

## Attachment 1, Part C -- Energy Emergency Alert 3 Report PNM September 12, 2016 Disturbance

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### C. Energy Emergency Alert 3 Report

A Deficient Balancing Authority or Load Serving Entity declaring an Energy Emergency Alert 3 must complete the following report. Upon completion of this report, it is to be sent to the Reliability Coordinator for review within two business days of the incident.

#### **Requesting Balancing Authority:**

Public Service Company of New Mexico is the BA for the PNM service territory. The Peak RC declared an EEA-3 for PNM. However, PNM did not make or request such declaration.

#### **Entity experiencing energy deficiency (if different from Balancing Authority):**

The Peak RC determined PNM was the deficient entity.

#### **Date/Time Implemented:**

EEA-3 declared on 9/12/2016 at 12:20 PPT (Per RMT message)

#### **Date/Time Released:**

EEA-0 declared on 9/12/2016 at 13:25 PPT (Per RMT message)

#### **Declared Deficiency Amount (MW):**

150 MW.

#### **Total energy supplied by other Balancing Authority during the Alert 3 period:**

PNM received assistance from two neighboring entities. PNM is verifying the energy delivered during the event.

#### **Conditions that precipitated call for "Energy Deficiency Alert 3":**

At approximately 11:30 MST, PNM experienced loss of a 345 kV switchyard, resulting in trips of all connected facilities emanating from the station. The loss of two of the transmission lines reduced PNM's import capability. However, the northern New Mexico system is protected by a Remedial Action Scheme (RAS) which is designed to shed load to protect against loss of principal transmission lines. Due to a previously undetected error in an EMS calculation, the RAS contribution to import capability was not included in the import limit being telemetered to Peak RC, resulting in the Peak RC seeing a negative operating margin. Thereafter, Peak RC directed PNM to shed 150 MW of firm load. Several minutes after the directive was issued, PNM restored transmission facilities sufficient to increase its import capability. Shortly thereafter, PNM, in coordination with Peak RC, restored firm load within approximately 45 minutes after the load shed directive was issued.

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**If “Energy Deficiency Alert 3” had not been called, would firm load be cut? If no, explain:**

No. PNM would not have cut firm load for this disturbance because a RAS was available and armed and as such PNM’s import capability operating margin was adequate. PNM did not request declaration of an EEA-3.

**Explain what action was taken in each step to avoid calling for “Energy Deficiency Alert 3”:**

- 1. All generation capable of being on line in the time frame of the energy deficiency was on line (including quick start and peaking units) without regard to cost.**

PNM immediately called for all available generation within the import boundary to start and ramp to full output.

- 2. All firm and non-firm purchases were made regardless of cost.**

PNM requested assistance across the HVDC converter station that connects PNM to a neighboring entity. PNM also requested that another neighboring entity adjust its phase shifting transformer to transfer power into the import boundary. Both requests served to reduce flow across PNM’s import boundary.

- 3. All non-firm sales were recalled within provisions of the sale agreement.**

No non-firm sales were contributing to loading on the import boundary. Thus, no non-firm sales were available for recall to mitigate the load shed directive.

- 4. Interruptible load was curtailed where either advance notice restrictions were met or the interruptible load was considered part of spinning reserve.**

No interruptible load reduction programs were available within the time frame required to mitigate the load shed directive.

- 5. Available load reduction programs were exercised (public appeals, voltage reductions, etc.).**

No load reduction programs were available within the time frame required to mitigate the load shed directive.

- 6. Operating Reserves being utilized.**

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PNM requested Reserve Sharing Group (RSG) assistance, causing all available generation within the import boundary to be on-line and ramping to mitigate the load shed directive. The RSG made recovery within approximately 13 minutes.

**Comments:** The preamble to this form directs BA/LSE entities which declared EEAs to file this report. Because PNM as a BA did not declare an Energy Emergency Alert 3, this report is being filed for informational purposes.

**Reported By:** David Eubank

**Organization:** Public Service Company of New Mexico

**Title:** Director PNM Power Operations