PJM Cycle 1
Submission Playbook

Comprehensive guide to preparing and submitting your interconnection application

Prepared by Zonevex | zonevex.com
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The Definitive Developer Guide to PJM's Reformed Interconnection Process

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1. What Changed and Why It Matters Now

The Structural Shift

FERC Order 2023 (effective November 2023) replaced PJM's serial "first-come, first-served" queue with a clustered "first-ready, first-served" process. PJM's compliance filing was partially accepted by FERC on July 24, 2025, with a further compliance filing submitted October 22, 2025 (Docket ER24-2045).

Cycle 1 -- opening April 27, 2026 -- is the first cycle under the fully reformed rules. Every prior queue was either legacy serial or transitional.

What this means practically: The requirements that follow are not theoretical. They are the actual rules that will govern your application. The transition queue provided a preview -- 96 projects withdrew at Decision Point 1 and another 10 were discontinued for failing readiness requirements. The reformed process is unforgiving.

Old vs. New: Side-by-Side

Why 2026 Is Different from 2024-2025

The transition queue processed ~200,000 MW of legacy projects. That queue is clearing through 2026. Cycle 1 is clean -- no legacy baggage, no grandfathered exceptions. Every project enters under identical rules for the first time.

Simultaneously:

* Data center demand is driving unprecedented load growth (PJM forecast: 5,100 MW of incremental peak from data centers alone in the 2027/2028 delivery year)
* ~2,300 GW of generation and storage sits in national interconnection queues (LBNL Queued Up 2025)
* PJM interconnection timelines went from <2 years (2008) to 8+ years (2025)
* In H1 2025, $22 billion in renewable projects were canceled nationally

The reformed process is designed to filter: only projects that can demonstrate readiness -- financially, technically, and in terms of site control -- will survive to GIA execution.

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2. PJM Cycle 1 Architecture

Timeline Overview

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March 2026 NOW -- Final preparation
April 27, 2026 APPLICATION DEADLINE (Cycle 1 window closes)
May 2026 Deficiency notices (within 5 business days)
Cure window: 10 business days
June-Sep 2026 PHASE I System Impact Study (~120 days)
October 2026 DECISION POINT 1
-> Post RD2 (10% of upgrade costs minus RD1)
-> Demonstrate extended site control + 50% interconnection facilities
-> 30 days to decide: proceed or withdraw
Nov 2026-Apr 2027 PHASE II System Impact Study (~180 days)
May 2027 DECISION POINT 2
-> Post RD3 (20% of upgrade costs minus total RDs)
-> Updated readiness documentation
-> 30 days to decide: proceed or withdraw
Jun-Nov 2027 PHASE III System Impact Study (~180 days)
Dec 2027 DECISION POINT 3
-> 100% site control (generating + interconnection), 3-year term
-> ~35 business day GIA negotiation window
-> Execute GIA or withdraw (9x penalty unless exempt)
~Feb 2028 GIA EXECUTION -> Construction phase

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Accelerated Track

If your Phase II study shows network upgrade costs <$5 million or zero cost allocation, you may proceed directly to a

project-specific facilities study and GIA negotiation, bypassing Phase III. This is documented in Manual 14H and represents a significant timeline advantage for projects at uncongested POIs.

How Clusters Are Formed

PJM groups projects by electrical proximity -- projects interconnecting in the same transmission area are studied together. Your costs, timeline, and viability are directly tied to who else is in your cluster:

* Other projects withdrawing may decrease your cost allocation (but triggers restudy)
* Many projects at the same POI increase shared upgrade costs
* A single large project can dominate cluster costs

You cannot choose your cluster. PJM assigns it based on your POI and the transmission topology.

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3. The Application Package: Every Document, Every Field

Required Submissions

The following must be submitted via the NextGen platform before April 27, 2026. Missing any item triggers a deficiency notice with a 10-business-day cure window.

3.1 Application and Studies Agreement (ASA)

OATT Reference: Part VII, Subpart A

PJM Form: Download current version from https://www.pjm.com/planning/service-requests/application-and-forms

The ASA is the contract between you and PJM governing the entire study process. It must be:

* Fully executed (signed by authorized representative)
* Submitted WITH the application (not after)
* In the current Cycle 1 version (not Transition Cycle forms)

Key provisions to understand before signing:

* You are committing to fund studies at PJM's actual cost
* You are agreeing to the withdrawal penalty structure
* You are consenting to PJM's cluster study methodology and cost allocation approach
* The ASA is binding -- withdrawal after execution triggers the penalty framework

3.2 Cycle Application Officer Certification

PJM Form: Cycle Application Officer Certification (download from PJM portal)

An officer or authorized representative must certify:

* All information in the application is accurate
* The applicant has the authority and resources to develop the project
* Site control evidence is valid and current
* The applicant understands and accepts the obligations under the reformed process

The signatory must have actual corporate authority. If challenged, you need a corporate resolution or authorization document. Prepare this in advance.

3.3 Site Plan (Attachment N)

Manual Reference: Manual 14G, Attachment N

Your site plan must show:

For solar projects specifically: You must include an engineering analysis demonstrating that the controlled acreage supports the proposed MW capacity. This means:

* Panel type, wattage, and arrangement (fixed-tilt vs. tracker)
* Ground coverage ratio (GCR) calculation
* Row spacing and inter-row dimensions
* Total panel count x panel wattage = nameplate capacity
* Comparison of required acreage vs. controlled acreage

If your site plan implies 100 MW but your engineering analysis shows the land only supports 75 MW, this is an automatic deficiency.

3.4 System Impact Study Data Form (Attachments B-1 and B-2)

Manual Reference: Manual 14G, Attachments B-1 and B-2

This is the most technically demanding submission component. Required data:

Attachment B-1 -- Generating Facility Technical Data:

* Nameplate capacity (MW and MVA)
* Power factor range (leading and lagging)
* Voltage level (generator terminal voltage)
* Step-up transformer specifications (impedance, tap range, MVA rating)
* Reactive power capability curve data
* Governor response characteristics
* Excitation system type and parameters

Attachment B-2 -- Dynamic Model Data:

* PSSE-compatible dynamic model file (.dyr) for PSSE v33 or later
* Manufacturer-provided models with documentation
* Associated documentation files
* Parameters must match the data in Attachment B-1
* If your equipment manufacturer hasn't produced a PSSE model, you need to engage them NOW -- this takes weeks to months

For solar/inverter-based resources:

* Inverter manufacturer, model, and firmware version
* REGC_A / REEC_A / REPC_A model parameters (or equivalent)
* Fault current contribution data (three-phase and single-line-to-ground)
* Frequency ride-through capability
* Voltage ride-through capability

For storage:

* Charging source (grid, co-located generation, or both)
* State of charge management strategy
* Duration (hours at rated output)
* Dispatch profile (peak shaving, arbitrage, capacity, ancillary services)
* Round-trip efficiency
* Degradation assumptions

For hybrid facilities:

* Operational interaction between generation and storage components
* Whether components share an inverter or have independent inverters
* How dispatch is coordinated
* Whether the facility operates as a single resource or multiple resources in PJM's market systems

Critical note: FERC rejected PJM's initial storage operating assumptions in its July 2025 compliance order. Verify current requirements against PJM's October 2025 further compliance filing (Docket ER24-2045) and contact InterconnectionSupport@pjm.com for the latest guidance.

3.5 Site Control Evidence Package

OATT Reference: Part VII, Subpart A, §302

See Section 4 below for the detailed breakdown. At application, you must demonstrate:

* 100% site control of the generating facility site
* Term of at least 1 year from the application deadline (through April 27, 2027)
* Documents in the EXACT legal entity name as the applicant
* Acceptable form: deed, lease, option, development agreement, or equivalent

3.6 Financial Deposits

Manual Reference: Manual 14H, §6

Two deposits due at application:

See Section 5 for the complete financial model.

3.7 Permitting Documentation

While PJM does not require permits at application, projects with no permitting plan are viewed as unready. Submit:

* List of all required permits (federal, state, local) with issuing authority
* Current status of each permit (not filed, filed, under review, approved)
* Expected timeline for each permit
* Any known permitting risks or opposition

See Section 10 for state-specific requirements.

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4. Site Control: Exact Requirements by Decision Point

OATT Reference: Part VII, Subpart A, §302

What Qualifies as Site Control

PJM accepts the following as evidence of site control (per FERC Order 2023 and PJM OATT §302):

Entity Name Matching -- The #1 Deficiency Trigger

Every site control document must be in the exact legal entity name as the application. This means:

* Application: "Sunrise Solar Project LLC" / Lease: "Sunrise Solar Project LLC" -- VALID
* Application: "Sunrise Solar Project LLC" / Lease: "Sunrise Solar LLC" -- DEFICIENCY
* Application: "Sunrise Solar Project LLC" / Lease: "Sunrise Energy Holdings Inc." (parent) -- DEFICIENCY
* Application: "Sunrise Solar Project, LLC" / Lease: "Sunrise Solar Project LLC" (comma difference) -- CHECK PJM's interpretation

If your site control is in a different entity: Execute an assignment agreement transferring rights to the applicant entity BEFORE submission. Include the complete chain of assignment documentation in your package.

Requirements by Decision Point

At Application (April 27, 2026)

At Decision Point 1 (~October 2026)

Critical risk: The interconnection facility path (gen-tie route) may not be fully defined until Phase I study results are available. You're being asked to demonstrate 50% site control over a route that may change.

Mitigation strategy:

1. Before application, request PJM's preliminary assessment of likely interconnection configurations at your POI
2. Secure options on parcels along the most probable gen-tie routes -- not just one route
3. Budget for the possibility that Phase I identifies a different optimal route
4. If your gen-tie crosses third-party land, secure easements or options before DP1

At Decision Point 2 (~May 2027)

At Decision Point 3 (~December 2027) -- The Hard Gate

Why DP3 kills projects: The transmission owner can change the interconnection facility path during Phase III study. If the updated path crosses land you don't control, you must acquire that land or fail DP3. This is the single highest-risk event in the entire process.

Preparation:

* Negotiate broad easement options along alternative gen-tie routes during Phase I/II
* Include "path change" contingency language in your landowner agreements
* Budget $50-200K for emergency land acquisition at DP3
* Track transmission owner facility studies closely -- don't be surprised by path changes

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5. Financial Model: Deposits, Penalties, and Cash Flow

Study Deposit Tiers

Verify your amount: https://www.pjm.com/planning/service-requests/application-and-forms/deposit-calc

Readiness Deposits

Worked Examples

Example A: 100 MW Solar -- Favorable Location ($240/kW upgrades)

Example B: 100 MW Solar -- Congested Location ($600/kW upgrades)

Example C: 50 MW Storage -- Moderate Location ($400/kW)

Refund Structure on Withdrawal

"At-risk" means: PJM may retain deposits to fund underfunded network upgrades caused by your withdrawal. After upgrades are fully funded, remaining deposits are refunded pro-rata.

Withdrawal Penalty Exemptions

You are NOT subject to the 9x penalty if ANY of these conditions apply:

1. No material impact -- Your withdrawal doesn't affect remaining cluster projects' costs or timing
2. No study delay -- Your withdrawal doesn't delay completion of studies for other projects
3. >25% cost increase -- Your most recent study allocated >25% more in upgrade costs than the prior study
4. 100% cost increase (individual) -- An individual study showed your cost allocation doubled vs. prior study

Documentation is critical. If you plan to withdraw under an exemption, document the basis with specific study result comparisons BEFORE submitting your withdrawal notice. Cite the specific OATT provision and provide supporting calculations.

Cash Flow Planning

Planning note: The cash flow is highly uneven. You need substantial capital reserves before DP1 -- you won't know your RD2 amount until Phase I results come back, and you'll have 30 days to fund it or lose your queue position.

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6. POI Selection: How to Evaluate Before You Commit

Your Point of Interconnection is the single most consequential decision in your application. It determines your cluster assignment, likely network upgrade costs, and study outcomes. Changing your POI after application is extremely difficult and may require withdrawal and reapplication.

Tools for POI Evaluation

Queue Scope (Primary Screening Tool)

URL: https://queuescope.pjm.com/queuescope/pages/public/evaluator.jsf

User Guide: https://www.pjm.com/-/media/DotCom/etools/planning-center/queue-scope-user-guide.pdf

Queue Scope provides:

* Real-time transmission availability (headroom) at specific POIs
* Heat maps showing facility loading impacts by POI bus
* Thermal constraint data identifying congestion severity
* Geospatial interface for visual screening

Critical limitation: Queue Scope only addresses thermal constraints. It does NOT evaluate:

* Voltage impacts (>5% voltage drop at POI is generally unacceptable)
* Stability constraints
* Short-circuit impacts

A POI that looks thermally available may still trigger expensive upgrades for voltage or stability reasons. Queue Scope is a screening tool, not a definitive assessment.

PJM OASIS -- Available Transfer Capability (ATC)

URL: http://oasis.pjm.com

Documentation: https://www.pjm.com/pjmfiles/pub/oasis/ATCID.pdf

OASIS provides:

* ATC values by corridor and facility (updated hourly)
* Total Transfer Capability (TTC) data
* System topology and operational data
* Real-time constraint information

How to use it: Look up ATC at your target POI's transmission corridor. High ATC = more room for new generation. Low or zero ATC = likely congestion and expensive upgrades.

Interconnection.fyi -- Third-Party Queue Intelligence

URL: https://www.interconnection.fyi/?market=PJM

This site aggregates PJM queue data and provides:

* 1,426 projects and 145.1 GW currently tracked (daily updates)
* Filtering by substation, technology, capacity, and status
* Visualization of queue density by region

How to use it: Before selecting a POI, check how many other projects are targeting the same substation or transmission line. High queue density at a POI = higher probability of expensive shared network upgrades and larger clusters.

PJM Official Queue Data

URL: https://www.pjm.com/planning/service-requests

Download the complete queue spreadsheet showing every active interconnection request with POI, capacity, technology, and status.

POI Evaluation Framework

Before committing to a POI, evaluate:

POI Red Flags

* POI where multiple Transition Cycle projects were terminated or withdrew
* Substations with known thermal or voltage violations
* POIs where recent studies showed >$500/kW in upgrade costs
* Locations where the transmission owner has flagged capacity constraints
* POIs requiring a gen-tie >10 miles (long gen-tie = expensive + site control risk)

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7. The Cluster Study Process: Phase by Phase

Phase I -- System Impact Study (~120 days)

OATT Reference: Part VII, Subpart D, §307-308

Manual Reference: Manual 14H, §4.3

What PJM analyzes:

* Thermal impacts on the transmission system (power flow analysis)
* Voltage impacts at the POI and surrounding buses
* Stability analysis:
  * Three-phase faults with three-phase delayed clearing (stuck breaker)
  * Three-phase faults at 80% of the line with delayed clearing
  * Three-phase faults with loss of multiple-circuit tower line
* Short-circuit analysis
* Preliminary network upgrade identification and cost estimation
* Cost allocation among cluster members

What you receive:

* Phase I System Impact Study Report
* Preliminary network upgrade scope and cost allocation
* Identified interconnection facilities (gen-tie, substation work, etc.)
* Any system reliability flags

What you must do before DP1 deadline (30 days after report):

* Review your cost allocation -- is the project still economic?
* Calculate RD2 obligation (10% of upgrade costs minus RD1)
* Secure additional site control (50% of interconnection facilities)
* Decide: proceed to Phase II or withdraw

Phase II -- Interconnection Facilities Study (~180 days)

OATT Reference: Part VII, Subpart D

Manual Reference: Manual 14H, §4.5

What PJM analyzes:

* Refined network upgrade scope (accounts for DP1 withdrawals)
* Detailed interconnection facility design
* Updated cost allocation (cluster composition has changed)
* Construction timeline estimates

What changes from Phase I:

* Projects that withdrew at DP1 are removed from the cluster
* Cost allocation shifts -- your share may increase or decrease
* Interconnection facility design becomes more specific
* Upgrade cost estimates become more accurate (but can still change)

What you must do before DP2 deadline (30 days after report):

* Calculate RD3 obligation (20% of upgrade costs minus total RDs)
* Provide updated readiness documentation
* Assess whether your project economics still work with refined costs
* Decide: proceed to Phase III or withdraw

Phase III -- Network Facilities Study (~180 days)

OATT Reference: Part VII, Subpart D, §312

Manual Reference: Manual 14H, §4.7

What PJM analyzes:

* Final network upgrade scope and costs
* Final interconnection facility design
* Final construction schedule
* Final cost allocation

What you must do before DP3 deadline:

* Demonstrate 100% site control of ALL facilities (generating + interconnection) for 3 years
* Enter GIA negotiation (~35 business day window per §314)
* Execute GIA or withdraw (subject to 9x penalty unless exempt)

Restudy Provisions

If a project withdrawal during any phase materially affects remaining cluster members, PJM may conduct a restudy. This can:

* Change your cost allocation (up or down)
* Modify the network upgrade scope
* Extend the study timeline

You have no control over restudies. Budget for the possibility of cost changes at each phase.

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8. Deficiency Notices: The 7 Killers and How to Survive Them

Timeline: PJM issues deficiency notices within 5 business days of application submission. You have 10 business days to cure. No extensions. Failure = automatic termination and withdrawal from Cycle 1.

Killer #1: Entity Name Mismatch

What PJM flags: Legal entity name on application does not match name on site control, financial instruments, or certifications.

Why it's #1: In the Transition Cycle, this was the most frequent deficiency. It's entirely preventable and often fatal when

site control is held by a parent company or predecessor entity without proper assignment documentation.

Before submission, complete this verification:

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Document	Entity Name on Document	Matches Application?
Application	[Your Entity Name]	(baseline)
Site control -- Parcel A (deed/lease)	_____	[ ]
Site control -- Parcel B	_____	[ ]
Site control -- Parcel C	_____	[ ]
Access easement	_____	[ ]
Study deposit funding instrument	_____	[ ]
RD1 funding instrument	_____	[ ]
Officer Certification	_____	[ ]
ASA	_____	[ ]
ILOC/surety bond (if used)	_____	[ ]

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If you find a mismatch: Fix it BEFORE submission. Options:

1. Amend the document (fastest if counterparty cooperates)

2. Execute an assignment from the named entity to your applicant entity with a complete chain of title

3. For minor formatting differences (e.g., "LLC" vs. "L.L.C."): prepare an officer certification letter confirming they are the same entity -- but don't rely on PJM accepting this

Killer #2: Insufficient Site Control Coverage

What PJM flags: Controlled land doesn't cover the full project footprint.

Common gaps:

* Main parcel controlled but access roads cross uncontrolled land
* Setback zones extend beyond controlled parcel boundaries
* Construction laydown area not included
* Stormwater management area not covered
* Solar: controlled acreage insufficient for proposed MW at realistic GCR

Prevention: Commission a boundary survey overlaid with your site plan BEFORE submission. Every square foot of your Attachment N site plan must fall within controlled land.

10-day cure: This is the hardest deficiency to cure. If you need additional land, you likely can't negotiate, execute, and record an agreement in 10 business days. Your best options:

* Execute a short-term access license with the adjacent landowner (faster than a lease)
* Reduce project MW to match available acreage (if the gap is solar land adequacy)
* Provide supplemental documentation showing existing control covers the gap (if the issue is a mapping error)

Killer #3: Expired or Expiring Site Control

What PJM flags: Documents expire before April 27, 2027 (the 1-year minimum).

Prevention: When negotiating site control, set initial terms for at least 3 years from expected application date. Build automatic extension provisions into leases and options.

10-day cure: Execute a term extension amendment with your landowner. Achievable if you have a good relationship.

Killer #4: Vague or Invalid POI

What PJM flags: POI doesn't identify a specific facility, or identifies a facility that's decommissioned, renamed, or outside PJM.

Prevention: Before submission:

1. Verify your POI exists on PJM's transmission map
2. Use the exact facility name PJM uses (check the queue spreadsheet for naming conventions)
3. Include voltage level (e.g., "XYZ Substation 138 kV bus")
4. Contact InterconnectionSupport@pjm.com to pre-validate if uncertain

10-day cure: Straightforward -- resubmit with the correct, specific POI.

Killer #5: Incorrect Deposit Amount

What PJM flags: Study deposit or RD1 doesn't match the required amount.

Common errors:

* Using nameplate MW when you should use the greater of energy or capacity value
* Using an outdated tier structure
* Calculation error on RD1 ($4,000/MW -- did you use the right MW figure?)

Prevention: Use PJM's official calculator. Have a second person verify.

10-day cure: Fund the correct amount. Straightforward if capital is available.

Killer #6: Missing or Outdated Forms

What PJM flags: Wrong version of ASA, Officer Certification, or other form. Missing required attachments.

Prevention: Download ALL forms from PJM's portal in the final week before submission. Do not reuse forms from Transition Cycle or prior processes. Create a document index listing every form with its version/revision number.

10-day cure: Download and complete the correct forms. Administrative fix.

Killer #7: Technology-Specific Documentation Gaps

What PJM flags: Missing dynamic model data (PSSE files), missing storage operating assumptions, missing hybrid interaction documentation, missing inverter fault current data.

Prevention:

* Engage your equipment manufacturer for PSSE models early -- they can take 4-8 weeks
* For storage: document ALL operating assumptions in detail (PJM's requirements evolved after the July 2025 compliance order -- verify current requirements)
* For solar: request fault current data sheets from your inverter vendor
* For hybrid: write a 2-3 page operational concept document

10-day cure: Contact your equipment vendor immediately. If you don't have PSSE models, ask the manufacturer for expedited delivery and submit what you have with a timeline for the remainder.

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9. Decision Point Playbook: Stay or Walk

At each Decision Point, you have 30 days to decide. This framework helps structure that decision.

The Economic Kill Criteria

Calculate after each study report:

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Project All-In Cost ($/kW) =
(Development costs to date)
+ (Network upgrade cost allocation / MW x 1000)
+ (Interconnection facilities cost / MW x 1000)
+ (Remaining construction cost / MW x 1000)
= Total $/kW

Compare to:
Your PPA/contracted revenue ($/MWh) x capacity factor x 8760 hours
/ (Total $/kW x capital recovery factor)
= Implied project return

If implied return < your hurdle rate -> WITHDRAW
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Historical Benchmarks (LBNL 2025)

Rule of thumb: If your study shows interconnection costs >$400-500/kW, your project is in the danger zone. Most projects above this threshold ultimately withdraw.

Decision Matrix

The Sunk Cost Trap

Every dollar spent before this Decision Point is sunk. Do not factor it into your proceed/withdraw decision. The only relevant comparison is:

Forward cost to complete vs. Expected project value at completion

If the expected value is negative, withdraw -- regardless of how much you've already spent.

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10. State Permitting: Detailed Requirements by Jurisdiction

Quick Reference Matrix

Pennsylvania

Primary gatekeeper: Local township/municipal government. PA has 2,500+ municipalities, each with independent zoning authority. The same project may be permitted in one township and prohibited next door.

Required permits:

1. Local zoning approval -- Conditional use, special exception, or variance per township ordinance

2. Chapter 102 Permit -- Erosion/sedimentation/stormwater for projects disturbing >1 acre (filed through County Conservation District)

3. Chapter 105 Permit -- If project affects waterways

Start here: DEP's Permit Application Consultation Tool (PACT) at https://www.ahs.dep.pa.gov/PACT/ -- generates your specific permit requirements based on project characteristics.

Developer resources: https://www.pa.gov/agencies/dep/residents/solar-energy-resource-hub/developers

New Jersey

Interconnection levels:

* Level 1: <=10 kW residential / <=25 kW non-residential (simplified)
* Level 2: Mid-range (standard review)
* Level 3: Complex/large (enhanced review)

Required:

* Utility-specific interconnection application (PSE&G, JCP&L, Atlantic City Electric, or Rockland Electric -- forms differ by utility)
* NJDEP Permit Readiness Checklist (ground-mounted projects)
* Stormwater compliance (N.J.A.C. 7:8)
* Local electrical and building permits
* If on preserved farmland: SADC review

One-stop coordination: NJDEP OPPN at https://dep.nj.gov/oppn/

Interconnection forms by utility: https://cleanenergy.nj.gov/renewable-energy/programs/net-metering-and-interconnection/interconnection-forms

Timeline: Utility contact within 3 business days; engineering determination within 18 business days; approval within 21 business days.

Virginia -- Fastest State-Level Approval in PJM

Two pathways:

* Permit-by-Rule (PBR) under 9VAC15-60 for projects <=150 MW AC solar (most utility-scale solar)
* SCC CPCN for >150 MW or generation tie lines

PBR Process (Section 30 -- projects >5 MW and >10 acres):

1. File Notice of Intent (NOI) >= 90 days before public comment period
2. Local government zoning compliance certification
3. Final interconnection agreements or recent feasibility studies
4. Professional engineering certification
5. Environmental analysis: air quality, natural/historic resources, 12-month wildlife monitoring
6. 30-day public comment period with responses
7. DEQ has 90 days to determine completeness -- construction can commence once complete

Fees: $14,000 for 75-150 MW projects

Contact: Amber Foster, DEQ Renewable Energy Program: (804) 774-8474

PBR program: https://www.deq.virginia.gov/our-programs/renewable-energy/permit-by-rule-program

Maryland -- Longest Average Timeline

Thresholds:

* <=2 MW: CPCN exemption (~60 days, often ~30 for complete applications)
* >2 MW: Standard CPCN (~388 days average in 2024)
* 2-5 MW: New DG-CPCN expedited category (effective July 1, 2027)

Standard CPCN (>2 MW):

1. Application to PSC (fee: $10,000)
2. Deposit: 1.0% of total installed costs
3. Notify county/municipal governing bodies and legislators within 1 mile
4. Environmental Review Document (ERD)
5. Local conditional use permit (must be FINAL before PSC completes review)
6. Public hearing (presided by PULJ with stenographer)

Critical: File >=6 months before planned construction. Local permit must be final before PSC approval -- start local permits early.

CPCN information: https://www.pscmaryland.com/regulated-utilities/electricity/cpcn/

Ohio

OPSB Certificate required for >=50 MW (Certificate of Environmental Compatibility and Public Need)

Process:

1. Pre-application notification >=21 days before PIMs
2. Two public information meetings (PIMs) in project area
3. 90-day county review (Board of County Commissioners per Senate Bill 52)
4. OPSB application and review

Solar-specific requirements (effective May 30, 2024):

* Setbacks: >=50 ft non-participating parcels, >=300 ft non-participating residences, >=150 ft road pavement
* Fencing: small-wildlife permeable
* Noise: <=40 dBA at sensitive receptors within 1 mile of project boundary (or ambient +5 dBA, whichever is greater)
* Decommissioning plan required
* Landscape plan (licensed architect)

Fees: Initial $10,000; full application $0.50/kW (capped at $150,000)

Timeline: 12-24+ months

West Virginia

CPCN from WVPSC required. PSC must issue final order within 150 days of filing. Capacity limited to <=50 MW per facility. Decommissioning plan required within 12 months of COD.

Illinois

County-level permitting. State law (PA 102-1123, effective Jan 2023) sets statewide standards preventing unreasonable county restrictions.

* Public hearing within 60 days of application (per PA 103-0580, effective Dec 8, 2023)
* County decision within 30 days of hearing
* Total: ~90 days minimum
* Counties cannot impose unreasonable fees

Delaware

DNREC environmental permitting + local permits. ePermitting portal: https://epermitting.dnrec.delaware.gov/dnrec-home. Contact: DNREC Division of Energy Programs: 302-526-5600.

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11. NextGen Platform: How to Actually Submit

Account Setup

Member companies: Auto-eligible for NextGen access

Non-member companies: Contact your PJM Account Manager for CAM assignment

Do this now. If you need a CAM assignment, it takes business days. Do not wait until April.

User roles:

* NextGen Read Only: View-only (for reviewers, investors, counsel)
* NextGen Read/Write: Required for application submission

NextGen User Guide: https://www.pjm.com/-/media/DotCom/etools/planning-center/nextgen-user-guide.pdf

Submission Process

1. Log into NextGen
2. Create Company Profile (one-time setup, shared across projects)
3. Create new Cycle 1 application
4. Enter project data (MW, technology, POI, location)
5. Upload documents (ASA, Officer Cert, site plan, site control, technical data)
6. Submit payment (study deposit + RD1)

7. Finalize and submit before April 27, 2026

Post-Submission

* Monitor for deficiency notices (within 5 business days)
* Check NextGen for status updates
* Contact InterconnectionSupport@pjm.com with questions

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12. OATT and Manual Cross-Reference

Direct links:

* Manual 14H: https://www.pjm.com/-/media/DotCom/documents/manuals/m14h.pdf
* Manual 14G: https://www.pjm.com/-/media/DotCom/documents/manuals/m14g.pdf
* Manual 14A: https://www.pjm.com/-/media/DotCom/documents/manuals/m14a.pdf
* Manual 14C: https://www.pjm.com/-/media/DotCom/documents/manuals/m14c.pdf
* PJM OATT: Available through PJM's tariff page
* FERC Order 2023 Explainer: https://www.ferc.gov/explainer-interconnection-final-rule
* FERC Order 2023-A Explainer: https://www.ferc.gov/explainer-interconnection-final-rule-2023-A

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13. Document Templates

Template A: Deficiency Cure Response Letter

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[Company Letterhead]

Date: [Date]

PJM Interconnection, L.L.C.
2750 Monroe Blvd.
Audubon, PA 19403
Attn: Interconnection Support

Via email: InterconnectionSupport@pjm.com

Re: Deficiency Cure -- [Project Name]
Cycle 1 Application -- [Queue/Application Number]
Deficiency Notice dated [Date of Notice]

Dear PJM Interconnection Team:

[Legal Entity Name] ("Applicant") submits this response to the deficiency notice dated [date] regarding its Cycle 1 interconnection application for [Project Name], a proposed [MW] [technology] facility in [County, State].

DEFICIENCY IDENTIFIED

PJM identified the following deficiency:

"[Quote the exact language from PJM's deficiency notice]"

CURE PROVIDED

Applicant provides the following to cure this deficiency:

[Describe specifically what you are providing and why it satisfies the requirement. Reference the applicable OATT section or Manual 14H provision.]

SUPPORTING DOCUMENTATION

The following documents are enclosed:

1. [Document name] -- [Brief description of what it demonstrates]
2. [Document name] -- [Brief description]
3. [Document name] -- [Brief description]

CERTIFICATION

The undersigned, as [Title] of [Legal Entity Name], certifies that (i) the information and documentation provided herein is accurate and complete, (ii) the enclosed materials fully address the identified deficiency, and (iii) all application requirements under PJM's OATT Part VII and Manual 14H are satisfied.

Respectfully submitted,

_____

[Name]
[Title]
[Legal Entity Name]
[Phone]
[Email]
`

Template B: Entity Name Consistency Certification

`

OFFICER'S CERTIFICATE OF ENTITY IDENTITY

I, [Name], as [Title] of [Full Legal Entity Name as on Application] (the "Company"), hereby certify as follows:

1. The Company was organized as a [LLC/Corporation/LP] under the laws of the State of [State] on [Date of Formation].

2. The Company's full legal name as reflected in its [Certificate of Formation / Articles of Organization] filed with the

[State Secretary of State] is:

[Full Legal Entity Name -- exact as on state filing]

3. The following name variations appearing on documents submitted with the Company's PJM Cycle 1 interconnection application refer to the same legal entity:

a. "[Name as on Document A]" -- appearing on [Document A]
b. "[Name as on Document B]" -- appearing on [Document B]

4. No other entity exists under any of the above name variations. All references are to the same single legal entity.

5. The Company's EIN is: [Number]
6. The Company's state entity number is: [Number]

IN WITNESS WHEREOF, I have executed this certificate as of [Date].

_____
[Name]
[Title]
[Legal Entity Name]
`

Template C: Site Control Evidence Summary Table

`

SITE CONTROL EVIDENCE SUMMARY

Project: [Project Name]
Applicant: [Legal Entity Name]
Application Date: [Date]
Cycle: PJM Cycle 1
OATT Reference: Part VII, Subpart A, §302

PARCEL ID	TYPE OF CONTROL	COUNTERPARTY ON DOCUMENT	ENTITY NAME	EXECUTION DATE	EXPIRATION DATE	ACREAGE
A	Lease					
B	Option					
C	Deed					
Access	Easement					
TOTAL						___ ac

Required acreage for [MW] at [GCR]: ___ acres
Controlled acreage: ___ acres
Coverage: ___%

Entity Name Verification:

Application entity name: _____

All documents match: [ ] Yes [ ] No -- see attached reconciliation

Term Verification:

Minimum required expiration: April 27, 2027

Earliest expiring document: _____ (expires: _____)

All documents meet minimum term: [ ] Yes [ ] No

`

Template D: Pre-Submission QA Signoff

`

PJM CYCLE 1 -- PRE-SUBMISSION QA SIGNOFF

Project: _____

Application Date: _____

VERIFICATION CHECKS	VERIFIED BY	DATE
1. Entity name matches on ALL documents	_____	_____
2. MW consistent: application, site plan, engineering analysis, site control	_____	_____
3. POI identified by specific name + voltage	_____	_____
4. Study deposit verified via PJM calculator	_____	_____
5. RD1 verified ($4,000 x ___ MW = $_____)	_____	_____
6. All site control expires after 4/27/2027	_____	_____
7. Site plan covers full footprint	_____	_____
8. PSSE dynamic models ready (.dyr, v33+)	_____	_____
9. All forms are current Cycle 1 versions	_____	_____
10. ASA fully executed	_____	_____
11. Officer Certification signed	_____	_____
12. Permitting pathway documented	_____	_____
13. Legal review of package completed	_____	_____
14. NextGen account active (Read/Write)	_____	_____
15. Backup copy of entire package stored	_____	_____

SIGNOFF

Prepared by: _____ Date: _____

Reviewed by: _____ Date: _____

Approved by: _____ Date: _____

[ ] READY FOR SUBMISSION

[ ] DEFICIENCIES IDENTIFIED -- See attached remediation plan

`

Template E: Withdrawal Notice with Penalty Exemption Claim

`

[Company Letterhead]

Date: [Date]

PJM Interconnection, L.L.C.
2750 Monroe Blvd.
Audubon, PA 19403

Re: Withdrawal of Interconnection Request -- [Project Name]
Queue/Application Number: [Number]
Claim of Withdrawal Penalty Exemption

Dear PJM Interconnection Team:

[Legal Entity Name] hereby provides notice of withdrawal of its interconnection request for [Project Name], a [MW] [technology] facility, effective as of the date of this letter.

PENALTY EXEMPTION CLAIM

Applicant claims exemption from the withdrawal penalty under [cite specific OATT provision], based on the following:

[Select applicable basis:]

[ ] NO MATERIAL IMPACT: Applicant's withdrawal does not materially affect the costs or timing of any remaining interconnection request in the cluster. [Provide supporting analysis.]

[ ] NO STUDY DELAY: Applicant's withdrawal will not delay completion of studies for other projects in the cluster. [Provide supporting analysis.]

[ ] >25% COST INCREASE: The most recent [Phase I/II/III] study allocated network upgrade costs of $[amount] ($/kW: $[amount]), representing a [__]% increase over the prior study allocation of $[amount] ($/kW: $[amount]). This exceeds the 25% threshold.

Prior study: $_____ (Date: _____)
Current study: $_____ (Date: _____)
Increase: ___%

[ ] 100% COST INCREASE (INDIVIDUAL): An individual study showed allocated costs of $[amount], representing a [__]% increase over the prior allocation of $[amount]. This exceeds the 100% threshold.

DEPOSIT REFUND REQUEST

Applicant requests refund of all eligible deposits per the

applicable OATT provisions and Manual 14H §6.2.1.

Respectfully submitted,

_____

[Name]

[Title]

[Legal Entity Name]

`

Appendix: Glossary

About This Guide

Prepared by Zonevex based on PJM OATT Part VII, PJM Manuals 14H (Rev. 3), 14G (Rev. 8), 14A (Rev. 30), and 14C; FERC Orders 2023 and 2023-A; PJM's July 2025 compliance order and October 2025 further compliance filing (Docket ER24-2045); LBNL interconnection queue data (2025); and PJM Transition Cycle 1 results.

Educational resource only. Not legal, financial, or engineering advice. Verify against PJM's official documentation before submission.

Confirm manual versions are current: https://www.pjm.com/library/manuals.aspx

Visit zonevex.com to learn how Zonevex automates interconnection compliance tracking across RTOs.

Zonevex -- Interconnection compliance, simplified.