

MAGNET S2

INTELLIGENCE REPORT

DTG: 260702-2359Z | Geographic Focus: Eastern United States (PJM Interconnection Region)
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REPORT IDENTIFICATION

Subject	Federal Emergency Action and Grid Reliability Risks Across the PJM Interconnection During Extreme Heat Conditions
Purpose	Provide an intelligence assessment of current electrical grid stress indicators, infrastructure resilience concerns, and preparedness implications resulting from emergency actions within the PJM power network.
DTG	260702-2359Z
Reporting Period	29 June – 2 July 2026 (260629–260702)
Geographic Focus	Eastern United States (PJM Interconnection Region)
Precedence	RR – ROUTINE
MagCon Status	L3 – ELEVATED
Sources	Multiple source reporting from Federal, Energy Sector, National Media, and Grid Operations platforms. See source list.

SUMMARY (BLUF)

The United States Department of Energy issued emergency Order 202-26-32 under Section 202(c) of the Federal Power Act after PJM Interconnection warned of an imminent reliability emergency caused by extreme heat, record electricity demand, constrained reserve margins, and limited operational flexibility. Peak demand forecasts exceeded historical records established in 2006, while operating reserves fell to near minimum reliability thresholds. Current indicators support a moderate probability of localized outages and emergency conservation measures, but a low probability of prolonged multi-state grid failure. The event demonstrates increasing systemic pressure from weather extremes, data-center growth, electrification, and shrinking reserve margins, reinforcing the importance of independent communications and household backup power capabilities.

BACKGROUND

PJM operates the largest synchronized electrical transmission network in North America, serving approximately 67 million people across all or portions of 13 states and the District of Columbia. The system includes major population centers, critical infrastructure nodes, military facilities, and the world's largest concentration of commercial data centers in Northern Virginia.

Section 202(c) of the Federal Power Act authorizes emergency federal intervention when sudden increases in electricity demand or shortages in generation threaten public welfare or national security. Such actions permit otherwise restricted generation assets to operate beyond normal environmental, fuel, or permitting constraints for limited periods.

PJM has repeatedly warned that accelerating electricity demand growth, combined with generator retirements and transmission congestion, is reducing long-term reserve margins. Updated forecasts anticipate substantial increases in peak demand over the next fifteen years.

SITUATION

Timeline

DATE	EVENT
29 Jun 2026	PJM issued Hot Weather Alerts and formally requested emergency federal assistance after forecasting unprecedented demand levels between July 1–3.
30 Jun 2026	DOE approved Order No. 202-26-32, effective from 2359 EDT on June 30 through July 3, directing specified generating assets to operate as required for reliability preservation. The order granted temporary relief from certain permit limitations.
1 Jul 2026	Electricity demand exceeded 160 GW. Wholesale prices in Northern Virginia increased from approximately \$40/MWh to more than \$600/MWh. PJM issued generator alerts and requested maximum available production.
2 Jul 2026	Projected peak demand reached approximately 166.2 GW, surpassing the previous all-time record of 165.6 GW established during the 2006 heat wave. PJM initiated transmission security procedures, activated reserve resources, and ordered idle plants back online. Operating reserves

	declined from 22 GW to roughly 5 GW, approaching the minimum requirement of 3.2 GW. Emergency market prices briefly reached nearly \$28,000/MWh.
As of DTG	No voltage reductions, controlled load shedding, or rolling blackouts had been implemented at the time of publication.

COMMENTS / ASSESSMENT

Confidence Level: Moderate to High. The present emergency does not indicate imminent collapse of the eastern electrical grid. However, it provides strong evidence that multiple structural pressures are converging faster than reserve capacity expansion efforts. Extreme weather alone was sufficient to require federal intervention, deployment of expensive standby generation, and consideration of extraordinary demand-management measures.

Strategic Drivers — Weather Stress

Persistent temperatures approaching or exceeding 100°F significantly increased air-conditioning demand across densely populated metropolitan regions. Heat also reduced transmission efficiency and constrained generation performance.

Strategic Drivers — Data Center Expansion

Northern Virginia's data-center corridor remains a major contributor to regional load growth. Estimates attribute approximately \$3.8 billion in additional wholesale power costs this year to expanding digital infrastructure.

Strategic Drivers — Reduced Operational Flexibility

Repeated reliance on Section 202(c) authorities demonstrates decreasing tolerance for generation outages, maintenance schedules, and environmental constraints during periods of elevated demand.

Probability Assessment

SCENARIO	PROBABILITY
Multi-state, long-duration blackout	LOW
Localized utility outages	MODERATE
Public conservation requests	HIGH
Temporary industrial/data-center curtailments	MODERATE-HIGH
Additional federal emergency orders this summer	MODERATE
Significant retail electricity price increases in coming years	HIGH

Multi-state blackout probability is assessed LOW based on sufficient remaining emergency authorities and reserve resources. Assessment may be revised as additional information is developed.

INTELLIGENCE GAPS

- ▶ Exact number of generating units operating under emergency exemptions.
- ▶ Whether major data-center operators were required to activate backup systems.
- ▶ Duration of reserve levels below 5 GW.
- ▶ Any concurrent cyber threats targeting energy infrastructure.
- ▶ State-level emergency management coordination measures.
- ▶ Potential fuel supply constraints affecting gas-fired generation.

MITIGATION RECOMMENDATIONS

- ▶ Verify operational readiness of battery systems, generators, solar charging equipment, and fuel reserves.
- ▶ Conduct regional HF and digital communications exercises under simulated commercial power loss conditions.
- ▶ Maintain multiple methods for receiving emergency information, including amateur radio, NOAA broadcasts, and battery-powered receivers.
- ▶ Identify vulnerable populations dependent on electrically powered medical devices.
- ▶ Review family cooling plans and establish alternative shelter locations during prolonged outages.
- ▶ Encourage members to maintain a minimum 72-hour sustainment capability without commercial utilities.
- ▶ Monitor grid operator conservation requests and emergency declarations during future heat events.
- ▶ Test portable radio kits using off-grid power sources at least once per month during summer operations.

MAGNET GUIDANCE

MAGNET operators should interpret the current PJM emergency as a preparedness indicator rather than an immediate crisis. The incident demonstrates how weather-driven demand surges can rapidly consume reserve capacity and require extraordinary federal intervention even in highly developed infrastructure environments. Independent communications and resilient power systems remain foundational capabilities for community stability.

SOURCE LIST

- [1] DOE 2026 Section 202(c) Orders [A1] — Official federal order authorizing emergency generation measures.
- [2] Reuters — Grid operator PJM orders emergency steps to avoid large-scale U.S. power outages [B2]
- [3] Reuters — Heat dome poses woes for largest U.S. power grid beyond data center boom [B2]
- [4] Reuters — Largest U.S. power grid details price spikes and warns on record demand [B2]
- [5] Reuters — U.S. issues emergency order for PJM Interconnection as heatwave looms [B2]
- [6] Maryland Matters — PJM gets green light to push data centers onto backup power during heat wave [B2]
- [7] Maryland Matters — Amid high heat, power demand in PJM territory could set records [B2]
- [8] PJM Operations Update — June 30, 2026 [A1]
- [9] Reuters — PJM moves toward managing data-center demand [B2]

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