1067	0	0	0	0	0	22,831,834	1,226,902	0	22,831,834
J1069	0	0	0	0	0	1,102,243	810,385	0	1,102,243
J1074	0	0	0	2,531,000	26,798,315	1,216,300	588,804	0	28,014,615
J1087	0	0	0	656,000	1,319,532	8,322,000	621,000	0	9,641,532
J1026	12,839,254	0	0	4,037,000	16,443,844	1,170,000	1,626,000	0	30,453,098
J1027	0	0	0	0	10,155,153	717,200	2,919,300	0	10,872,353
J1028	0	0	0	0	12,045,819	9,916,400	1,819,200	0	21,962,219

Appendix A: DPP 2018 April – Central (Phase II SIS Cont.)

Project #	ERIS Network Upgrades (\$)				NRIS Network Upgrades (\$)	Interconnection Facilities (\$)		Shared Network Upgrade (\$)	Total Cost (TOIF not included) (\$)
	Steady State	Stability	Short Circuit	Affected System	Deliverability	TO Network Upgrades	TO - Owned Direct Assigned		
J1094	0	0	0	0	1,227,725	7,653,000	867,000	0	8,880,725
J1096	0	0	0	0	0	6,422,000	621,000	0	6,422,000
J1102	0	0	0	0	0	1,031,000	517,000	0	1,031,000
J1107	0	0	0	447,000	1,358,952	9,813,000	1,024,000	0	11,171,952
J1111	12,677,000	0	0	0	1,028,551	7,550,000	377,000	0	21,255,551
J1112	0	0	0	0	0	4,326,378	1,166,956	0	4,326,378
J1115	0	0	0	9,681,700	0	9,847,000	1,024,000	0	9,847,000
J1139	0	0	0	41,861,500	0	290,000	1,017,000	0	290,000
J1145	0	0	0	1,865,000	3,672,284	9,855,000	1,024,000	0	13,527,284
J1152	0	0	0	3,909,000	2,181,818	0	0	0	2,181,818
J1180	0	0	0	0	0	15,006,000	1,024,000	0	15,006,000
J1182	3,659,982	0	0	2,098,000	0	1,367,000	1,227,000	0	5,026,982
J1189	0	0	0	0	284,936	0	0	0	284,936

Appendix A: DPP 2018 April – Central (Phase II SIS Cont.)

Project #	ERIS Network Upgrades (\$)				NRIS Network Upgrades (\$)	Interconnection Facilities (\$)		Shared Network Upgrade (\$)	Total Cost (TOIF not included) (\$)
	Steady State	Stability	Short Circuit	Affected System	Deliverability	TO Network Upgrades	TO - Owned Direct Assigned		
Totals	\$57,937,800	\$0	\$0	\$116,385,768	\$115,420,241	\$218,749,734	\$37,928,573	\$0	\$392,107,775

Network Upgrades:

- ERIS – 8 upgrades (transformer replacements/upgrades, line rebuilds, reconductoring).
- NRIS – 5 upgrades (new lines, a rebuild, and terminal upgrades).
- No basecase / backbone upgrades needed.

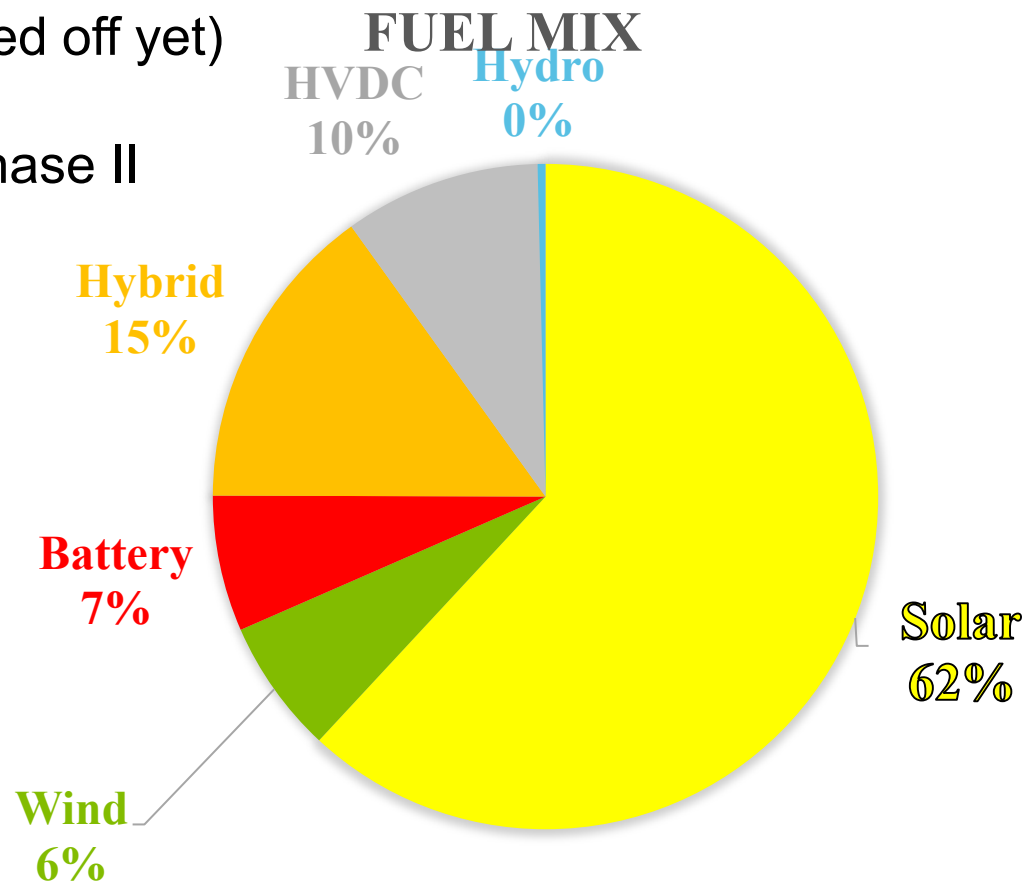
This information can be found at the following:

- https://www.misoenergy.org/planning/generator-interconnection/GI_Studies
- Navigate to the “Generator Interconnection Documents” section → Definitive Planning Phase (DPP) → April 2018 → Central → **GI DPP 2018 APRIL Central SIS Phase I Report - FINAL Rev2.pdf**

Appendix B: DPP 2019 Cycle - Central

- 102 Active Study Projects (Phase I data shown as Phase II has not kicked off yet)
- Over 15,725 MWs
- Decision Point 1 Complete – Phase II Kickoff Pending
- Fuel Mix:

Fuel Type	Total MW's (Summer)
Wind	1026.8
Solar	9736.1
Battery	1038.5
HVDC	1500
Hybrid	2364.2
Hydro	60



Appendix B: DPP 2019 Cycle - Central

Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel
J1191	City of Columbia, MO	NRIS	64	Solar	J1227	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	125	Solar	J1268	Ameren Missouri	NRIS	150	Solar
J1197	Ameren Illinois	NRIS	75	Battery Storage	J1231	Big Rivers Electric Corporation	NRIS	125	Solar	J1269	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	100	Solar
J1198	Ameren Illinois	NRIS	51.8	Solar	J1232	Ameren Illinois	NRIS	99	Solar	J1271	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	100	Battery Storage
J1199	Ameren Illinois	NRIS	20	Solar	J1233	Vectren	NRIS	50	Battery Storage	J1272	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	50	Battery Storage
J1200	Ameren Illinois	NRIS	24.2	Solar	J1234	Duke Energy Indiana, Inc.	NRIS	100	Solar					
J1201	Ameren Illinois	NRIS	44.2	Solar	J1235	Duke Energy Indiana, Inc.	NRIS	50	Solar	J1274	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	100	Solar
J1202	Ameren Illinois	NRIS	68.4	Solar						J1275	Big Rivers Electric Corporation	NRIS	100	Solar
J1204	Ameren Illinois	NRIS	199.3	Solar	J1241	Ameren Illinois	NRIS	200	Solar	J1276	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	100	Solar
J1208	Ameren Illinois	NRIS	80	Solar	J1242	Ameren Illinois	External NRIS	25	Solar					
J1209	Ameren Illinois	NRIS	80	Solar	J1243	Ameren Illinois	External NRIS	25	Solar	J1289	Ameren Illinois	NRIS	200	Wind
J1213	Ameren Missouri	NRIS	60	Hydro	J1254	Duke Energy Indiana, Inc.	NRIS	150	Solar	J1295	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	280	Solar
J1216	Ameren Illinois	NRIS	250	Solar	J1263	Ameren Illinois	NRIS	408.6	Solar	J1296	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	200	Solar
J1222	Ameren Missouri	NRIS	200	Solar	J1265	Northern Indiana Public Service Company	NRIS	43	Solar	J1299	Union Electric Company d/b/a/Ameren Missouri	NRIS	200	Solar
J1225	Ameren Illinois	NRIS	160	Solar	J1266	Ameren Illinois	NRIS	99	Solar	J1301	Ameren Illinois	NRIS	150	Solar

Appendix B: DPP 2019 Cycle - Central

Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel
J1302	Ameren Illinois	NRIS	150	Solar	J1336	Northern Indiana Public Service Company	NRIS	125	Solar	J1363	Ameren Missouri	NRIS	150	Solar
J1303	Southern Illinois Power Cooperative	NRIS	150	Solar	J1338	Ameren Missouri	NRIS	125	Solar	J1369	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	100	Solar
J1306	Ameren Illinois	NRIS	200	Solar	J1339	Northern Indiana Public Service Company	NRIS	99	Solar	J1376	Ameren Missouri	NRIS	100	Wind
J1307	METC	NRIS	150	Solar	J1340	Northern Indiana Public Service Company	NRIS	50	Battery Storage	J1378	Duke Energy Indiana	NRIS	200	Solar
J1308	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	300	Solar	J1342	Northern Indiana Public Service Company	NRIS	100	Solar	J1381	Duke Energy Indiana	NRIS	200	Solar
J1311	Ameren Illinois	NRIS	150	Solar	J1348	Duke Energy Indiana	NRIS	50	Solar	J1382	Ameren Illinois	NRIS	150	Solar
J1318	Detroit Edison Company	NRIS	25	Solar	J1352	Ameren Missouri	NRIS	135	Solar	J1383	Ameren Illinois	NRIS	150	Solar
J1323	Northern Indiana Public Service Company	NRIS	50	Battery Storage	J1353	Northern Indiana Public Service Company	NRIS	200	Solar	J1385	Duke Energy Indiana, Inc.	NRIS	100	Solar
					J1354	Hoosier Energy	External NRIS	25	Solar	J1387	Northern Indiana Public Service Company	NRIS	59.18	Solar
J1330	Ameren Illinois	NRIS	200	Solar	J1355	Northern Indiana Public Service Company	External NRIS	25	Solar	J1388	Duke Energy Indiana	NRIS	142.42	Solar
J1332	Northern Indiana Public Service Company	NRIS	200	Solar	J1356	Duke Energy Indiana, Inc.	NRIS	150	Solar	J1390	Duke Energy Indiana, Inc.	NRIS	150	Solar
J1333	Northern Indiana Public Service Company	NRIS	199.5	Solar	J1357	Northern Indiana Public Service Company	NRIS	408.6	Solar	J1391	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	100	Solar
J1334	Northern Indiana Public Service Company	NRIS	199.5	Solar	J1358	Northern Indiana Public Service Company	NRIS	43	Solar	J1392	Northern Indiana Public Service Company	NRIS	200	Solar
J1335	Northern Indiana Public Service Company	NRIS	199.5	Solar	J1360	Ameren Illinois	NRIS	99	Solar	J1393	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.	NRIS	200	Solar

Appendix B: DPP 2019 Cycle - Central

Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel
J1396	Hoosier Energy REC, Inc.	NRIS	150	Solar	J1453	Ameren Illinois	NRIS	188.3	Wind
J1398	Hoosier Energy REC, Inc.	NRIS	150	Solar	J1454	Ameren Illinois	NRIS	58.5	Wind
J1405	Duke Energy Indiana	NRIS	140	Solar	J1457	Duke Energy Indiana	NRIS	200	Solar
J1407	Northern Indiana Public Service Company	NRIS	100	Solar	J1464	Ameren Transmission Company of Illinois	NRIS	592.8	Solar
J1408	Ameren Illinois	NRIS	100	Wind	J1466	Big Rivers Electric Corporation	NRIS	250	Solar
J1409	Big Rivers Electric Corporation	NRIS	25	Battery Storage	J1470	Duke Energy Indiana, Inc.	NRIS Only	30	Wind
					J1475	Ameren Illinois	NRIS	75	Solar
					J1481	Duke Energy Indiana	NRIS	200	Solar
J1419	Duke Energy Indiana	NRIS	250	Solar	J1482	Duke Energy Indiana	NRIS	150	Solar
					J1488	Ameren Missouri	NRIS	500	High Voltage DC
J1422	Ameren Illinois	NRIS	150	Solar					
J1447	Northern Indiana Public Service Company	NRIS	250	Solar	J1490	Ameren Missouri	NRIS	1000	High Voltage DC
J1448	Big Rivers Electric Corporation	NRIS	150	Solar					
J1450	Big Rivers Electric Corporation	NRIS	150	Solar					

Appendix B: DPP 2019 Cycle – Central (Phase I SIS)

Total Cost of Network Upgrades for DPP 2019 Cycle Central Phase I Projects:

Project	ERIS Network Upgrades (\$)					NRIS Network Upgrades (\$)	Interconnection Facilities (\$)		Shared Network Upgrades (\$)	Total Network Upgrade Cost for Milestone Calculation
	Thermal	Voltage	Stability	Short Circuit	Affected System	Deliverability	TO Network Upgrades	TO – Owned Direct Assigned		(\$)
a	b	c	d	e	f	g	h	i	j	k = b+c+d+e+g+h+j
J1191	922,527	0	TBD	TBD	TBD	244,335	500,000	0	0	1,666,862
J1197	35,268	0	TBD	TBD	TBD	0	7,500,000	750,000	0	7,535,268
J1198	74,412	0	TBD	TBD	TBD	0	750,000	0	0	824,412
J1199	7,875	0	TBD	TBD	TBD	0	500,000	0	0	507,875
J1200	10,563	0	TBD	TBD	TBD	0	500,000	0	0	510,563
J1201	149,544	0	TBD	TBD	TBD	40,873	500,000	0	0	690,416
J1202	258,039	0	TBD	TBD	TBD	226,542	500,000	0	0	984,581
J1204	212,233	0	TBD	TBD	TBD	0	2,000,000	1,000,000	0	2,212,233
J1208	0	3,538	TBD	TBD	TBD	997,856	4,250,000	500,000	0	5,251,394
J1209	0	3,538	TBD	TBD	TBD	997,856	4,250,000	500,000	0	5,251,394
J1213	271,690	0	TBD	TBD	TBD	213,737	0	50,000	0	485,428
J1216	18,053,526	0	TBD	TBD	TBD	533,856	8,500,000	500,000	0	27,087,382
J1222	1,672,603	0	TBD	TBD	TBD	17,345,318	2,000,000	1,000,000	0	21,017,921

Appendix B: DPP 2019 Cycle – Central (Phase I SIS)

Total Cost of Network Upgrades for DPP 2019 Cycle Central Phase I Projects:

J1225	16,051,148	0	TBD	TBD	TBD	413,954	750,000	500,000	0	17,215,102
J1227	733,867	58,625	TBD	TBD	TBD	31,964,185	10,000,000	0	0	42,756,678
J1231	1,519,081	0	TBD	TBD	TBD	0	4,500,000	0	0	6,019,081
J1232	122,889	0	TBD	TBD	TBD	0	8,000,000	500,000	0	8,122,889
J1233	725,337	8,255	TBD	TBD	TBD	347,824	2,000,000	0	0	3,081,416
J1234	24,777,170	12,803	TBD	TBD	TBD	927,368	7,000,000	0	0	32,717,341
J1235	12,494,889	6,907	TBD	TBD	TBD	463,684	7,000,000	0	0	19,965,480
J1241	536,700	0	TBD	TBD	TBD	345,828	10,500,000	1,000,000	0	11,382,528
J1242	0	0	TBD	TBD	TBD	0	TBD in Phase III	0	0	0
J1243	0	0	TBD	TBD	TBD	0	TBD in Phase III	0	0	0
J1254	69,291	13,982	TBD	TBD	TBD	47,864,733	19,000,000	0	0	66,948,007
J1263	421,304	0	TBD	TBD	TBD	0	18,600,000	1,000,000	0	19,021,304
J1265	21,325	0	TBD	TBD	TBD	0	3,000,000	0	0	3,021,325
J1266	795,919	0	TBD	TBD	TBD	0	8,000,000	500,000	0	8,795,919
J1268	3,278,208	0	TBD	TBD	TBD	14,506,554	8,500,000	500,000	0	26,284,762
J1269	53,384	28,738	TBD	TBD	TBD	9,764,665	4,500,000	0	0	14,346,787
J1271	520,690	46,076	TBD	TBD	TBD	15,239,674	2,000,000	0	0	17,806,440
J1272	28,644	30,773	TBD	TBD	TBD	7,560,283	2,000,000	0	0	9,619,701
J1274	771,877	386,788	TBD	TBD	TBD	12,651,042	750,000	0	0	14,559,707
J1275	14,983,600	22,237	TBD	TBD	TBD	10,099,687	1,500,000	0	0	26,605,525

Appendix B: DPP 2019 Cycle – Central (Phase I SIS)

Total Cost of Network Upgrades for DPP 2019 Cycle Central Phase I Projects:

J1276	771,877	386,788	TBD	TBD	TBD	12,651,042	750,000	0	0	14,559,707
J1289	805,183	0	TBD	TBD	TBD	2,028,256	10,500,000	1,000,000	0	13,333,439
J1295	118,234	32,345	TBD	TBD	TBD	18,690,215	17,000,000	0	0	35,840,794
J1296	84,220	38,915	TBD	TBD	TBD	8,376,268	2,000,000	0	0	10,499,403
J1299	10,750,000	0	TBD	TBD	TBD	15,484,289	0	50,000	0	26,234,289
J1301	476,999	0	TBD	TBD	TBD	456,824	0	50,000	0	933,824
J1302	0	7,918	TBD	TBD	TBD	1,160,133	7,500,000	500,000	0	8,668,051
J1303	43,385,331	0	TBD	TBD	TBD	9,644,103	7,907,000	0	0	60,936,434
J1306	537,977	0	TBD	TBD	TBD	523,942	10,500,000	1,000,000	0	11,561,920
J1308	109,596	50,539	TBD	TBD	TBD	14,459,654	16,500,000	0	0	31,119,789
J1311	498,782	0	TBD	TBD	TBD	476,814	7,500,000	500,000	0	8,475,596
J1318	11,858	0	TBD	TBD	TBD	6,000,000	8,000,000	0	0	14,011,858
J1323	12,266	0	TBD	TBD	TBD	0	1,500,000	0	0	1,512,266
J1330	695,296	0	TBD	TBD	TBD	672,804	11,500,000	1,000,000	0	12,868,101
J1332	6,050,721	0	TBD	TBD	TBD	0	4,400,000	0	0	10,450,721
J1333	3,398,143	0	TBD	TBD	TBD	0	6,250,000	0	0	9,648,143
J1334	3,398,143	0	TBD	TBD	TBD	0	6,250,000	0	0	9,648,143
J1335	3,398,143	0	TBD	TBD	TBD	0	6,250,000	0	0	9,648,143
J1336	3,398,143	0	TBD	TBD	TBD	0	6,250,000	0	0	9,648,143
J1338	3,985,555	0	TBD	TBD	TBD	13,008,989	10,500,000	1,000,000	0	27,494,544
J1339	6,032,986	0	TBD	TBD	TBD	0	2,200,000	0	0	8,232,986

Appendix B: DPP 2019 Cycle – Central (Phase I SIS)

Total Cost of Network Upgrades for DPP 2019 Cycle Central Phase I Projects:

J1340	6,032,986	0	TBD	TBD	TBD	0	2,200,000	0	0	8,232,986
J1342	4,683,031	0	TBD	TBD	TBD	3,979,899	1,800,000	0	0	10,462,930
J1348	148,037	0	TBD	TBD	TBD	4,113,424	23,000,000	0	0	27,261,461
J1352	1,154,646	0	TBD	TBD	TBD	3,244,088	10,500,000	1,000,000	0	14,898,734
J1353	15,243,013	0	TBD	TBD	TBD	0	1,600,000	0	0	16,843,013
J1354	20,918,095	0	TBD	TBD	TBD	0	4,000,000	0	0	24,918,095
J1355	15,020,168	0	TBD	TBD	TBD	0	1,800,000	0	0	16,820,168
J1356	132,864,347	11,287	TBD	TBD	TBD	1,322,207	7,000,000	0	0	141,197,841
J1357	67,149	0	TBD	TBD	TBD	0	14,000,000	0	0	14,067,149
J1358	4,591,667	0	TBD	TBD	TBD	0	6,400,000	0	0	10,991,667
J1360	47,266	0	TBD	TBD	TBD	1,950,797	1,000,000	1,000,000	0	2,998,064
J1363	1,738,403	0	TBD	TBD	TBD	4,866,131	10,500,000	1,000,000	0	17,104,535
J1369	540,550	46,496	TBD	TBD	TBD	21,438,976	12,000,000	0	0	34,026,022
J1376	10,044,010	0	TBD	TBD	TBD	402,383	8,500,000	500,000	0	18,946,393
J1378	133,178	0	TBD	TBD	TBD	24,775,298	15,000,000	0	0	39,908,476
J1381	105,461	0	TBD	TBD	TBD	5,201,824	7,000,000	0	0	12,307,286
J1382	168,600	0	TBD	TBD	TBD	0	8,500,000	500,000	0	8,668,600
J1383	60,442	0	TBD	TBD	TBD	0	0	750,000	0	60,442
J1385	19,899,099	0	TBD	TBD	TBD	770,959	14,000,000	0	0	34,670,059
J1386	8,491,343	0	TBD	TBD	TBD	0	1,600,000	0	0	10,091,343
J1387	1,887,836	0	TBD	TBD	TBD	0	1,000,000	0	0	2,887,836

Appendix B: DPP 2019 Cycle – Central (Phase I SIS)

Total Cost of Network Upgrades for DPP 2019 Cycle Central Phase I Projects:

J1388	13,490,332	29,987	TBD	TBD	TBD	0	14,000,000	0	0	27,520,318
J1390	76,523	0	TBD	TBD	TBD	0	15,000,000	0	0	15,076,523
J1391	42,067	41,779	TBD	TBD	TBD	1,080,082	2,000,000	0	0	3,163,927
J1392	49,062	0	TBD	TBD	TBD	0	1,500,000	0	0	1,549,062
J1393	2,900,870	42,453	TBD	TBD	TBD	1,391,298	2,000,000	0	0	6,334,620
J1396	53,234,086	45,317	TBD	TBD	TBD	3,443,408	3,000,000	0	0	59,722,811
J1398	52,990,533	37,736	TBD	TBD	TBD	2,183,563	2,000,000	0	0	57,211,831
J1405	41,029,991	16,509	TBD	TBD	TBD	1,327,626	14,000,000	0	0	56,374,127
J1407	4,851,167	0	TBD	TBD	TBD	4,020,101	1,800,000	0	0	10,671,267
J1408	838,198	0	TBD	TBD	TBD	14,086,348	8,500,000	500,000	0	23,424,546
J1409	3,745,266	9,145	TBD	TBD	TBD	2,524,922	1,500,000	0	0	7,779,333
J1419	122,644	19,879	TBD	TBD	TBD	101,099,085	17,000,000	0	0	118,241,607
J1422	385,266	5,896	TBD	TBD	TBD	2,793,187	8,500,000	500,000	0	11,684,350
J1447	7,121,533	0	TBD	TBD	TBD	0	25,000,000	0	0	32,121,533
J1448	1,822,820	0	TBD	TBD	TBD	1,034,514	4,500,000	0	0	7,357,334
J1450	1,858,099	17,015	TBD	TBD	TBD	1,296,837	4,500,000	0	0	7,671,951

Appendix B: DPP 2019 Cycle – Central (Phase I SIS)

Total Cost of Network Upgrades for DPP 2019 Cycle Central Phase I Projects:

J1453	24,489,340	0	TBD	TBD	TBD	5,919,286	8,500,000	500,000	0	38,908,626
J1454	627,065	0	TBD	TBD	TBD	6,080,714	0	50,000	0	6,707,778
J1457	146,966	0	TBD	TBD	TBD	4,601,123	17,000,000	0	0	21,748,089
J1464	1,106,198	0	TBD	TBD	TBD	7,044,523	10,500,000	1,000,000	0	18,650,721
J1466	20,111,599	37,736	TBD	TBD	TBD	23,071,417	3,000,000	0	0	46,220,752
J1470	0	0	TBD	TBD	TBD	1,757,645	0	0	0	1,757,645
J1475	59,951	0	TBD	TBD	TBD	0	0	50,000	0	59,951
J1481	105,461	0	TBD	TBD	TBD	5,201,824	7,000,000	0	0	12,307,286
J1482	1,513,166	0	TBD	TBD	TBD	3,489,526	10,000,000	0	0	15,002,692
J1488	34,423,057	0	TBD	TBD	TBD	3,797,933	500,000	750,000	0	38,720,989
J1490	68,846,114	0	TBD	TBD	TBD	7,595,865	500,000	750,000	0	76,941,979

Project	ERIS Network Upgrades (\$)					NRIS Network Upgrades (\$)	Interconnection Facilities (\$)		Shared Network Upgrades (\$)	Total Network Upgrade Cost for Milestone Calculation
	Thermal	Voltage	Stability	Short Circuit	Affected System	Deliverability	TO Network Upgrades	TO – Owned Direct Assigned		(\$)
a	b	c	d	e	f	g	h	i	j	k = b+c+d+e+g+h+j
Total	767,319,758	1,500,000	TBD	TBD	TBD	553,290,000	625,807,000	22,250,000	0	1,947,916,758

Appendix B: DPP 2019 Cycle – Central (Phase I SIS)

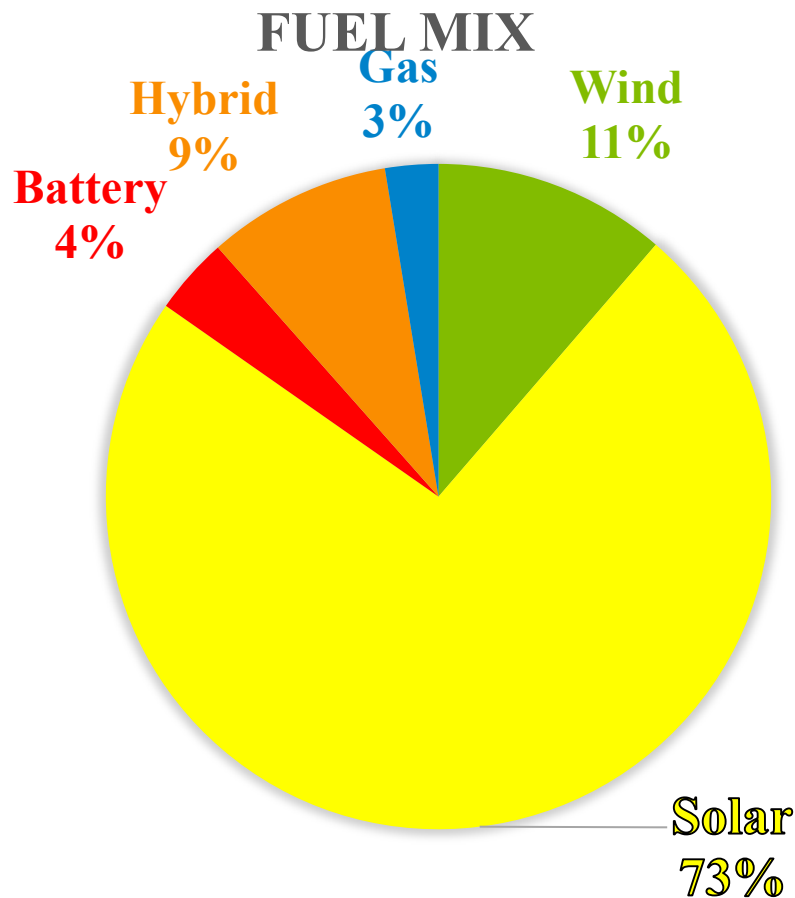
Network Upgrades:

- ERIS – 86 upgrades (transformer replacements/upgrades, line rebuilds, reconductoring).
- NRIS – 25 upgrades (new lines, a rebuild, and terminal upgrades).
- No basecase / backbone upgrades needed.

Appendix C: DPP 2020 Cycle - Central

- 85 Active Study Projects
- 13,180 MWs
- DPP Phase 1
- Fuel Mix:

Fuel Type	Total MW's (Summer)
Wind	1344.38
Solar	9678.21
Battery	494.7
Hybrid	1181
Gas	340.3



Appendix C: DPP 2020 Cycle - Central

Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel
J1491	Indianapolis Power & Light Company	NRIS	200	Battery Storage	J1616	Duke Energy Indiana	NRIS	200	Solar	J1652	Ameren Illinois	NRIS	116	Solar
J1517	Duke Energy Indiana	NRIS	40	Battery Storage	J1619	Big Rivers Electric Corporation	NRIS	160	Solar	J1653	Ameren Illinois	NRIS	150	Solar
J1518	Duke Energy Indiana	NRIS	185	Solar	J1624	Duke Energy Indiana	NRIS	100	Solar	J1655	Ameren Illinois	NRIS	50	Battery Storage
J1519	Ameren Missouri	NRIS	200	Solar	J1625	Duke Energy Indiana	NRIS	150	Solar	J1656	Ameren Illinois	NRIS	412	Hybrid
J1563	Duke Energy Indiana	NRIS	200	Solar	J1626	Ameren Illinois	NRIS	150	Solar	J1676	Ameren Illinois	NRIS	300	Wind
J1565	Duke Energy Indiana	NRIS	200	Solar	J1632	Big Rivers Electric Corporation	NRIS	200	Solar	J1677	Ameren Illinois	NRIS	180	Solar
J1578	Duke Energy Indiana	NRIS	200	Solar	J1636	Ameren Missouri	NRIS	44	Solar	J1678	Duke Energy Indiana	NRIS	74.7	Battery Storage
J1579	Ameren Illinois	NRIS	200	Solar	J1637	Duke Energy Indiana	NRIS	150	Solar	J1679	Ameren Illinois	NRIS	125	Solar
J1585	Ameren Missouri	NRIS	200	Solar	J1638	Big Rivers Electric Corporation	NRIS	150	Solar	J1680	Duke Energy Indiana	NRIS	100	Solar
J1591	Duke Energy Indiana	NRIS	150	Solar	J1641	Hoosier Energy REC Inc	NRIS	150	Solar	J1681	Ameren Missouri	NRIS	200	Solar
J1593	Duke Energy Indiana	NRIS	200	Solar	J1642	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana Inc.	NRIS	200	Hybrid	J1684	Northern Indiana Public Service Company	NRIS	200	Solar
J1600	Big Rivers Electric Corporation	NRIS	40	Solar	J1646	Northern Indiana Public Service Company	NRIS	150	Solar	J1687	Hoosier Energy REC Inc	NRIS	160	Solar
J1604	Henderson Municipal Power & Light	NRIS	50	Solar	J1649	Big Rivers Electric Corporation	NRIS	60	Solar	J1691	Hoosier Energy REC Inc	NRIS	200	Solar
J1610	Ameren Illinois	NRIS	100	Solar	J1651	Ameren Illinois	NRIS	149.5	Solar	J1695	Ameren Illinois	NRIS	50	Battery Storage

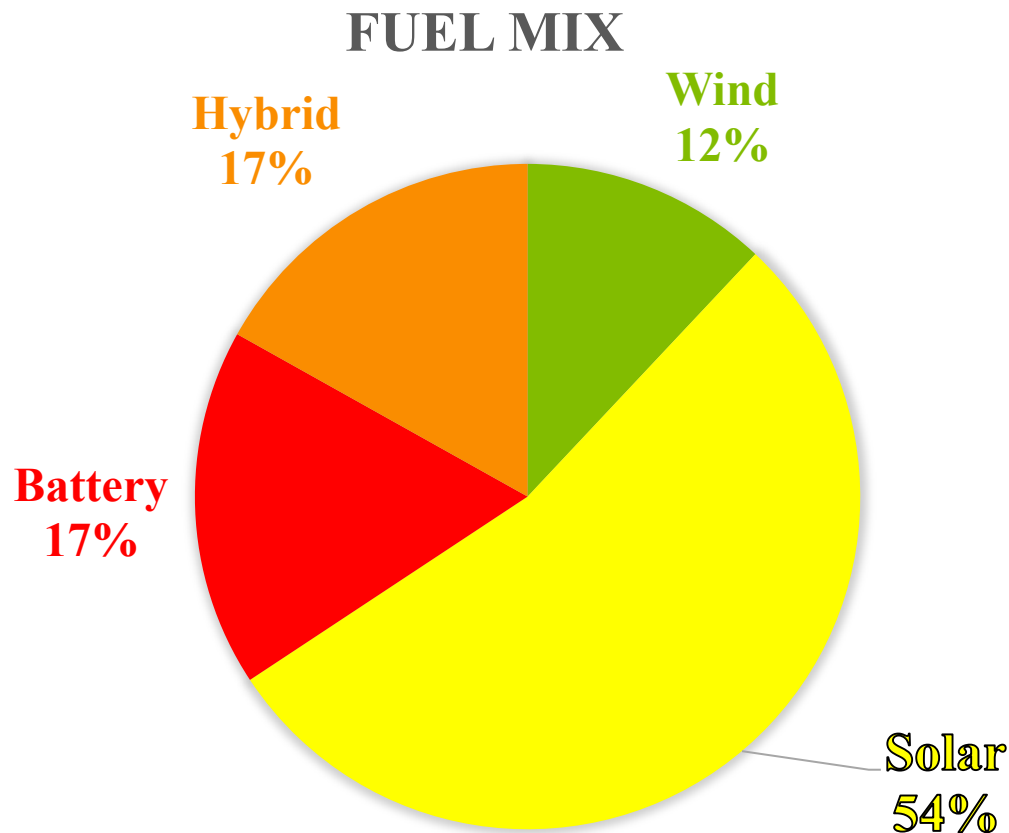
Appendix C: DPP 2020 Cycle - Central

Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel
J1696	Big Rivers Electric Corporation	NRIS	150	Solar	J1736	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana Inc.	NRIS	100	Solar	J1784	Duke Energy Indiana	NRIS	39	Solar
J1697	Duke Energy Indiana	NRIS	200	Solar	J1737	Duke Energy Indiana	NRIS	210	Solar	J1785	Northern Indiana Public Service Company	NRIS	100	Solar
J1699	Hoosier Energy REC Inc	NRIS	43	Solar	J1743	Duke Energy Indiana	NRIS	292.89	Solar	J1786	Hoosier Energy REC Inc	NRIS	200	Solar
J1701	Ameren Illinois	NRIS	200	Wind	J1744	Ameren Illinois	NRIS	149.5	Solar	J1802	Northern Indiana Public Service Company	NRIS	150	Solar
J1703	Big Rivers Electric Corporation	NRIS	74	Solar	J1755	Ameren Illinois	NRIS	147.19	Wind	J1805	Northern Indiana Public Service Company	NRIS		Battery Storage
J1704	Duke Energy Indiana	NRIS	50	Battery Storage	J1756	Indianapolis Power Light Company	NRIS	309	Hybrid	J1806	Duke Energy Indiana	NRIS	30	Battery Storage
J1707	Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana Inc.	NRIS	72	Solar	J1765	Duke Energy Indiana	NRIS	93.2	Solar	J1810	Northern Indiana Public Service Company	NRIS	60	Hybrid
J1712	Ameren Illinois	NRIS	300	Solar	J1770	Ameren Illinois	ERIS	150	Wind	J1815	Duke Energy Indiana	NRIS	180	Solar
J1713	Ameren Transmission Company of Illinois	NRIS	147.19	Wind	J1772	Northern Indiana Public Service Company	NRIS	200	Solar	J1829	Duke Energy Indiana	NRIS	180	Solar
J1714	Ameren Illinois	NRIS	100	Solar	J1774	Duke Energy Indiana	NRIS Only	50	Wind	J1830	Ameren Illinois	NRIS	200	Hybrid
J1721	Duke Energy Indiana	NRIS	175.12	Solar	J1777	Ameren Illinois	NRIS	100	Solar	J1831	Ameren Illinois	NRIS	200	Wind
J1724	Northern Indiana Public Service Company	NRIS	150	Solar	J1780	Duke Energy Indiana	NRIS	200	Solar	J1835	Southern Indiana Gas Electric Company d/b/a Vectren Energy Delivery of Indiana Inc	NRIS	200	Wind
J1725	Ameren Illinois	NRIS	100	Wind	J1782	Duke Energy Indiana	NRIS	150	Solar	J1836		NRIS	300	Solar
J1726	Northern Indiana Public Service Company	NRIS	200	Solar	J1783	Duke Energy Indiana	NRIS	150	Solar	J1839	Ameren Illinois	NRIS	325	Gas
33										J1840	Ameren Illinois	NRIS		Solar

Appendix D: DPP 2021 Cycle - Central

- 126 Active Study Projects
- ~19,300 MWs
- DPP Phase 1
- Fuel Mix:

Fuel Type	Total MW's (Summer)
Wind	2,308
Solar	10,325
Battery	3,346
Hybrid	3,246



Appendix D: DPP 2021 Cycle - Central

Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel
J1861	Northern Indiana Public Service Company	NRIS	45	Battery Storage	J1970	Ameren Illinois	NRIS	160	Solar
J1876	Duke Energy Indiana	NRIS	140	Solar	J1973	Ameren Illinois	NRIS	40	Battery Storage
J1877	Duke Energy Indiana	NRIS	45	Battery Storage	J1974	Ameren Illinois	NRIS	160	Solar
J1882	Ameren Illinois	NRIS	45	Battery Storage	J1975	Ameren Illinois	NRIS	40	Battery Storage
J1885	Big Rivers Electric Corporation	NRIS	300	Solar	J1976	Northern Indiana Public Service Company	NRIS	25	Battery Storage
J1886	Big Rivers Electric Corporation	NRIS	300	Solar	J1986	Ameren Missouri	NRIS	100	Battery Storage
J1901	Big Rivers Electric Corporation	NRIS	200	Battery Storage	J2000	Duke Energy Indiana	NRIS	150	Solar
J1926	Ameren Illinois	NRIS	200	Wind	J2004	Duke Energy Indiana	NRIS	40	Battery Storage
J1947	Duke Energy Indiana	NRIS	140	Solar	J2008	Ameren Missouri	NRIS	65	Battery Storage
J1948	Ameren Missouri	NRIS	195	Solar	J2016	Southern Indiana Gas Electric Company d/b/a Vectren Energy Delivery of Indiana Inc	NRIS	100	Battery Storage
J1960	Northern Indiana Public Service Company	NRIS	100	Solar	J2032	Indianapolis Power Light Company	NRIS	70	Battery Storage
J1965	Ameren Missouri	NRIS	150	Solar	J2033	Ameren Illinois	NRIS	200	Solar
J1966	Wabash Valley Power	NRIS	200	Wind	J2036	Ameren Illinois	NRIS	0	Battery Storage
J1967	Ameren Illinois	NRIS	150	Wind	J2038	Duke Energy Indiana	NRIS	300	Wind

Appendix D: DPP 2021 Cycle - Central

Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel
J2039	Ameren Transmission Company of Illinois	NRIS	400	Hybrid	J2115	Ameren Illinois	NRIS	98.3	Wind
J2043	Ameren Missouri	NRIS	300	Solar	J2121	Ameren Missouri	NRIS	100	Solar
J2044	Northern Indiana Public Service Company	NRIS	100	Solar	J2123	Southern Indiana Gas Electric Company d/b/a Vectren Energy Delivery of Indiana Inc	NRIS	50	Battery Storage
J2045	Northern Indiana Public Service Company	NRIS	50	Battery Storage	J2124	Ameren Transmission Company of Illinois	NRIS	100	Battery Storage
J2046	Duke Energy Indiana	NRIS	200	Solar	J2128	Ameren Illinois	NRIS	300	Hybrid
J2048	Northern Indiana Public Service Company	NRIS	100	Wind	J2130	Duke Energy Indiana	NRIS	180	Solar
J2049	Ameren Illinois	NRIS	200	Wind	J2131	Ameren Illinois	NRIS	150	Solar
J2050	Ameren Missouri	NRIS	208.43	Solar	J2136	Ameren Illinois	NRIS	190.9	Solar
J2052	Ameren Missouri	NRIS	0	Battery Storage	J2142	Ameren Missouri	NRIS	150	Hybrid
J2059	Duke Energy Indiana	NRIS	0	Battery Storage	J2145	Big Rivers Electric Corporation	NRIS	50	Hybrid
J2060	Duke Energy Indiana	NRIS	170	Solar	J2146	Big Rivers Electric Corporation	NRIS	45	Solar
J2063	Duke Energy Indiana	NRIS	100	Solar	J2147	Big Rivers Electric Corporation	NRIS	56	Solar
J2073	Big Rivers Electric Corporation	NRIS	91.53	Hybrid	J2150	Duke Energy Indiana	NRIS	100	Solar
J2113	Big Rivers Electric Corporation	NRIS	200	Solar	J2151	Ameren Illinois	NRIS	150	Hybrid

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Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel
J2155	Ameren Missouri	NRIS	150	Solar	J2186	Ameren Illinois	NRIS	820.6	Solar
J2156	Ameren Illinois	NRIS	150	Solar	J2187	Northern Indiana Public Service Company	NRIS	124	Solar
J2158	Ameren Illinois	NRIS	50	Solar	J2189	Ameren Illinois	ERIS	15.6	Wind
J2159	Ameren Illinois	NRIS	50	Battery Storage	J2192	Ameren Illinois	NRIS	99.9	Wind
J2160	Duke Energy Indiana	NRIS	50	Battery Storage	J2195	Ameren Illinois	NRIS	100	Battery Storage
J2161	Ameren Transmission Company of Illinois	NRIS	50	Battery Storage	J2196	Ameren Illinois	NRIS	100	Hybrid
J2164	Indianapolis Power Light Company	NRIS	250	Solar	J2197	Ameren Illinois	NRIS	100	Battery Storage
J2170	Ameren Illinois	NRIS	148	Battery Storage	J2198	Ameren Missouri	NRIS	250	Battery Storage
J2171	Ameren Illinois	NRIS	500	Solar	J2201	Duke Energy Indiana	NRIS	200	Hybrid
J2172	Ameren Illinois	NRIS	99	Solar	J2203	Ameren Illinois	NRIS	150	Battery Storage
J2177	Duke Energy Indiana	NRIS	67	Solar	J2205	Ameren Missouri	NRIS	300	Hybrid
J2178	Hoosier Energy REC Inc	NRIS	100	Battery Storage	J2209	Ameren Missouri	NRIS	100	Solar
J2179	Ameren Missouri	NRIS	100	Solar	J2212	Duke Energy Indiana	NRIS	200	Solar
J2155	Ameren Missouri	NRIS	150	Solar	J2213	Northern Indiana Public Service Company	NRIS	200	Battery Storage

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Project #	Transmission Owner	Service Type	Summer MW	Fuel	Project #	Transmission Owner	Service Type	Summer MW	Fuel
J2215	Northern Indiana Public Service Company	NRIS	300	Battery Storage	J2246	Big Rivers Electric Corporation	NRIS	300	Solar
J2216	Duke Energy Indiana	NRIS	100	Solar	J2247	Ameren Illinois	NRIS	182.2	Wind
J2221	Duke Energy Indiana	NRIS	100	Solar	J2251	Duke Energy Indiana	NRIS	200	Solar
J2225	Big Rivers Electric Corporation	NRIS	300	Solar	J2254	Indianapolis Power Light Company	NRIS	100	Battery Storage
J2226	Northern Indiana Public Service Company	NRIS	200	Solar	J2255	Duke Energy Indiana	NRIS	100	Battery Storage
J2229	Duke Energy Indiana	NRIS	100	Battery Storage	J2258	Ameren Illinois	NRIS	175	Solar
J2230	Hoosier Energy REC Inc	ERIS	400	Solar	J2259	Wabash Valley Power	NRIS	199.99	Solar
J2232	Duke Energy Indiana	NRIS	100	Battery Storage	J2263	Duke Energy Indiana	NRIS	100	Battery Storage
J2233	Ameren Illinois	NRIS	100	Solar	J2265	Ameren Missouri	NRIS	200	Hybrid
J2234	Big Rivers Electric Corporation	NRIS	300	Solar	J2266	Ameren Illinois	NRIS	175	Hybrid
J2236	Duke Energy Indiana	NRIS	100	Battery Storage	J2267	Ameren Illinois	NRIS	250	Hybrid
J2238	Ameren Missouri	NRIS	200	Hybrid	J2269	Duke Energy Indiana	NRIS	300	Solar
J2239	Ameren Missouri	NRIS	100	Solar	J2270	Hoosier Energy REC Inc	NRIS	300	Solar
J2241	Duke Energy Indiana	NRIS Only	320	Wind	J2273	Ameren Illinois	NRIS	175	Hybrid

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Project #	Transmission Owner	Service Type	Summer MW	Fuel
J2274	Ameren Missouri	NRIS	170	Hybrid
J2275	Ameren Illinois	NRIS	249.1	Wind
J2278	Ameren Illinois	NRIS	60	Hybrid
J2280	Duke Energy Indiana	NRIS	198	Battery Storage
J2282	Big Rivers Electric Corporation	NRIS	100	Hybrid
J2288	Ameren Missouri	NRIS	175	Solar
J2296	Hoosier Energy REC Inc	ERIS	100	Solar
J2301	Duke Energy Indiana	NRIS	100	Hybrid
J2305	Big Rivers Electric Corporation	NRIS	139	Solar
J2307	Duke Energy Indiana	NRIS	130	Solar
J2308	Duke Energy Indiana	NRIS	35	Battery Storage
J2311	Ameren Illinois	NRIS	145	Wind
J2312	Ameren Illinois	NRIS	47.9	Wind
J2318	Southern Indiana Gas Electric Company d/b/a Vectren Energy Delivery of Indiana Inc	NRIS	75	Hybrid