

# DER process for participation in Capacity auctions

DISRS

Pete Langbein

January 8, 2023

This represents PJM's draft approach. This will change and include more details for full implementation.

Significant changes from last meeting are included in **red**



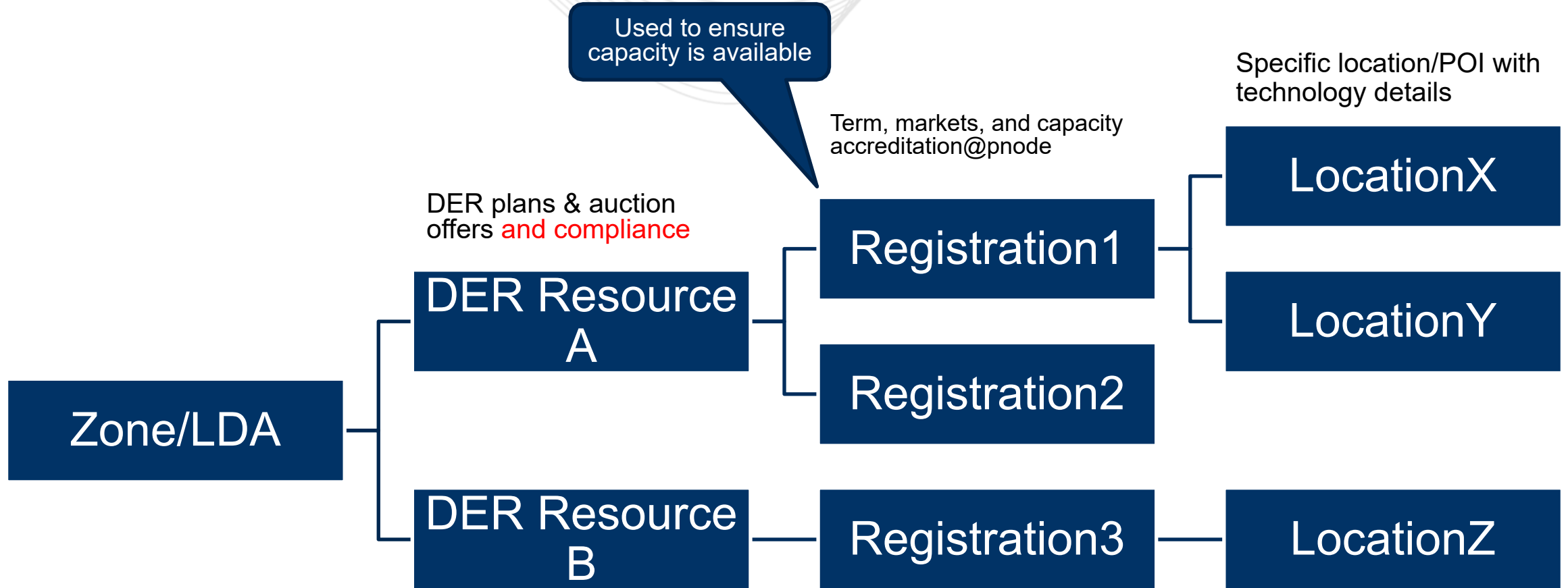
Earliest DER activity for capacity market participation is submission of DER plan

- DR – Demand Response, reduces load at POI (EDC account number). Does not participate in the market at times when there are injections onto the distribution system.
- DRwI – DR with injections (same as DR but will participate in the wholesale market with both load reductions and injections)
- DG – Distributed Generation that interconnects through the State process (does not go through the PJM queue)
- **EE – Energy Efficiency Resources**

PJM would need to understand why this would ever be included to be considered. EE is not used to meet the PJM reliability requirement

## PJM plans to standardize across models

- Location = Component DER. For DR related activity this is the EDC account number for the POI. For DG, we need to determine best reference to avoid any confusion. (EDC 15 day review process)
- Registration = DER Aggregation. One of more locations at the same pnode. Identifies the markets, time and amount eligible to participate. (EDC 45 day review process). May have multiple registrations at same pnode.
- DER Resource = DER Capacity Resource. One or more registrations in the same LDA/Zone. Identifies “resource” that will offer into the capacity market.



Capacity compliance during a PAI may be measured at the DER Resource level

	MPOR	MSOC
DR	Not applicable	Not applicable
DRwInjection	Injection MW by technology type	Injection MW by technology type
DG	MW by technology type	MW by technology type
EE	Not applicable	Not applicable

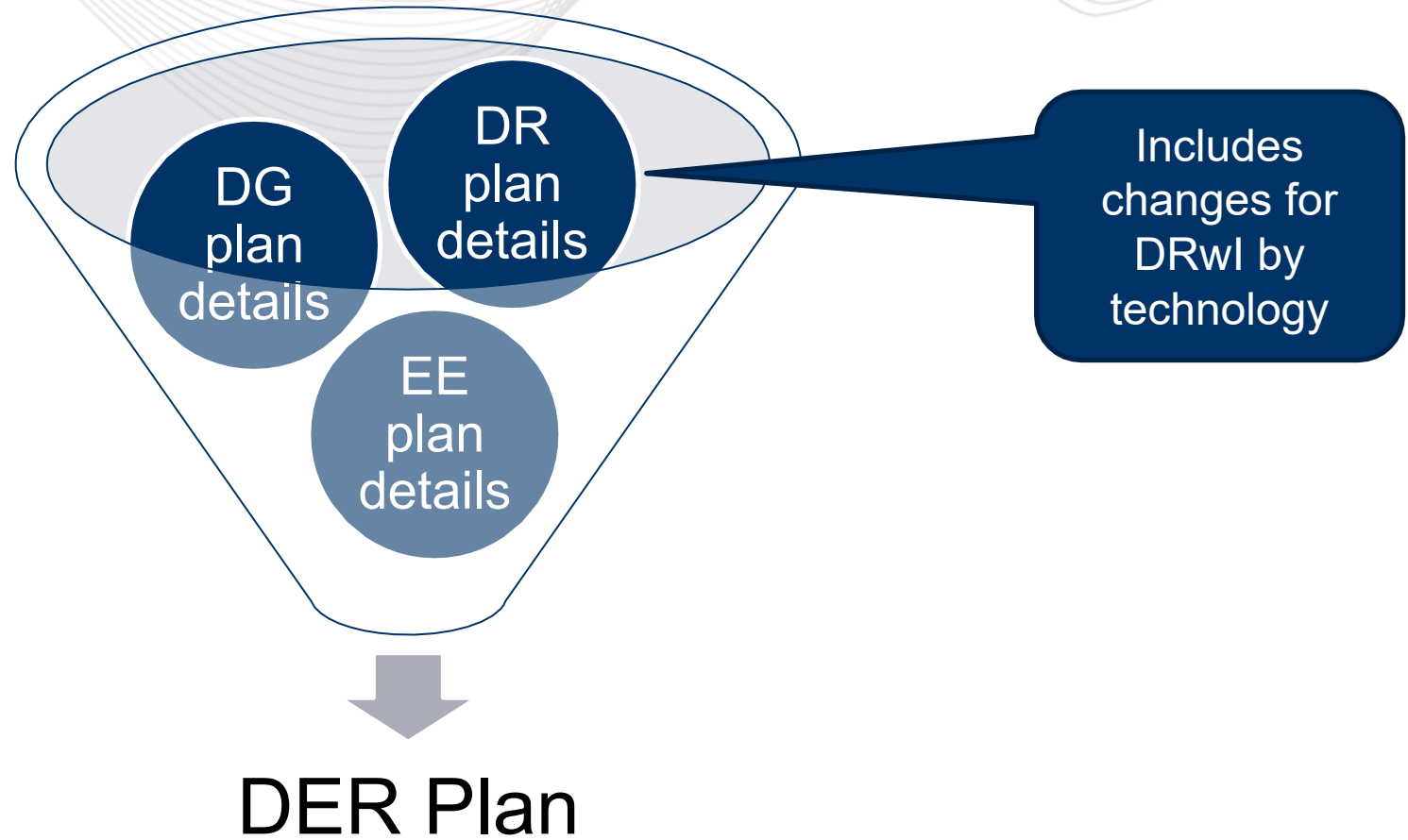
DER Resources do not have must offer obligation in the capacity market

# DER Plans consist of Planned and/or Existing DER

Existing	Planned
<ul style="list-style-type: none"> <li>I. Currently have capability to provide capacity and will provide the capability for DY of RPM Auction</li> <li>II. (tbd) Existing MWs based on pre-registrations in Capacity Exchange. Pre-registrations are based on current registrations</li> <li>III. No Credit Requirement</li> </ul>	<ul style="list-style-type: none"> <li>I. Do not currently have capability to provide capacity, but is scheduled to be capable of providing capacity on or before start of DY</li> <li>II. Location not registered</li> <li>III. Credit Requirement is Pre-Clearing BRA Credit Rate * Number of Planned MWs</li> </ul>

DER Provider is required to provide Officer Certification that MWs will be delivered in the DY (similar to DR Plan)





- Heterogeneous resources are treated similar to other Generation Capacity Resources technologies that do not have a default:
  - MOPR (planned or existing)
    - if subject to MOPR then must request unit specific price or is not eligible to participate in auction.
  - MSOC (existing)
    - Price taker (\$0 offer price cap) unless unit specific MSOC is requested.
  - Bilateral transactions
    - Any heterogeneous resource that includes EE will be subject to EE bilateral transaction rules (can only be used to replace other EE resources).

Injection portion only

Lower of Zone or LDA	RPM Resource	DER Type	Gen Technology	Details	Existing ICAP(MW)	Planned ICAP (MW)	Total ICAP (MW)
PSEG/PSEG-N	DER_PSEG-N	DR	na	DR plan	3	2	5
PSEG/PSEG-N	DER_PSEG-N	DRwl	Battery	DR plan	2	1	3
PSEG/PSEG-N	DER_PSEG-N	DRwl	CT	DR plan	5	1	6
PSEG/PSEG-N	DER_PSEG-N	DG	Solar	DG plan	7	15	22
PSEG/PSEG-N	DER_PSEG-N	EE	na	EE plan	1	1	2
Resource Total					18	20	38

ICAP to UCAP conversion based on class average technology methodology  
(ELCC if CIFP is approved)

- DR will need to complete modified version of current [DR plan template](#):
  - Updated to include technology specific DRwl ICAP
  - Excludes existing aggregate resource designation
- EE will need to complete current [EE Plan template](#) and submit [EE M&V plan](#)
- DG will need to complete new DG plan template
  - All the details about the DG
- Officer Certification will be required for all DER plans

Zone/LDA	EDC	RPM Resource	DER Type	Gen Technology	Status	State Queue #	State Queue status	EDC verified expected interconnection date	EDC Account #	Unit Name	address	Nameplate MFO (ICAP MW)
PSEG/PSEG-N	PSEG	DER_PSEG-N	DG	Solar	planned	ja8898	complete	11/1/2023	8183773	Farmland Solar	123 maple	1
PSEG/PSEG-N	PSEG	DER_PSEG-N	DG	Solar	planned	gja0098	EDC review	4/1/2025	3365878	Joe Solar	435 gramble	4
PSEG/PSEG-N	PSEG	DER_PSEG-N	DG	Solar	planned	ldr00113	EDC review	5/1/2025	5455512	Jill Solar	599 oak	10
PSEG/PSEG-N	PSEG	DER_PSEG-N	DG	Solar	Existing*	ugge00091			5455512	Jill Solar	599 oak	7
											Total	22

\* Existing information will come from an approved registration for the specific location.

Resource did not go through PJM queue process  
Need to ensure DG does not participate as DER and as Generation Capacity Resource

- Mitigated based on technology specific rules with associated defaults
  - DG and DRwl (injection only) of same technology are considered homogeneous
  - For example – One 2 MW ICAP DER Resource in an LDA/Zone comprised of 1 solar DG location (1 MW ICAP) and 1 DRwl solar location (where the injection is 1 MW and DR component = 0 MW) would be considered homogeneous.
    - If DR is nominated then it is heterogeneous resource

- Draft DER plan template
  - Modified DR template (details)
  - DG template (details)
- Transition – Identification of Existing DER for DER Plan prior to DER registration process
  - DER pre-registration process

SMEs/Presenters:

Pete Langbein - [Peter.Langbein@pjm.com](mailto:Peter.Langbein@pjm.com)

Facilitator:

Ilyana Dropkin - [Ilyana.Dropkin@pjm.com](mailto:Ilyana.Dropkin@pjm.com)

Secretary:

Luke Zinszer - [Luke.Zinszer@pjm.com](mailto:Luke.Zinszer@pjm.com)



Member Hotline

(610) 666 – 8980

(866) 400 – 8980

[custsvc@pjm.com](mailto:custsvc@pjm.com)



**PROTECT THE  
POWER GRID  
THINK BEFORE  
YOU CLICK!**



Be alert to  
malicious  
phishing emails.

**Report suspicious email activity to PJM.**  
(610) 666-2244 / [it\\_ops\\_ctr\\_shift@pjm.com](mailto:it_ops_ctr_shift@pjm.com)

