

# Fuel Requirements for Black Start Resources

MIC

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IMM



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# Fuel Assurance Issues

- **PJM planning for black start and fuel assured black start should be on a regional basis.**
  - **Cost allocation should be on a regional rather than a zonal basis.**
- **Intermittent resources should not be black start resources: cannot meet basic eligibility criteria.**
  - **Run of river should be eligible to be black start resources.**
- **Run hour requirements should be 16 hours, including three starts, without exceptions, without 90 percent exception for intermittents, run of river hydro, hybrids.**

# Fuel Assurance Issues

- **Emission permits/limitations should be submitted and verified prior to acceptance as black start resource.**
  - **Predefined waivers should be required to accommodate operations during restoration period.**
- **Run of river hydro should be set to most restrictive seasonal flow (MW).**
  - **No 90 percent exception. No rationale for exception.**
- **Rules for black start from DER/DR with onsite generator must be more specific.**
  - **Need to wait for PJM's DER/DR rules to be defined.**
  - **Same rules should apply to all black start resources.**

# Fuel Assurance Issues

- **Testing at PJM defined time**
- **Fuel supply verification**
  - **Required: details for gas supply; consumables**
  - **Weekly frequency**
- **Notification of issues**
  - **Should be immediate**
- **Compensation**
  - **Z factor should not change**
  - **X factor should not change**
  - **Paying for penalties is not appropriate part of compensation (PJM rationale)**

# Fuel Assurance Issues: Compensation

- **Offset to capital costs solely associated with fuel assurance recoverable following the process in schedule 6A.**
- **Net revenues from operating on backup fuel netted from black start revenues.**
  - **Energy markets**
  - **Ancillary services markets**
  - **Capacity markets**

# Fuel Assurance Issues: Penalties

- **If any requirements of fuel assured black start service not met, PJM must be notified immediately and monthly black start revenues will be forfeited for each such month.**
  - **Black start monthly revenues will be forfeited for months in which the fuel inventory, water level, stored energy falls below the run hour requirement**
  - **Regardless of cause, including a regulatory requirement.**

# Fuel Assurance Issues: Black Start MW

- **Black start MW capability used for procurement and compensation should be based on:**
  - **ICAP for non intermittent resources**
  - **ICAP/ELCC/CIR for storage resources**
- **Fuel assured and non fuel assured**

# Fuel Assurance Issues: Role of TOs

- **The reliability back stop in PJM Manual M14D allows TO ownership. TOs should not own generation.**
  - **No reason to believe that TOs can procure black start more effectively than PJM**
  - **PJM should continue efforts until goal is met, including cross zonal across multiple zones.**



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