

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

**ENERGY DIVISION**

**RESOLUTION E-3597  
JUNE 10, 1999**

**RESOLUTION**

**RESOLUTION E-3597. SOUTHERN CALIFORNIA EDISON COMPANY (EDISON) SEEKS COMMISSION APPROVAL OF A REVISION IN ITS AIR CONDITIONING CYCLING TARIFFS TO PROVIDE MORE FLEXIBILITY IN MANAGING HIGH LOADS. APPROVED WITH MODIFICATIONS.**

**BY ADVICE LETTER 1352-E FILED ON NOVEMBER 30, 1998.**

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**SUMMARY**

1. In Advice Letter 1352-E Edison requests revisions in its Automatic Powershift (APS) D-APS and GS-APS tariffs that would permit Edison to activate its Air Conditioning Cycling program on a more localized basis when the integrity of its distribution facilities may be jeopardized.
2. To ensure more flexibility in managing high loads, this Resolution grants Edison's revisions with modifications.
3. No protest was received.

**BACKGROUND**

1. Edison's Advice Letter (A.L.) 1263-E, approved April 1, 1998 added provisions to allow the Independent System Operator (ISO) to direct Edison to curtail specific amounts of load under its Interruptible and Air Conditioning Cycling programs when operating reserves are forecast to fall below 5 percent in the next hour.
2. Edison filed A.L. 1352-E, dated November 30, 1998, requesting authority to activate its Air Conditioning Cycling program on a more localized basis when, in Edison's judgement; the integrity of its distribution facilities is jeopardized. Edison explained that such conditions are limited to emergency situations that create disruptions jeopardizing the reliability of Edison's electrical system. If such disruptions are left unresolved, damage to the electrical system might

cause more widespread interruption of the supply of power. Edison would determine whether any given situation is an emergency.

3. Edison further explains that with its proposed revisions it would have the flexibility of curtailing the air conditioning load of some of the participants to prevent widespread interruptions that would deprive all customers in a local area of the availability of electricity for more essential uses.
4. Edison says that the revisions requested will not affect the cycling season or the number of occurrences of interruptions within the cycling season as provided for in currently effective tariffs.
5. Edison proposes a new paragraph b. within Special Conditions (SC) 5. so as to read that a Cycling Period is one in which the service may be interrupted:
  - a) When the ISO directs Edison to curtail specific amounts of load (up to the full capability of load curtailment programs) sufficient to maintain operating reserves above the five percent level through the next forecast hour,
  - b) When the Company determines that conditions exist that may jeopardize the integrity of Edison's distribution facilities.
  - c) For testing of the control device.<sup>1</sup>
6. In SC 5. Edison proposes that cycling under sections a. and b. be limited to 15 occurrences per year and cycling under b. be limited to emergency conditions as determined by Edison.
7. In an explanatory paragraph of SC 5. Edison proposed:

“Cycling under Subsection b. is limited to emergency conditions as determined by the Company, that create conditions on the Company's electrical distribution system that, if left unresolved, could damage the electrical system or

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<sup>1</sup> The control device disconnects the entire air conditioning system for the full cycling interval allowed under the tariff. Cycling shuts down the air conditioner compressor to reduce energy consumption or to perform a test. Under SC 3., Edison operates and maintains control devices at each customer's premises.

cause a more widespread interruption in the supply of power.”

8. After discussion with the Energy Division (ED) Edison proposes, in its January 15, 1999 tariff communication, more specific language than that proposed in SC 5.b: “A cycling period is one in which the service may be interrupted when a declaration by the Company of a Category One, Two, or Three Storm Alert exists and a condition exists that may jeopardize the integrity of the Company’s distribution facilities.”
9. In response to ED’s inquiry, dated March 12, 1999 Edison explained that under SC 5.c. testing of the control device could only occur if Edison does not receive the desired load reduction results after an Air Conditioning Cycling event. The test could occur at anytime in the summer season. Edison also explained that testing of the control device would interrupt a customer’s power to the air conditioner a maximum of 15 minutes.
10. In its response dated April 26, 1999 Edison explained how it would react if a reduction in load were less than expected. Edison will first analyze the lack of reduction to see if its equipment is sending the necessary signal to the customer’s premises. If Edison’s equipment is working properly, Edison’s control center will test each local area individually to verify reduction in load. When the reason for the lack of load reduction is identified, Edison will address the problem. Edison has not had to test under SC 5.c. for at least two years.
11. In a response dated April 27, 1999 Edison further explained its process of testing. Edison sends a signal to its control device, located on customer premises, and watches at its control center to verify that a load reduction occurs. Edison then brings the air conditioners back on line. The entire process lasts no longer than 15 minutes.
12. During a cycling event Edison’s testing verifies proper operation of control devices and communication systems. Edison, in a discussion with the ED, offered to restrict testing to once annually.
13. Edison proposes to record when and why cycling is initiated and report to the ISO to ensure that the cycling limitations will not be exceeded. Edison believes this tracking could reduce the number and duration of times that the program can be used at the ISO’s direction. We agree that Edison should minimize the number of cycling events as well as the duration of such events.

14. Edison discussed its proposed revisions with the ISO, and the ISO has not objected.
15. The number of customers impacted by cycling events in the D-APS and GS-APS schedules is shown in the table below. Customers in Tariff schedule D-APS are domestic service, individually metered single-family residences with central air conditioning. Customers in the GS-1-APS and TOU-GS-1-APS schedules experience less than 20 kilowatts (kw) maximum demand in any three-month period. Customers in the GS-2-APS and TOU-GS-2-APS schedules experience less than 500 kw in any three months. Schedule TOU-8-APS customers generally use a maximum demand over 500 kw in any three months. The total number of customers in each schedule is as follows:

**Tariff Schedules-APS Customers**

D-APS	144,744
GS-1-APS	878
GS-2-APS	2,034
TOU-GS-1-APS	3
TOU-GS-2-APS	291
TOU-8-APS	29
Total customers	147,979

Cycling of air conditioners would currently impact 147,979 customers, including 144,744 residential customers.

**NOTICE**

1. Notice of A.L. 1352-E was made by publication in the Commission's calendar and by mailing copies to adjacent utilities and interested parties.

**PROTESTS**

1. The Commission received no protests to A.L. 1352-E.

## **DISCUSSION**

1. We would be concerned about the use of Edison's judgement in determining whether conditions exist that may jeopardize the integrity of the Company's distribution facilities as proposed in its advice letter. However, we agree that Edison should have more flexibility in managing its high loads experienced during warm weather. To achieve such flexibility we will modify Edison's proposed language similar to that proposed in Edison's January 15, 1999 transmittal:

"Cycling under Subsection b. is limited to situations when the Company declares a Category One, Two, or Three Storm Alert and a condition exists that creates disruptions on the Company's electrical distribution system which, if left unresolved, could damage the electrical system or cause a more widespread interruption in the supply of power. The categories are defined as follows:

- a) A Category One Storm Alert is limited to a geographical area and is considered stable; or to a widespread power outage from a transmission disturbance when the transmission and distribution systems are considered stable.
  - b) A Category Two Storm Alert requires additional resources outside zone/area boundaries; or the storm is escalating and involves two or more zones/areas.
  - c) A Category Three Storm Alert is a catastrophic emergency that involves multiple zones/areas; resources are fully committed, and additional assistance, such as mutual aid, are requested."
2. We do not want APS customers to be unnecessarily inconvenienced; nor do we want Edison to use testing as merely a further stage of cycling. We will restrict Edison's testing, during peak hours, to one per summer season, in any given local area. SC 5.c. of Edison's proposed tariff refers to testing without definition or explanation. To place some restriction on the use of testing we will use the explanation provided in its March 12, 1999 response as follows:

"Testing of the Control Device will only occur if the Company does not receive the desired load reduction results after an Air Conditioning Cycling event. Testing of the Control Device will

interrupt power to a customer's air conditioner a maximum of 15 minutes. The Company will test during peak hours only once per summer season."

3. Providing Edison with more flexibility in cycling air conditioning customers on a localized level would minimize the impact of emergency outages. To better protect the reliability of Edison's distribution system we will allow its proposed revisions with the modifications set forth herein.

### **COMMENTS**

1. The only party, Edison, has stipulated to waive the 30-day waiting period required by PU Code section 311(g)(1) and the opportunity to file comments on the draft decision. Accordingly, this matter will be placed on the Commission's agenda directly for prompt action.

### **FINDINGS**

1. Currently, the ISO can direct Edison to curtail specific amounts of load when operating reserves are forecast to fall below 5 percent in the next hour.
2. In A.L. 1352-E Edison requests authority to activate its Air Conditioning Cycling program on a more localized basis if the integrity of its distribution facilities is jeopardized.
3. Edison states that it intends to track when and why cycling is initiated and report such information to the ISO.
4. Edison states that if it were unable to activate its Air Conditioning Cycling program on a more localized basis, conditions may arise that would cause a more widespread interruption in power supply.
5. Currently, 147,979 APS customers would be impacted by Edison's air conditioning cycling program.
6. Under tariffs D-APS and GS-APS Edison should add to SC 5.:

"Testing of the Control Device will only occur if the Company does not receive the desired load reduction results after an Air Conditioning Cycling event. Testing of the Control Device will interrupt power to a customer's air conditioner a maximum of 15

minutes. The Company will test during peak hours only once per summer season.”

7. Under Tariffs D-APS and GS-APS, SC 5. the second sentence of the qualifying paragraph, should read:

“Cycling under Subsection b. is limited to situations when the Company declares a Category One, Two, or Three Storm Alert and a condition exists that creates disruptions on the Company’s electrical distribution system which, if left unresolved, could damage the electrical system or cause a more widespread interruption in the supply of power. A Category One Storm Alert is limited to a geographical area and is considered stable; or to a widespread power outage from a transmission disturbance and the transmission and distribution systems are considered stable. A Category Two Storm Alert requires additional resources outside zone/area boundaries; or the storm is escalating and involves two or more zones/areas. A Category Three Storm Alert is a catastrophic emergency that involves multiple zones/areas, resources are fully committed, and additional assistance, such as mutual aid, are requested.”

8. Allowing its proposed revisions, as modified, would give Edison more flexibility in protecting the reliability of its systems serving local areas.
9. Edison discussed its proposed revisions with the ISO, and the ISO has not objected.

**THEREFORE, IT IS ORDERED that:**

1. Advice letter 1352-E is approved subject to the following modifications:
  - a) Under tariffs D-APS and GS-APS Edison shall add to SC 5.:

“Testing of the Control Device will only occur if the Company does not receive the desired load reduction results after an Air Conditioning Cycling event. Testing of the Control Device will interrupt power to a customer’s air conditioner a maximum of 15

minutes. The Company will test during peak hours only once per summer season.”

- b) Under Tariffs D-APS and GS-APS, SC 5. the second sentence of the qualifying paragraph, shall read:

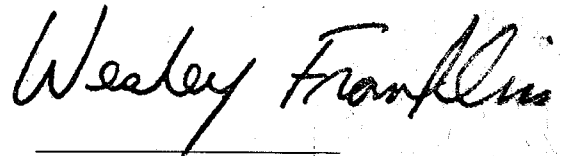
“Cycling under Subsection b. is limited to situations when the Company declares a Category One, Two, or Three Storm Alert and a condition exists that creates disruptions on the Company’s electrical distribution system which, if left unresolved, could damage the electrical system or cause a more widespread interruption in the supply of power. A Category One Storm Alert is limited to a geographical area and is considered stable; or to a widespread power outage from a transmission disturbance and the transmission and distribution systems are considered stable. A Category Two Storm Alert requires additional resources outside zone/area boundaries; or the storm is escalating and involves two or more zones/areas. A Category Three Storm Alert is a catastrophic emergency that involves multiple zones/areas, resources are fully committed, and additional assistance, such as mutual aid, are requested.”

2. Should Edison choose to implement the modification to Ordering Paragraph No. 1, it shall file a supplemental advice letter with tariff sheets, consistent with this Resolution within 20 days. The supplemental advice letter shall be effective on the date filed. If Edison doesn’t file a supplemental advice letter within 20 days, the approval of the Resolution is vacated.
3. This Resolution is effective today.



June 10, 1999

I certify that the forgoing resolution was duly introduced, passed, and adopted at a conference of the Public Utilities Commission of the State of California held on June 10, 1999, the following Commissioners voting favorably thereon:



WESLEY M. FRANKLIN  
Executive Director

RICHARD A. BILAS  
President  
HENRY M. DUQUE  
JOSIAH L. NEEPER  
LORETTA M. LYNCH  
JOEL Z. HYATT  
Commissioners