

General Subj Category	Specific Topic Title (s)	Topic Description and/or in Question Format	Priority Tier	Topic Lead Group (IPWG, ITWG, etc)	Suggested/Possible Next Steps, Potential Presenter, etc	Status	History & Conclusions	Key References	Misc Notes
Coms & Technology Platforms, Architecture	Current Available Solutions, Platforms	Review of all the currently marketable solutions available. Which once are currently in use for pilot projects. Which systems are developed "in house"?	2	ITWG	- industry mapping of each product and outlining capabilities -				
Coms & Technology Platforms, Architecture	DERMS Centralized Architecture	What is a sample CENTRALIZED architecture system? Is this being used in any regions? What are the key benefits? Challenges/drawbacks?	3	ITWG	- consultant? followed by - utility feedback & internal processing				Hardware-software platform in which the main logic, algorithms, and rules reside in one or more master processors in a central location, such as a main control building, service center, or other facility that is physically separate from the location of the DER assets. Note that the centralized architecture may include some components, such as communication facilities and hardware interfaces, that are in the field near the assets. However, the main logic always resides in a single, central location.
Coms & Technology Platforms, Architecture	DERMS Decentralized Architecture	What is a sample DECENTRALIZED architecture system? Is this being used in any regions? What are the key benefits? Challenges/drawbacks?	3	ITWG	- consultant? followed by - utility feedback & internal processing				Hardware-software platform in which the main DERMS logic, algorithms, and business rules reside in multiple, smaller processors in the field near the DER assets themselves. With a decentralized architecture, there is no single master processor. This architecture is also referred to as a "distributed" architecture. Note that some components of the decentralized architecture, such as the display consoles used by the distribution system operator, may be in a central location.
Coms & Technology Platforms, Architecture	DERMS Hybrid Architecture	Hardware-software platform in which the DERMS main logic is divided between processors located in central and field locations. With a hybrid architecture, there may or may not be a single master processor.	3	ITWG	- consultant? followed by - utility feedback & internal processing				
Curtailment Prediction Analysis & Data Requirements	Data Availability & Granularity	What is the minimum data needed by the utility to perform an analysis? What is the data that is being supplied to developers & consultants in the UK to perform analysis? What is the exact format of the data? Ex- "288 hour" format (24 hrs x 12 mo).	1	ITWG	- Getting samples of data supplied in UK (SGS, etc)				
Curtailment Prediction Analysis & Data Requirements	Method & Assumptions of Analysis	How is a general curtailment analysis completed? What are the key considerations to keep in mind? Etc. How does the analysis differ based on operating constrating? Distribution vs. Transmission? etc.	1	ITWG	- Pterra SOW? - Quanta Technology presentation				
Curtailment Prediction Analysis & Data Requirements	Sample Curtailment Analysis from other projects & regions	What is the exact format of a curtailment analysis provided by a utility? By a hired consultant?	1	ITWG	- Samples of data supplied in UK (SGS, etc)				
Curtailment Prediction Analysis & Data Requirements	Evidence of justification when curtailment takes place	Is there a mechanism by which the utility can provide evidence that when a curtailment analysis takes place it is justified? What is done in other markets?	1	ITWG & IPWG?					
Financing & Renumeration	Project Financial Impact Study	Once the curtailment analysis is recieved, how is this information used by the developer to predict 20 year proforma? Step through some examples.	1	IPWG & ITWG					
Financing & Renumeration	CalEdiston Current offering related to Flex IX	Industry believes that this is a suboptimal model for reasons to be outlined.	2	IPWG	- Industry brief overview.				
Financing & Renumeration	Curtailment rebate (\$/KW)	ComEd, IL provide rebate. Allows utility the ability to control a certain quantity of kW on a given project. They can ramp up/down as they desire to manage grid operations.	2	IPWG	- Brief overview of this system CURRENTLY BEING OFFERED in IL. https://www.comed.com/SmartEnergy/MyGreenPowerConnection/Pages/SoIarRebates.aspx				
Financing & Renumeration	Hardcap on curtailment	A hardcap on predictable curtailment is most reliable & efficient in obtaining project loans and in determining ROI. However, questions remain on how this would be enacted without some sort of payment when curtailment inevitably exceeds the threshold.	2	IPWG (& ITWG familiarity)					
Financing & Renumeration	Payment for estimated generation loss (\$/KWh)	Ex- Germany's 3% curtailment cap, all projects are subject to no more than 3% curtailment, further curtailment is compensated by ratepayers. Providing least cost solutions to ratepayers. Ex- Low-to-Moderate Income (LMI) household are subject to smaller curtailment compared to higher income households All of these options allow for a threshold to be reached whereby it becomes less costly to simply perform the upgrade. This is a bridge to enable continuous, long term, upgrade of the grid.	2	IPWG (& ITWG familiarity)	- IMPORTANT when the time comes. Industry working on a simple presentation overview of this concept.				
Financing & Renumeration	Payment via ESI (Energy Services Interface)	Market driven services that provide grid reliability through open bidding	2	IPWG (& ITWG familiarity)					
Financing & Renumeration	Transition to Cost Allocation (CS 2.0)	Certain POA mechanisms enable reliable transition to cost allocation for firm IX	2	IPWG					
Financing & Renumeration	Curtailment Insurance	Similar to insurance for DER generation in bad seasons, a service that insures curtailment risks	3	IPWG					
Operating Constraint	Feeder/Conductor Thermal Capacity	Development of each utilities accepted methodologies for controlling DER based on FEEDER/CONDUCTOR thermal capacity.	1	ITWG					
Operating Constraint	Primary Substation Thermal Capacity	Development of each utilities accepted methodologies for controlling DER based on SUBSTATION TRANSFORMER.	1	ITWG	- Review lessons learned in NYSEG & NG presentations				
Operating Constraint	Overvoltage and Undervoltage	Development of each utility's accepted methodology for curtailing DER based on OVER/UNDER VOLTAGE.	2	ITWG	- Pterra overview - complexities of voltage regulations?				
Operating Constraint	Sub-TI Transmission Substation Congestion	Development of each utilities accepted methodologies for controlling DER based on TRANSMISSION related constraints (voltage, thermal, etc.)	2	ITWG					

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Operating Constraint	Any other plus an N-1 Scenario	Review of the conditions when an N-1 scenario would result in modification of curtailment scenarios.	3	ITWG					
Operating Constraint	Highly Variable load & Gen profiles	Flicker (large industrial load on feeder cause rare higher curtailment.)	3	ITWG					
Operating Constraint	Protection	0 sequence, DTT protection escalates further complexities since distribution systems are designed unbalanced.	3	ITWG					
Pilot/Demo Projects	National Grid, NY	(see upcoming presentation!)	1	ITWG	- INDUSTRY TO FOLLOW UP WITH SPECIFIC QUESTIONS	1-Started		2205-19 Active Resource Integration ITWG Presentation	
Pilot/Demo Projects	NYSEG (Avangrid) general overview	(see previous presentation!)	1	ITWG	- INDUSTRY TO FOLLOW UP WITH SPECIFIC QUESTIONS	1-Started		2203-24 NYSEG Flexible Interconnection	
Pilot/Demo Projects	Commonwealth Edison (ComEd)	Went live in 2021 Currently thermal constraining Considering 2nd project, expanding to voltage	2	ITWG	- Industry to present summary				
Pilot/Demo Projects	NYSEG Pilot - Cellular	Reliable communication is a huge barrier with 2-3% blips. Open to use of Fiber	2	ITWG					
Pilot/Demo Projects	Pilots in all utility territories	Are all utilities working on pilots? What is the status of each? Is there a way to support those that are not?	1	ITWG					
Rules of Curtailment Selection (POA)	Last In First Out (LIFO)	Most easy to administer. Aligns with queue process too. FYI for SGS, 95%+ of all their deployed systems use LIFO.	1	ITWG then IPWG	- Inevitable review as part of discussing methods of curtailment analysis				
Rules of Curtailment Selection (POA)	Physical	Selection of curtailment based on location.	1	ITWG then IPWG	- Inevitable review as part of discussing methods of curtailment analysis				
Rules of Curtailment Selection (POA)	Shared or pro rata	Difficult in practice because the utility and stakeholders probably need to agree on boundary limits to shared. E.g. Queue groupings: Tier 1, 2, 3 of shared groups over a period of allocation time (e.g. 1, 2, 3 years out). Or Location on feeder groupings: Front, Middle, Back shared grouping for distance along the feeder (e.g. voltage drop grouping).	1	ITWG then IPWG	- Inevitable review as part of discussing methods of curtailment analysis				curtailment predictability (hardcap?) is critical to get loans and determine ROI
Rules of Curtailment Selection (POA)	Economical	Ex: Carbon replacement, generations replacing least carbon get curtailed first	3	ITWG then IPWG	- Inevitable review as part of discussing methods of curtailment analysis				
Rules of Curtailment Selection (POA)	Time profiled	Provide choices other than continuous, year-round access. Users identify the percentage of their total access rights that are time profiled. They can request either no access or non-firm access during these "peak" periods. This scheme is in practice easier to allocate than shared/pro rata.	3	ITWG then IPWG	- Inevitable review as part of discussing methods of curtailment analysis				
Special, Standards, Etc	IEEE 2018-1547 Impacts	Voltage & volt var performance requirements & communications requirements	3	ITWG					
Special, Standards, Etc	Planned/ unplanned disconnect	Consider maintenance downtime?, probability of emergency disconnect?	3	ITWG					
Special, Standards, Etc	UL-1741	PCS testing for non export or limited export	3	ITWG	IREC BATTERIES recommendations				