RELIABILITY STUDIES ON 11KV FEEDER LINES IN AKURE, ONDO STATE, NIGERIA.

BY

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THE FEDERAL UNIVERSITY OF TECHNOLOGY AKURE

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A THESIS IN DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING SUBMITTED TO THE SCHOOL OF POST GRADUATE STUDIES TOWARDS THE DEGREE OF MASTER OF ENGINEERING (M. ENG.) IN ELECTRICAL AND ELECTRONICS ENGINEERING (POWER OPTION)

THE FEDERAL UNIVERSITY OF TECHNOLOGY AKURE

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CERTIFICATION

This is to certify that this thesis has been read and approved as meeting the requirement of the Department of Electrical and Electronics Engineering, Federal University of Technology Akure, for the award of Master of Engineering in Electrical and Electronics (power option).

Bisi Adeloye

DR. V. S. A. ADELOYE
Supervisor & H.O.D. EEE

31-8-2003.

DATE

DEDICATION

This thesis is dedicated to the glory of Almighty God – the author of life and giver of wisdom; all lovers of human progress and my beloved ***Oluwatimilehin Temidayo Ale****.*

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"Unless the Lord build the house, those who build it labour in vain".

Hence, the extent to which any man succeeds depends on the will of Almighty God as well as those elements within his social and material environment. Consequently, one record success only where conducive environment exists and when our great Lord permits.

I am therefore grateful to the faithful Almighty God who has always been my source of strength, knowledge and understanding throughout the course of my study.

My special thanks and gratefulness go to my supervisors - ENGR. J.O. ONI and DR. V. S. A. ADELOYE for their valuable assistance. Their guidance, comments and suggestions had made this thesis a successful one. May God Almighty replenish their efforts in Jesus name. I sincerely appreciate and acknowledge the support of the entire member of staffs of Electrical and Electronic Engineering Department for their cooperation and support.

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This acknowledgment will not be complete without expressing my profound gratitude to my God chosen wife – Folasade Itunu, iya afin Ale *for her prayer, commitment, love encouragement and support; my children – Temitope and Temidayo Ale, I thank you all.*

Finally, I appreciate and acknowledge the support of all who had contributed in no small measure to the successful completion of this programme. May you never lack good things in your life. At the end of our journey on this sinful earth, count us worthy in your kingdom oh Lord. Amen

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ABSTRACT

Power interruptions due to occurrence of system faults constitute a problem to electricity consumers in Nigeria. This project report records the result of a study on Akure township main substation (a case study). Fault data on the 11kV feeder lines were recorded from the daily logbooks. These were collated and analysed to estimate the reliability of the power system in Akure over a five-year period (1998 – 2002). Procedural processes for an improved reliability are suggested.

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NOMENCLATURE

OC	Over current
EF	Earth fault
CB	Circuit breaker
S/S	Substation
Tx	Transmission station
RMU	Ring main unit
Xf	Transformer
Freq.	Frequency
TRM&S	Trial reclosure made and stay
3-Φ	3 phase
Xarms	Cross arms
kVA	Kilovolt-ampere
@	At
mmf	Magneto-motive-force

CHAPTER ONE

INTRODUCTION

The energy sector of any nation occupies a place of central importance in term of its relative contribution to the national socio-economic goal of raising or elevating the productivity and therefore, higher living standard. Of all the sub-sectors comprising the energy sector, none has a greater impact on the lives of the citizenry than electricity.

The historical development of electricity supply in Nigeria dates back to 1896 when a bank of two 30kVA generators were installed in Lagos, at the present site of National Electric Power Authority (NEPA) Headquarters Annex. Later on, electricity supply from the generating sets was extended to some other parts of the country.

In 1946, the Nigerian Government Electricity Undertaking (NGEU) was established under the then Public Works Department (PWD) to handle electricity supply in Lagos environs. Along side with NGEU, there were other electricity undertakings owned and managed by Local Authorities and private organizations.

However, the need to co-ordinate various electricity supply activities across the country and to facilitate even development culminated in the establishment of Electricity Corporation of Nigeria (ECN) in 1950.

In order to meet electricity demand growth then, other government authorized bodies, like Nigeria Electricity Supply Company (NESCO) in Jos and African Timber and

Plywood Company at Sapele co-existed with ECN. Further increase in electricity demand, which rose to 39MW in Lagos alone by October 1960, was met by Ijora power station (Commissioned in 1956) with a total output capacity of 45MW.

Further development in electricity supply in the country resulted in the construction of the first 132kV transmission line that linked Lagos with Ibadan through Shagamu was commissioned in June, 1961. To further boost power supply in the country, Niger Dams Authority (NDA) came into existence in 1962 to harness river Niger and others in the country for the purpose of hydro-electric generation, and enhancement of navigation, fisheries and irrigation as additional responsibilities.

To further spread power supply in the country, the extension of the first 132kV line was made to Osogbo, Benin and Ugheli. The extension was referred to as western system and its equivalent in the northern part of the country was termed K-Z-K system, which linked Kaduna and Kano via Zaria.

In February 1969, the impact of NDA was felt across the country when Kainji hydroelectric dam was commissioned with installed capacity of 320MW then. The commissioning of Kainji hydroelectric dam gave rise to the first Kainji – Lagos 330kV transmission line that was put into operation in June 1969. The power from Kainji dam was then made available to the public through the ECN.

In order to ensure more effective co-ordination of activities between NDA and ECN, a merger of the two bodies was effected in January 1973 to form the present National Electric Power Authority (NEPA).

Electric energy is a facilitator of the technological advancement of any nation, because nearly all other sectors of development depend on it for their effectiveness. There are alternative energy sources but they are costly to acquire and maintain. By its set-up NEPA was to become a monopolist provider of electric power in Nigeria.

Over the few decades, electricity supply in Nigeria had been riddled with a lot of problems ranging from poor financing to inadequacy of facilities and the non-commitment of NEPA staff to make the system efficient. Two years ago, i.e in 2001 Ghana celebrated one year of uninterrupted power supply, but here in Nigeria, the condition has remained pathetic with interruption on daily basis making Nigeria the largest market for generators in the whole world. (Abitogun, 2003).

Since the management of continuous, economical and reliable power supply in a developing economy like Nigeria is a difficult task, there is a need for combined effort of professionals in both energy industries and academic institutions.

A power system supplies both large and small consumers with electrical energy. In modern society, continuous supply of energy is always expected but this is not possible practically due to random failures, which are generally outside the control of power system engineers. However, the system failure rate can be reduced by increased investment during either the planning or operating phase or both.

It is not always feasible and economical to generate electric power at the location of its use. Consequently, bulk energy generated in the generating stations must be transmitted over a long distance via an electric transmission network to consumers. In a power network, bulk power move on the grid or transmission links. From the grid,

power is then subdivided into smaller blocks based on operating voltage level and fed into the sub-transmission portions of the power network. Finally, the individual small and large consumers are serviced from the distribution network.

It is at the consumers' end the frequent faults are experienced. A fault occurs on a power system when one or more energized conductors contact other conductors or ground. Of course, in the event of insulation failure, it may not be necessary for the conductors to be in actual contact. A fault can also occur with the current flowing through an ionized path, which could be through air or some other substance that is normally an insulator.

During fault, the voltage between the two parts is reduced to zero for metal-to-metal contact or to a very low value if the short circuit path is through an arc. Thus, currents of abnormally high magnitude flow through the system to fault point. When there is a fault, consumers are denied of electricity supply. The more the fault, the lower the reliability figures of the power system. Hence, the need for this thesis, which is to determine the reliability of power supply in Akure Township.

1.1 OBJECTIVE OF THE STUDY

The general objective of this research is to determine the reliability of the 11kV power supply in Akure town.

1.1.1 SPECIFIC OBJECTIVES OF THE STUDY

(i) Determine the reliability of the 11kV feeder lines.

(ii) Proffer solutions to identified causes of instability.

(iii) Determine the cost implication of unstable power supply.

1.1.2 EXPECTED CONTRIBUTION TO KNOWLEDGE

This research project will:

1. Identify the shortcomings in the existing network due to preventable faults on the 11kV Akure township distribution network.
2. Provide solution to reduce occurrence of faults to barest minimum

1.2 SCOPE OF THIS RESEARCH

National Electric Power Authority (NEPA) Akure District comprises of;

(a) Akure Undertaking

(b) Owo Undertaking

(c) Ondo Undertaking and

(d) Okitipupa Service Center.

The Akure Undertaking itself is sub-divided into Obaile service center, which consists of one 15MVA, 33/11kV transformer that serves Obaile feeder, Ijapo feeder and Alagbaka feeder, and Akure township main substation (a case study) comprises of two 15MVA, 33/11kV transformers that serve 5 feeders. The scope of this work is the Akure township main substation. This was chosen because a high percentage of the reported faults came from this densely populated area.

CHAPTER TWO

LITERATURE REVIEW

Electric power is normally generated between 11 to 25kV in a power station. To transmit over long distances, it is then stepped-up to 330kV. This power is carried through a primary transmission network of high voltage lines. Usually, these lines run into hundreds of kilometers and deliver the power into common power pool called the grid. The grid is connected to the load center (cities) through a secondary transmission network of normally 132kV lines. These lines terminate into a 33kV at 132/33kV substation. At 33/11kV substation the voltage is stepped-down to 11kV for power distribution to load points through a secondary distribution network

The supply system consists of network of conductors and associated equipment through which energy is transmitted from the generating stations to the consumers. Basically, the power system consists of Generation, Transmission, Distribution and Consumption. The term Generation means obtaining electric power by conversion from other form of power, as of today, the country's bulk of power comes from five thermal stations and three hydro generating stations: They include Afam thermal power station, Delta thermal power station, Ijora thermal power station, Sapele thermal power station and Lagos (Egbin) thermal power station. The hydro stations are located in Kainji, Jebba and Shiroro. The breakdown of the total installed capacities of the power stations show that Kainji, Jebba and Shiroro generate 760MW, 540MW and 600MW respectively, while the capacities of the thermal stations are: Afam - 811MW, Delta - 840MW, Sapele - 1208MW, Ijora - 60MW, and Lagos - 1320MW.

The power network, which generally concerns the common man, is the distribution network of 11kV lines. Each 11kV feeder, which emanates from the 33/11kV substation branches further into several subsidiary 11kV feeders to carry power close to the load point. At these load points, a transformer further reduces the voltage from 11kV to 415V to provide the last-mile connection through 415V feeders (low tension feeders) to individual consumers either at 240V(single phase supply) or at 415V (three phase supply). In urban areas owing to the density of consumers, the length of an 11kV feeder is generally up to 3km. On the other hand, in rural areas the feeder length is much larger (up to 20km). A 415V feeder should normally be restricted to about 0.5 to 1.0km. Unduly long feeders link to low voltage at consumer ends

Similarly, consumption means converting electric power into other forms. Transmission deals with the transfer of electric power in bulk, either by underground cable or overhead lines over a considerable distance; and distribution is the conveyance of power to consumers by means of lower voltage networks. The transmission system is divided into two: Primary and secondary transmission. Distribution divides into primary, secondary and tertiary distribution. See fig. 2.1

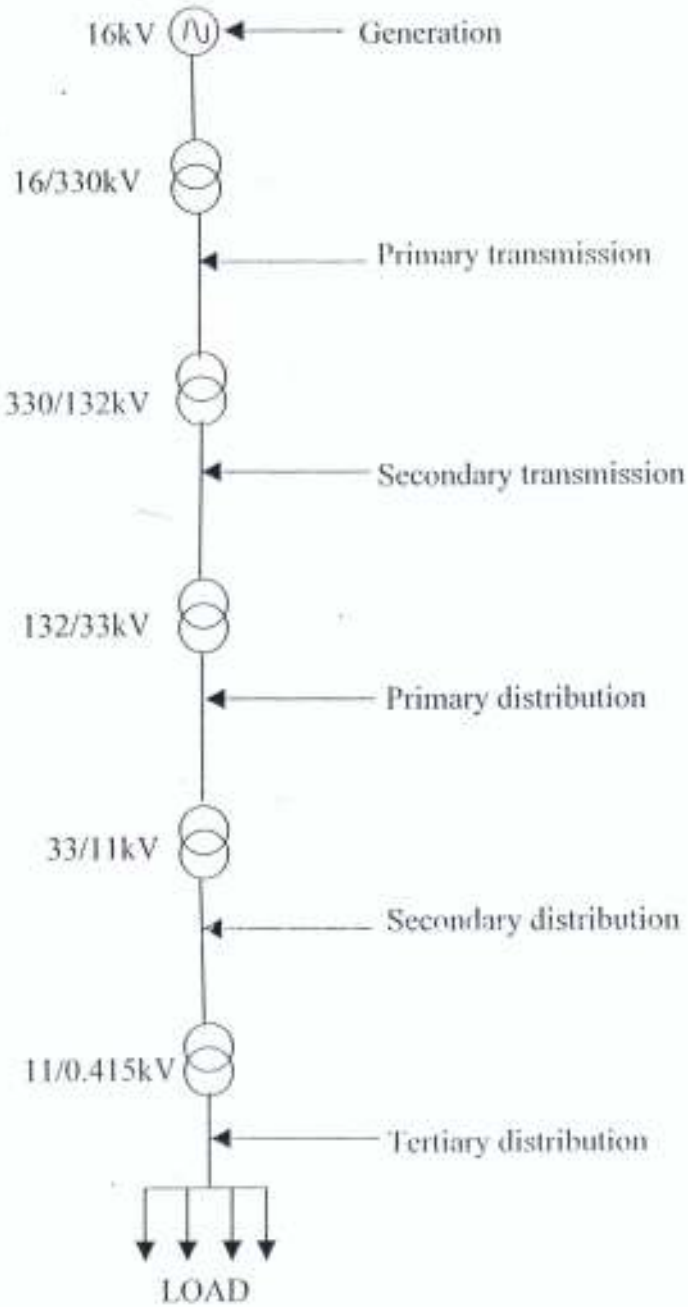

Fig. 2.1 One line diagram of power system in Nigeria.

In a power network, bulk power moves on the grid or transmission links. From the grid, power is subdivided into smaller blocks based on operating voltage levels and fed into the sub-transmission portions of the power network. Finally, the distribution network services the individual small consumers. Consumers drawing large amount of power up to 500kVA and above, take supply from the secondary distribution network, but the bulk of consumers with smaller loads take supply from tertiary distribution.

In an a.c. system, there is always a voltage transformation at each point where sub-division takes place by means of a transformer. Such a place is called a substation. Below are the voltage levels in Nigeria.

Primary transmission	-	330kV Grid Voltage	
Secondary transmission	-	132kV	
Primary distribution	-	33kV	
Secondary distribution	-	11kV	
Tertiary distribution.	-	415V	Phase - Phase
	-	240V	Phase - Neutral

The standard frequency in this country is 50Hz.

2.1 FAULT

The normal operation of a power system gets disturbed or disrupted when abnormally high current flows through an abnormal path as a result of partial or complete failure of insulation at one or more points of the system. The complete failure of insulation is called "short circuit" or "fault", (Turan, 1987).

A fault is not to be confused with an overload. An overload means that the system is loaded above the normal load for which the system is designed. The voltage at the

overload point may drop to a low value but not zero, as would be the case in the event of a fault.

Substation buses are designed to withstand the maximum expected faults due to extraordinary large mechanical forces produced by heavy short circuit currents. Transformer failures can be due to the insulation deterioration caused by ageing or overloading or over voltage as a result of lightning or switching transients.

Most of the faults on overhead transmission lines are transient in nature, (Turan, 1987). Therefore, a service can be restored by isolating and reclosing the faulty line section very rapidly, allowing only enough time for the air to be deionized after the fault arc has been extinquished so as to prevent restriking. This procedure is called high-speed reclosing.

2.1.1 TYPES OF FAULT

Basically, 3-phase power system faults can be categorized as follows:

(a) Shunt faults

1. Balanced (symmetrical) 3- phase faults
   - 3-phase direct (L-L-L) faults.
   - 3-phase faults through fault impedance to ground (L-L-L-G).

2 Unbalanced (Unsymmetrical) faults.
   - Single line to ground (SLG) faults.
   - Line to line (L-L) faults.
   - Double line to ground (DLG) faults.

(b) Open line / Series faults

a. One line open

b. Two lines open

(c) Simultaneous faults

1. A shunt fault at one fault point and shunt fault at the other
2. A shunt fault at one fault point and series fault at the other
3. A series fault at one fault point and series fault at the other
4. A series fault at one fault point and shunt fault at the other

Examples of both balanced and unbalanced faults are shown in Fig. 2.2. The path to earth contains resistance in form of an arc as shown in Fig.2.2 (f). The shunt faults are more severe than the series faults.

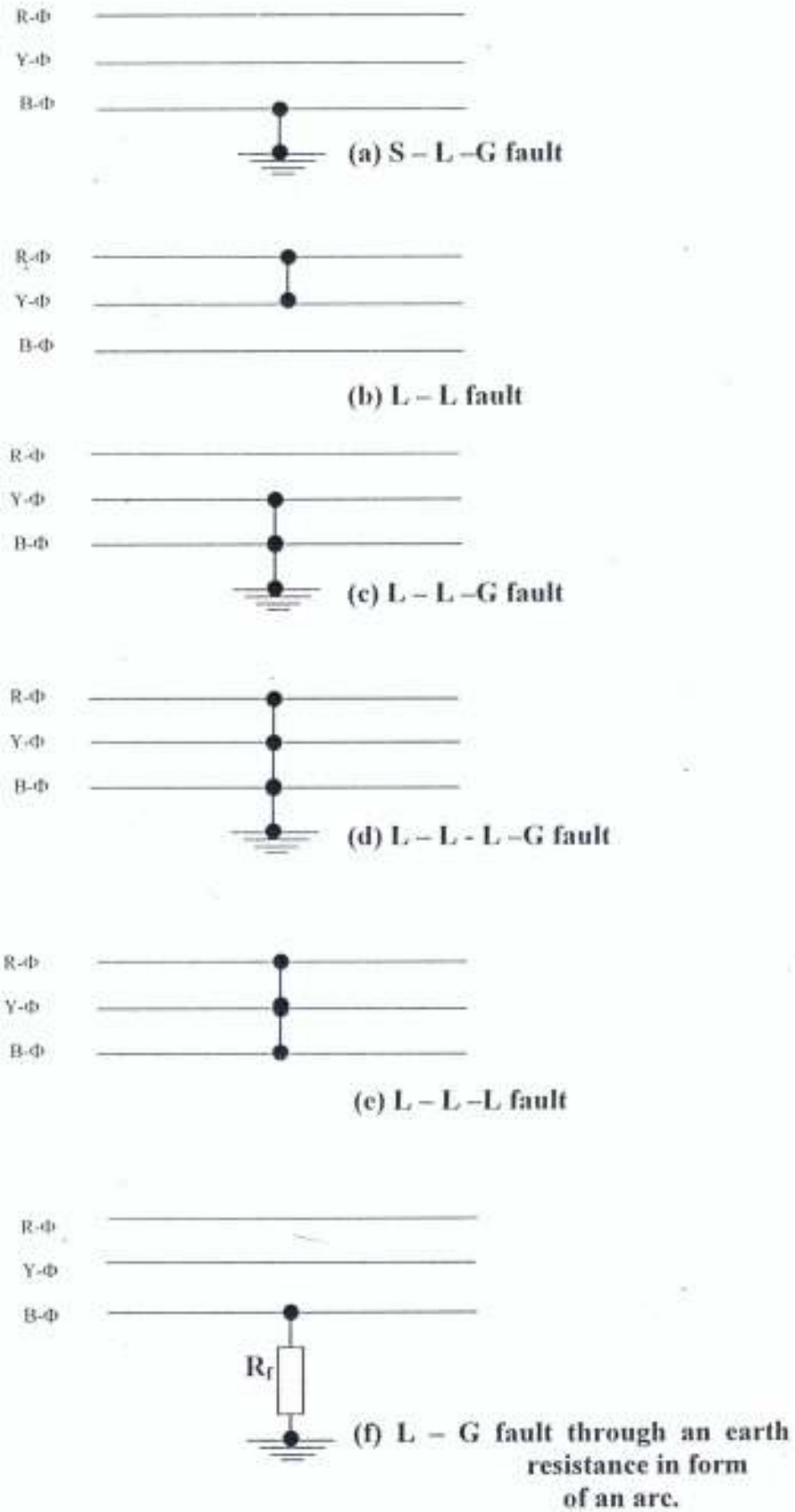

Fig. 2.2. Common types of electrical fault

2.1.2 CAUSES OF FAULTS

Causes of fault(s) are categorised into four basic groups namely:

1. Nature

- Rainfall- Heavy rainfall accomplished by wind destroys both LT & HT poles.

  - Erosion bridges lines at substations where cable insulation is bad.

- Wind - Destroys poles.

  - Bridges uneven sagging lines

- Thunderstorm - Its momentarily discharge produces very high current to the system, which disrupt the system.

- Breaking of accessories - Expansion and contraction of insulation causes cracks thus leakage of current occurred.

  - Excessive ice loading on bare cable leads to fault when the cable breaks.

2. Animal

- Small animals- Phase bridging by birds, snakes, squirrel, rat, etc.
- Vandalization- In the process of sealing live equipment, fault occurs.
- Overloading- Phase distribution imbalance causes fault.
- Accident- Overhead collision with poles bridges lines.
- Deforestation processes- Trees falling on live wires bridge the phases.
- Wrong size of cable- When cable takes more than its capacity, it melts off

3. Vegetation

- Trees- Tree branches touching the lines bridge the phases
- Climbers- It climbs the pole and bridge the phases.

4. Equipment/ machines

- Ageing- Insulation gets destroyed.

-Parts start wearing.

- Its capacity- If the load consumption is more than the capacity of the machine, overloading occurs which destroy such a system quickly.
- Inadequate maintenance- Preventive maintenance increases the life span of a machine.

2.1.3 WAYS OF CHECKING FAULTS.

The quality of power system can be improved in 3 ways.

- Reducing the number of faults by the use of proper earthing, relays and circuit breakers.
- Reducing the number of consumers affected by a fault.
- Reducing the time taken to restore supply following a fault (John 2001)

Amongst these, earthing and the use of protecting devices is the best option. If paraventure, this failed, the third option follows – quick response to fault clearing.

1. EARTHING OR SYSTEM GROUNDING.

Grounding means that a given electric system, circuit or device is connected to the earth or to some other equivalent conducting body of relatively large extent serving in the place of the former with the purpose of establishing and maintaining the potential of conductors connecting to it approve at the potential of the earth and allowing for conducting electric from and to the earth of its equivalent.

A grounding system is one that has at least one neutral point that is intentionally grounded either solidly or through a current limiting device. For example, most transformer neutral in transmission system are solidly grounded. Whereas generator

neutrals are usually grounded through some type of current limiting device to limit the ground fault current.

The various methods include:

- Ungrounded or free-neutral
- Solidly grounded
- Resistance grounded
- Reactance grounded
- Petersen coil grounded

Grounding, fault current and its effect on the system

For a LG fault-involving phase a say the potential of that phase becomes equal to the ground potential, and hence no charging current flows in this phase. Then a charging current 3x the normal per-phase charging current flows in the faulted phase because the phase voltage of each of the two healthy phases increases 3 times it phase value.

i.e. $I_g = 3I_R = 3I_Y$ as in fig 2.2 (a)

- The insulation of all apparatus connected to the lines is subjected to this high voltage. If it persists for some long period the insulation may not able to withstand it, causing it to weaken (cumulatively) eventually ending up with insulation failure.

- To operate the protective devices. It is crucial that fault current be sufficient to operate them. But for a LG fault on an un-grounded neutral system, the resultant capacitive current is usually not large enough to actuate the protective devices.

Because of these problems with underground neutral systems, in most of the modern high-voltage systems, the neutrals are grounded. The advantages of neutral grounding

include the following:

1. Voltages of phases are restricted to the line-to-ground voltages since the neutral point is not shifted in this system.
2. The ground relays can be used to protect against ground faults
3. The high voltages caused by arcing ground or transient SLG faults are eliminated.
4. The over voltages caused by lighting are easily eliminated contrary to the case of the isolated neutral systems.
5. The induced static charges do not cause any disturbance since they are conducted to ground immediately.
6. It provides greater safety to personnel and equipment.
7. It provides a reliable system.
8. It provides a reduction in operating and maintenance expenses.

The grounding resistance of a buried electrode is a function of (1) the resistance of the electrode itself and connections to it, (2) contact resistance between the electrode and the surrounding soil, and (3) resistance of the surrounding soil, from the electrode surface outward. The first two resistances are very small with respect to soil resistance and therefore may be neglected in some applications. Whereas the third one is usually very large, depending on the type of soil, chemical ingredients, moisture level, and temperature of the soil surrounding the electrode.

2. PROTECTIVE SYSTEM.

The need for Power System Protection.

Faults are defects in power systems when current and power are diverted from their intended paths. They can be due to insulation failure (lightning, pollution, and

overvoltage) or short-circuiting of live conductors. Protection is needed to isolate the faulted part from the remaining healthy part of power system:

* To minimise damage to plant due to overheating or overvoltage
* To minimise injury to personnel
* To maintain continuity of power supply
* To prevent instability of generators

Protective relays detect abnormal conditions and initiate the operation of circuit breaker. Protection does not prevent the appearance of faults. It gets into action only after the fault has occurred. It is not possible to satisfy all the objectives, as proper cost-to-benefit ratio should be considered. The cost of protection is considered with the cost of the plant to be protected, but usually should not be more than 5% of the total cost. However, if the apparatus to be protected is of paramount importance like the generator or major transmission line, reliability can sometimes override the cost consideration.

A typical protective system is shown in Fig. 2.3, which consists of

1. **Protective current transformers (CTs), Potential transformers (PTs)** for measuring the system voltages and currents.
2. **Relays (electromechanical, solid state or digital)** with their associated wiring and relay contacts, which receive information from CTs and PTs. The relays decide whether the system is healthy or not. When a section of the system experiences some disturbance, the relays of that section take action to initiate the operation of circuit breakers.
3. **Circuit breakers (CBs)**, which isolate the faulted part from the rest of power system. The CB trip coils are energized from station batteries.

Principles of Operation of Protective System.

The relays operate usually from currents and voltages derived from current and voltage transformers or potential devices. A station battery usually provides the CB trip current. Successful clearing depends on the following:

(i) Condition of battery

(ii) Continuity of wiring and trip coil

(iii) Proper mechanical/electrical operation of the CB.

(iv) Closing of relay trip contacts.

Some relays are made to operate when the current increases above certain level (i.e. over current relay). Others may compare current and voltage and operate when impedance is less than a given value (i.e. impedance relay).

Zones of Protection

Power system is protected in zones, each containing an alternator, a transformer, a busbar section or a transmission line. Each zone has one or more protective schemes, which are coordinated with the overall protection with the following characteristics:

* The zones are arranged to overlap so that no part of the system remains unprotected as in Fig. 2.4
* CBs (see e.g. zone 4) are located in the overlapped region.
* For a fault anywhere in a zone, all CBs in that zone open to clear the fault. For example, the two CBs in zone 5 should open for a fault at P_1, and all the five CBs in zones 4 & 5 should open for a fault at P_2. In order to prevent "wide-spread" CB tripping and loss of service, overlap regions are kept as small as possible. Fig. 2.5 shows how the two CTs, one for zone 1 and one for zone 2 are arranged to achieve zoning.

Requirements For Protection

Protective relaying must have the following characteristics:

1. **Reliability:** The relay may be idle for periods extending to years and be required to operate with fast response, as intended, the first time. The penalty for failure to operate may run into millions of dollars.
2. **Selectivity or discrimination:** It must not respond to abnormal, but harmless system conditions such as switching transients or sudden change in load.
3. **Sensitivity**: It must not fail to operate, even in borderline situations, when operation was planned.
4. **Speed:** It should make decision to act as close to instantaneously as possible.

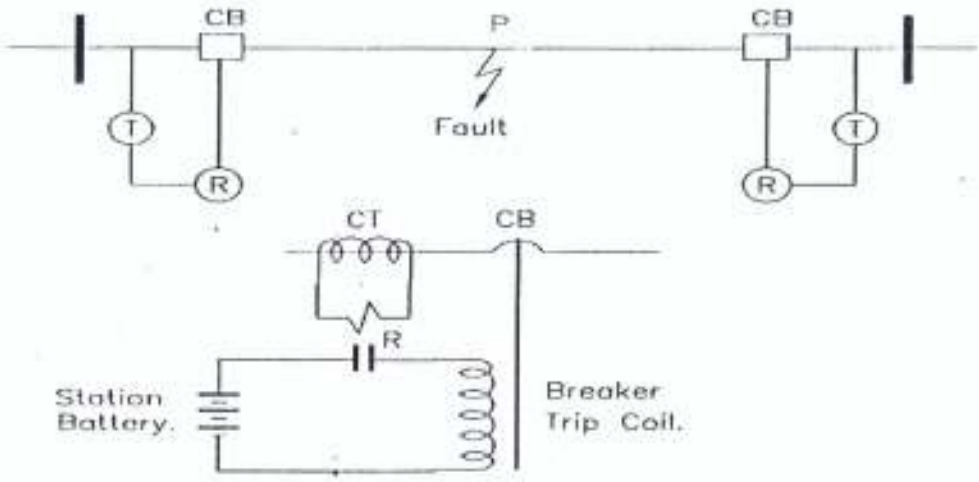

Fig 2.3 Components of Power System Protection.

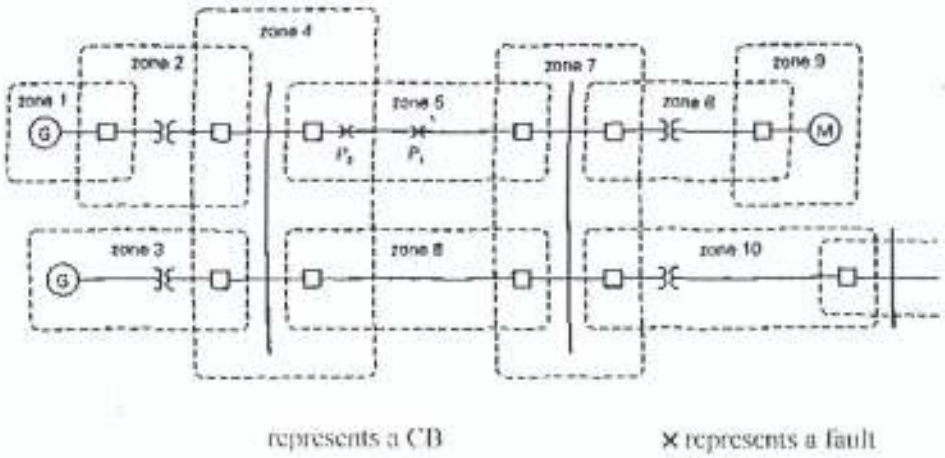

Fig. 2.4 Zones of Protection.

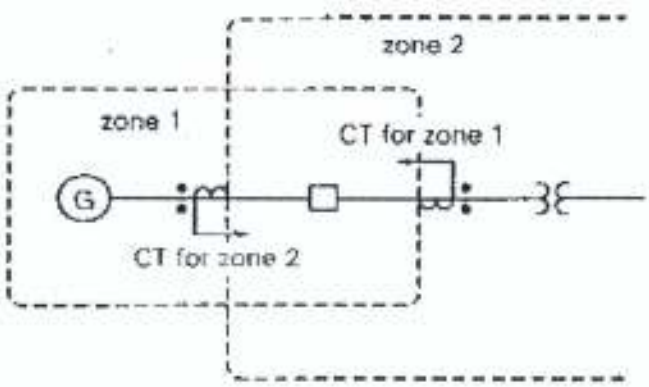

Fig. 2.5 Overlapping Protection around a CB

Differential Protection

A differential protection scheme is shown in Fig. 2.6. This system uses a *Differential Relay* having a spring loaded balanced beam supporting an operating coil and a restraining coil. These coils are connected to two sets of CTs, which define the ends of a protected zone. By examining the circuit in Fig. 2.6, it can be seen that the relay operates when a differential current ($I_1 - I_2$) of sufficient magnitude flows through the operating coil. Hence this relay is known as the differential relay. It is also known as *Biased Relay* or *Balanced Beam Relay*. These relays are used in unit protection systems.

Unit Protection System

A unit protection system is typically of the differential type, which comprises of two sets of CTs, which may be at some distance apart defining the ends of the protected section. The CTs are interconnected by a pilot-wire circuit incorporating the protective relays, so that the protective system operates immediately without the use of time grading when there is a fault in the protected zone. Such protection schemes are ideally suited for the protection of generators, transformers, busbars, reactors, capacitors and short transmission lines etc. Unit protection systems are instantaneous (0.1 second) and their time settings are independent of other protective systems.

The basic principle of the unit protection systems is that the currents entering and leaving the protected section are identical if the section is healthy. The relays are connected to measure the difference between these two currents. So unit protection systems are also referred to as differential or balanced protection systems. Unit protection systems are insensitive to load current and external fault current. They are classified into

(i) circulating-current systems used for short zones and

(ii) balanced-voltage system used for long zones.

Generator Protection

The collective function of all forms of protection applied to generators is to reduce the outage period to minimum by rapid discriminative clearance of faults. Faults that occur in a generating unit can be insulation failure due to stator or rotor faults, or abnormal running conditions due to loss of excitation, unbalanced loading, overloading, failure of prime mover, over speeding or vibration.

The main protection for stator winding against phase and earth faults is provided by the unit protection system shown in Fig. 2.7. If an internal fault occurs on the stator winding, it is not sufficient to open the main circuit breaker to clear the fault because the generator will continue to supply power to the fault until its field excitation is suppressed. Hence if the main protection operates, the main CB should be opened, field supply is suppressed and input supply (steam for example) to the prime mover should be shut off.

In addition to the main protection, large alternators are fitted with other non-urgent protective devices to take care of the problems listed above. If any of the non-urgent devices operate, first the steam supply to the prime mover is shut off and the CB is opened after the turbine has dissipated the energy of the trapped steam. This condition is signaled when alternator reverse power relay operates.

A differential protective system will not detect a short circuit between the turns on the same phase. The generators are usually grounded through resistance or inductor to

limit the fault current. If an earth fault occurs near the star point of an alternator, the voltage behind the fault may be insufficient to create a relay operating current greater than the pick-up (setting) current.

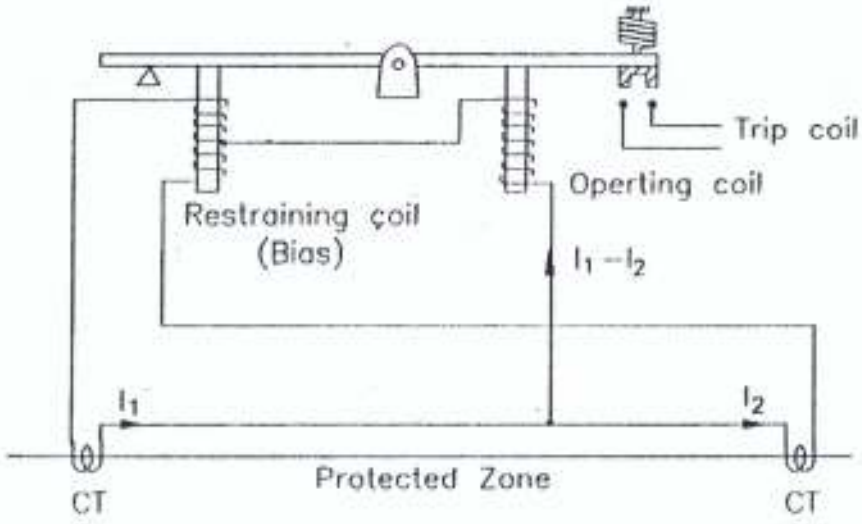

Fig. 2.6 Differential Protection.

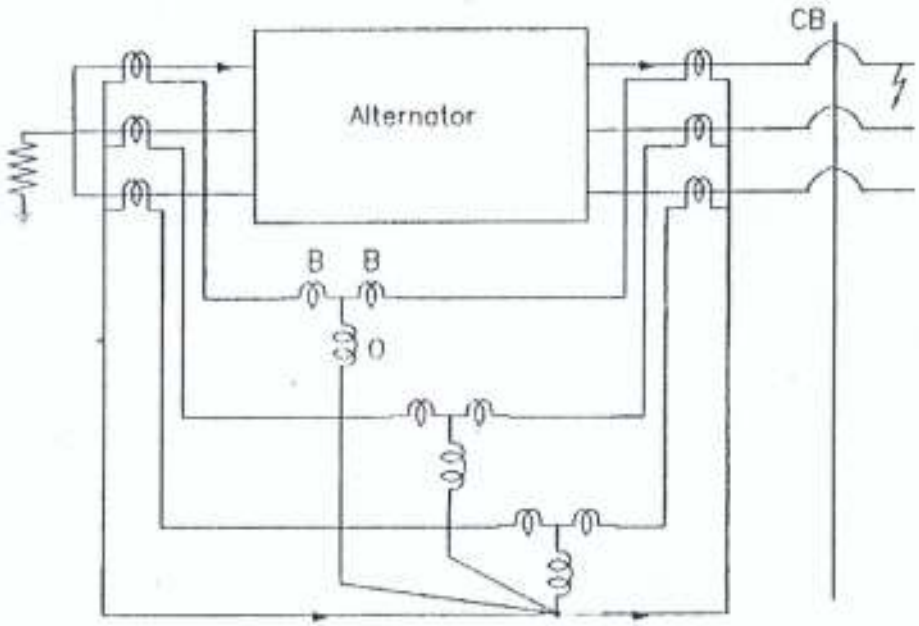

Fig. 2.7 Generator Protection System.

Transformer Protection

In contrast to rotating machines, the problems of protecting transformers are relatively less complicated. Power transformer, being static, is totally enclosed and oil immersed. Hence it develops faults only rarely but the consequence of even a rare fault may be serious unless it is quickly disconnected from the system. The faults that may occur in a transformer are of the following types:

1. Faults in the windings and connections.
2. Incipient faults.
    - Insulation failure of the laminations and core bolts.
    - Insulation between the windings, between the windings and core, and the conductor insulation may be of poor quality; may have been damaged mechanically; may be brittle because of aging or overloading.
    - Badly made joints or connections.
3. Overloads and external short-circuit.

It is usual practice to provide gas and oil surge protection (known as Buchholz relay) for all transformers rated above 5 MVA. For small distribution transformers, HV fuses or over-current / earth fault protection schemes are employed. Differential protection similar to the one shown in Fig. 2.8 is invariably used for all transformers rated 5 MVA and above.

In Fig. 2.8, the primary windings are connected in delta while the secondary windings are connected in star, it should be noted that comparison of current takes place at the relays which are connected on the secondary side of the CTs. and in a Δ/Y transformer, the primary and secondary line currents are 30^0 out of phase.

Bus Protection

A bus being a power system element that does not extend over long distance as transmission line does is deadly suited for protection by differential relay. Bus zone protection includes, besides the bus itself the apparatus such as CBs, disconnecting switches, instrument transformer and bus sectionalizing reactor etc. Bus zone is more valuable to the effects of faults once it occurs for the following reasons: -

Concentration of fault MVA increases the risk of damage

Loss of bus zone would result in widespread supply interruption.

It is of utmost importance therefore that bus zone protection should be fast, stable and most reliable. Periodic testing is necessary to check the pick-up of the relay on internal faults. Bus zone faults can generally be classified under one of the following headings:

- Failure of CB to interrupt fault current.
- Insulation failure due to material deteriorating.
- Flashover caused by prolonged and excessive over voltages.
- Errors in the operation & maintenance of switchgear.
- Foreign objects accidentally falling across bus bars.

During normal load conditions or external fault conditions sum of currents entering a bus equals the sum of those leaving. If the sum of these currents (for a given conductor) is not zero, it must be due to a short circuit either a ground fault or a phase-to-phase fault. Differential schemes can be applied for both these types of faults, the essential difference in the schemes being the method of connecting the circuits.

Lines Protection

Classification of A.C Electrical Power Lines

Primary transmission	-	330kV
Secondary transmission	-	132kV
Primary distribution	-	33kV
Secondary distribution	-	11kV
Tertiary distribution.	-	(240 - 415) V

Lines are protected by overcurrent, distance or pilot relays, depending on the requirements. A distance relay for instance requires the current and voltage signals as input quantities at the relaying point. Refer to Fig. 2.9 for an "impedance" relay. The voltage signal (from the line to neutral voltage V_{LN}) provides the restraining torque while the current signal (from the line current I_L) provides the operating torque. When the relay is at the verge of operation,

$$k_1 V_{LN}^2 = k_2 I_L^2$$

$$\text{or } Z_L = \frac{V_{LN}}{I_L} = \sqrt{\left(\frac{k_2}{k_1}\right)} = k_3$$

In other words, the relay "sees" an impedance, which is proportional to the length of the line between the relay location and the fault. The relay operates, when the impedance seen is less than or equal to a constant k_3. The relay is thus known as an impedance distance relay, whose impedance setting can be adjusted by changing the mmf of the restraining coil.

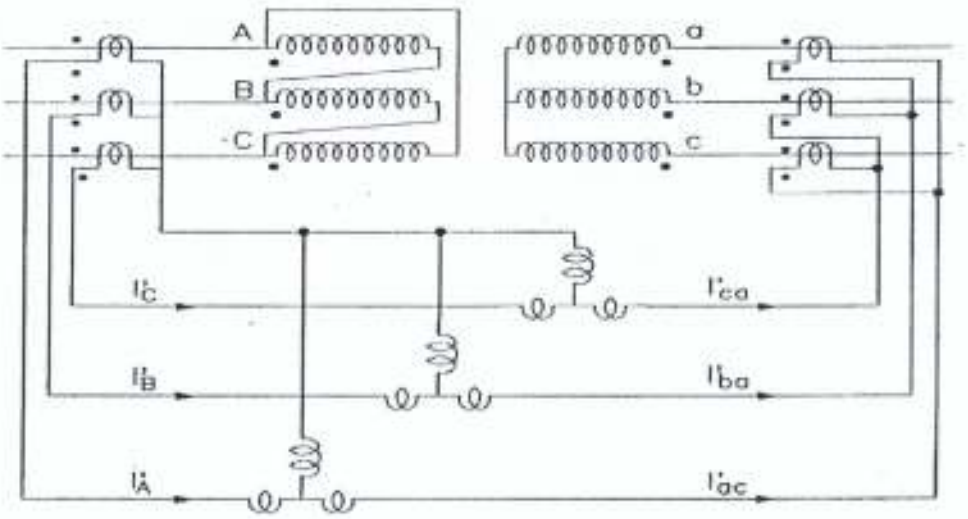

Fig. 2.8 Transformer Differential Protection.

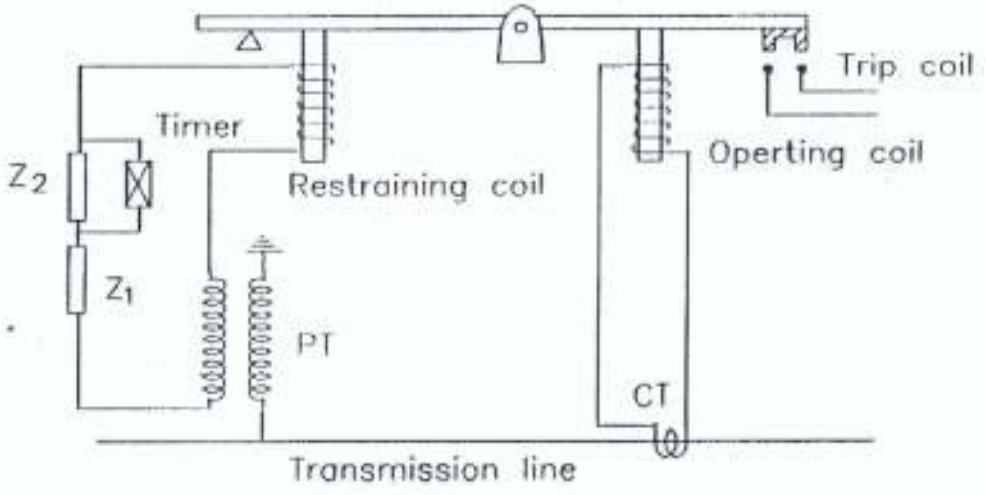

Fig. 2.9 Layout of Impedance Relay.

2.2 RELIABILITY OF A SYSTEM

This is the probability that a system or equipment will perform a required function under stated conditions, for a stated period of time, (David 1988). This can also be defined as the ability of a system to maintain its quality under specified conditions, within a specified time; quality is associated with manufacturing, while reliability is often used by the consumers. Environmental conditions such as temperature, humidity, vibration, etc affect the quality and in turn cause the failure of a unit under operation. Thus, any change in operational parameters can cause failures.

The reliability of supply is governed by the frequency and the duration of interruptions to supply and the number of customers affected by interruption. On an occurrence of an electrical fault, the corresponding feeder's circuit breaker opens at the substation. This disconnects the entire feeder from supply of electrical energy. Consequently all customers on the faulted feeder experience an interruption in service. In most cases the fault is detected by the operations control systems or by "trouble calls" from customers, but in some cases a crew has to be dispatched to locate the fault. Once the fault is located, it is isolated by separating it from the rest of the network before restoring service to the unfaulted section. The faulty component / section can then be repaired. Subsequently the distribution system returns to its normal operating state (Kavinesh 2001).

Reliability evaluation is an important and an integral feature of planning, design and operation of all engineering system. One of the measures for improving service reliability is through adequate and coordinated planning. The usefulness of a system

therefore is determined by its steady availability and frequency of failures. In power system, stability can be measured based on system reliability indices.

Reliability is a probability expression, which needs to be quantified to make it suitable for scientific analysis. Introducing performance parameters, which indicate the degree of reliability and are called the indices of reliability, does the quantification. Some of them are explained below.

2.2.1 RELIABILITY PARAMETERS

1. Failure rate, λ:

This is a basic index of reliability. It is a measure of the frequency at which fault occurs. Two definitions of failure rate are available depending on whether it relates to repairable or non- repairable items. The definition which relates to non repairable items expresses failure rate as a percentage and is given by:

$$\lambda\,(\%) = \frac{\text{Number of units which failed} \times 100}{\text{Number of units tested}}$$

The other definition relates to repairable items or systems and expresses failure rate as the number of failures, which occurs per unit-hour of operation. It is denoted by λ (N) and given as:

$$\lambda\,(N) = \frac{\text{Number of times that failure occurred}}{\text{Number of unit–hours of operation}}$$

The unit of λ (N) is therefore failures per unit- hour but failures per thousand hours and failures per million hours are also used (Heizer and Render, 1988). Obviously, a high value of λ (%) or λ (N) is indicative of low reliability.

2. Mean time between failures (MTBF)

This is another index of reliability. It expresses the average time, which elapses between consecutive failures of a repairable system or equipment.

Mathematically, MTBF is given by:

$$\text{MTBF} = \frac{\text{Total system operating hours}}{\text{Number of failures}}$$

It can be shown that MTBF is the reciprocal of failure rate. Clearly the longer MTBF is, the more reliable is the system.

3. Mean time to repair (MTTR)

This is the average time that is needed to restore a system or an item to operational effectiveness once it fails. MTTR is therefore an index of maintainability and hence refers only to repairable items. MTTR is a function of the equipment design, the expertise of the personnel and the tools available. Clearly, a low value of MTTR indicates good maintainability (Dhillon and Reiche, 1987).

4. Availability (A)

This is an important basic index of reliability. It is the probability that equipment will be available to perform as required or that it will be in a state of operational effectiveness within a given period. Mathematically, availability (A) is given as:

$$\text{Availability (A)} = \frac{\text{MTBF - MTTR}}{\text{MTBF}}$$

Administrative and logistics downtime assumed to be negligible. Thus availability integrates both the reliability and maintainability parameters of the system. (Billinton and Allan, 1982).

CHAPTER THREE

DATA COLLECTION AND RESULTS

A comprehensive study of 11kV Akure township main distribution network of the National Electric Power Authority (NEPA) Akure District was carried out in this work. See appendix VI. Outages that are due to faults were recorded from their daily logbook (see appendices I-V). These were collated, studied, analysed mathematically and depicted graphically.

From the collated fault data, feeder-by-feeder load loss, downtime and revenue loss were evaluated for each year. The results are shown on Tables 3.1 to 3.5 with their corresponding charts on Fig. 3.1 to 3.15

The addition of annual total for each of the feeders for the 5 years gave us table 3.6 giving a feeder-by-feeder load loss result in megawatts. In a similar manner, Tables 3.7 and 3.8 show the downtime and revenue loss respectively. Graphical illustrations of Table 3.6, Table 3.7, and Table 3.8 are shown in Fig. 3.16 to 3.33.

Table 3.9 shows the affected phase when the fault occurred as compiled from appendices 1-5. Its graphical illustration is on Fig. 3.34 to 3.37. Table 3.10 shows the failure rate of the system for each year. Plotting the failure rate against the years gives Fig. 3.38b. Table 3.11 shows the statistical summary of fault frequency on 11/0.415kV Akure township main substation network between 1998-2002, Plotting frequency against the years gives Fig. 3.39 while frequency against the months is shown in Fig. 3.40.

Table 3.1: 1998 feeder-by-feeder load loss, downtime and revenue loss.

MONTHS / FEEDERS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL TOTAL	FAULT FREQ.	ANNUAL AVERAGE TOTAL
A: LOAD LOSS RESULTS IN MEGAWATTS															
1	-	3.80	-	-	3.00	-	-	-	-	-	-	2.25	9.05	4.00	2.26
2	5.00	4.50	10.00	3.50	9.00	-	8.95	6.20	3.50	3.50	20.80	17.25	92.20	29.00	3.18
3	-	4.60	6.70	9.08	6.92	1.80	-	3.40	8.50	13.20	7.25	3.25	64.70	38.00	1.70
4	-	5.30	7.50	6.00	16.50	-	4.17	4.17	23.56	25.90	36.40	23.90	153.40	36.00	4.26
B: DOWNTIME RESULTS IN HOURS															
1	-	1.35	-	-	2.00	-	-	-	-	-	-	0.17	3.52	4.00	0.88
2	2.27	0.28	1.90	7.73	1.13	-	5.70	0.38	1.02	3.63	4.98	3.20	31.60	29.00	1.09
3	-	7.45	35.12	20.98	16.47	5.43	-	11.45	4.77	21.82	6.57	21.32	151.37	38.00	3.98
4	-	2.95	0.52	4.27	16.95	-	0.27	0.23	22.05	6.47	8.85	14.95	77.50	36.00	2.15
C: REVENUE LOSS IN NAIRA															
1	-	1,447	-	-	3,300	-	-	-	-	-	-	206	4,953	4.00	1,238.25
2	2,558	701	3,477	6,591	1,871	-	8,298	639	1957	6,994	8,993	7,058	49,137	29.00	1,694.38
3	-	9,148	32,800	19,472	13,514	5,379	-	10,319	4,613	18,423	6,414	20,301	140,383	38.00	3,694.29
4	-	4,502	1,128	6,202	25,076	-	612	533	49,880	18,240	22,851	37,298	166,322	36.00	4,620.06

Table 3.2: 1999 feeder-by-feeder load loss, downtime and revenue loss.

MONTHS / FEEDERS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL TOTAL	FAULT FREQ.	ANNUAL AVERAGE TOTAL
A: LOAD LOSS RESULTS IN MEGAWATTS															
1	3.10	3.80	1.30	-	3.83	2.00	-	3.80	-	-	-	-	17.83	7.00	2.55
2	9.80	10.60	19.20	10.50	25.82	37.55	22.70	11.60	17.00	7.90	10.80	27.00	210.47	57.00	3.69
3	3.50	4.20	8.60	9.20	11.83	12.00	2.80	11.10	17.10	-	8.50	-	88.83	33.00	2.69
4	34.60	15.80	16.00	15.50	11.99	3.60	3.70	39.90	-	17.30	17.00	3.70	179.09	41.00	4.37
B: DOWNTIME RESULTS IN HOURS															
1	9.07	0.52	0.33	-	0.08	0.07	-	0.80	-	-	-	-	10.87	7.00	1.55
2	2.63	3.67	4.88	2.78	12.65	25.17	5.73	4.15	3.40	1.33	3.48	9.47	74.35	57.00	1.30
3	4.53	6.87	4.08	3.83	10.97	34.35	0.08	15.35	5.32	-	16.83	-	102.72	33.00	3.11
4	12.97	20.47	24.33	10.63	2.87	2.82	0.22	28.82	-	3.42	19.32	1.88	127.72	41.00	3.12
C: REVENUE LOSS IN NAIRA															
1	14,713	1,080	238	-	176	73	-	1,672	-	-	-	-	17,952	7.00	2,564.57
2	3,925	6,041	9,976	5,436	21,626	63,055	11,928	8,971	7,439	2,809	6,899	18,133	166,236	57.00	2,916.42
3	3,901	8,679	9,130	6,016	12,208	49,247	128	31,831	10,218	-	19,379	-	150,737	33.00	4,567.79
4	34,841	44,889	50,206	22,118	5,342	5,577	441	80,045	-	7,484	33,140	3,833	287,916	41.00	7,022.34

Table 3.3: 2000 feeder-by-feeder load loss, downtime and revenue loss.

MONTHS / FEEDERS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL TOTAL	FAULT FREQ.	ANNUAL AVERAGE TOTAL
A: LOAD LOSS RESULTS IN MEGAWATTS															
1	-	1.50	-	-	9.60	7.50	3.00	-	6.25	11.20	9.50	7.83	56.38	19.00	2.97
2	9.00	2.70	17.40	22.87	14.54	38.96	26.41	5.50	48.20	18.59	19.92	32.20	256.29	63.00	4.07
3	2.75	-	9.70	15.30	20.00	47.88	33.20	20.50	24.50	15.33	30.20	23.33	242.69	83.00	2.92
4	-	4.50	24.17	22.25	5.00	27.50	-	35.07	27.41	16.91	45.08	46.82	254.71	62.00	4.11
B: DOWN TIME RESULTS IN HOURS															
1	-	0.15	-	-	0.95	2.62	16.75	-	4.02	2.45	14.95	2.05	43.93	19.00	2.31
2	1.83	0.23	4.55	1.22	3.70	7.75	5.80	2.13	3.32	1.12	15.88	7.88	54.20	63.00	0.86
3	1.42	-	0.55	34.17	12.70	42.62	33.78	40.00	8.50	5.50	3.58	7.98	190.80	83.00	2.30
4	-	16.25	6.95	12.85	0.23	20.27	-	16.87	14.30	27.85	10.80	14.08	140.45	62.00	2.27
C: REVENUE LOSS RESULTS IN NAIRA															
1	-	124	-	-	1,173	5,642	27,638	-	7,842	5,975	21,528	3,634	75,556	19.00	3,871.37
2	2,198	347	8,491	3,290	7,978	20,966	13,513	3,631	9,124	1,724	33,794	16,903	121,959	63.00	1,935.86
3	1,054	-	967	39,943	21,927	70,115	41,090	43,504	14,251	11,875	7,613	19,986	272,325	83.00	3,281.02
4	-	19,240	15,348	29,739	642	36,483	-	37,670	26,610	63,219	21,136	32,437	282,524	62.00	4,556.84

Table 3.4: 2001 feeder-by-feeder load loss, downtime and revenue loss.

MONTHS / FEEDERS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL TOTAL	FAULT FREQ.	ANNUAL AVERAGE TOTAL
A: LOAD LOSS RESULTS IN MEGAWATTS															
1	36.83	3.83	12.34	28.25	25.00	17.09	9.67	8.00	23.57	2.50	22.00	6.00	195.08	56.00	3.48
2	57.61	32.94	128.97	83.27	122.33	54.66	45.43	59.00	106.23	158.06	167.60	48.73	1064.83	261.00	4.08
3	10.67	9.00	23.00	15.83	36.42	25.49	32.58	-	35.16	13.50	44.25	35.53	281.43	98.00	2.87
4	48.07	27.66	99.65	46.50	61.52	26.33	38.18	46.09	40.08	56.23	59.84	64.15	614.30	145.00	4.24
5	-	-	-	2.84	3.00	8.76	1.67	-	8.84	7.50	16.60	10.51	59.72	36.00	1.66
B: DOWNTIME RESULTS IN HOURS															
1	17.57	1.12	17.10	62.72	20.10	1.62	5.62	0.33	22.83	0.03	4.67	0.15	153.86	56.00	2.75
2	3.08	2.10	84.15	11.40	9.87	3.05	10.55	21.88	19.07	14.47	23.95	17.30	220.87	261.00	0.85
3	1.93	8.00	79.48	38.43	92.05	40.53	27.53	-	24.70	25.83	25.52	1.28	365.28	98.00	3.73
4	11.75	8.15	86.92	81.55	52.55	47.62	29.32	69.60	18.15	15.23	11.47	5.00	437.35	145.00	3.02
5	-	-	-	0.28	9.33	22.92	0.67	-	17.83	10.45	1.92	1.40	64.80	36.00	1.80
C: REVENUE LOSS RESULTS IN NAIRA															
1	49,375	2,352	45,294	137,139	32,718	3,029	9,277	727	41,410	46	9,257	234	330,858	56.00	5,908.18
2	8,490	4,498	167,811	25,657	23,477	7,096	24,717	43,931	42,524	33,337	57,419	35,219	474,176	261.00	1,816.77
3	4,453	19,682	138,363	69,782	128,748	61,354	43,503	-	35,435	36,940	36,769	2,674	577,703	98.00	5,894.93
4	32,469	18,234	218,313	206,460	119,664	113,503	76,006	138,737	37,741	37,616	30,307	12,124	1,041,174	145.00	7,180.51
5	-	-	-	1,037	15,400	37,375	612	-	22,103	13,794	2,300	1,829	94,450	36.00	2,623.61

Table 3.5: 2002 feeder-by-feeder load loss, downtime and revenue loss.

MONTHS / FEEDERS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL TOTAL	FAULT FREQ.	ANNUAL AVERAGE TOTAL
A: LOAD LOSS RESULTS IN MEGAWATTS															
1	16.53	23.91	63.51	21.75	45.48	74.38	26.75	18.17	41.49	20.09	30.49	8.67	391.22	120.00	3.26
2	57.95	118.82	81.64	35.00	46.51	105.34	35.24	89.43	68.33	90.00	40.91	7.25	776.42	211.00	3.68
3	16.50	36.84	68.16	26.99	53.01	106.54	39.08	43.32	75.07	41.82	40.49	8.67	556.48	223.00	2.50
4	47.59	50.75	75.49	39.59	53.00	96.93	35.55	25.83	58.77	37.32	39.15	13.43	573.40	166.00	3.45
5	24.83	54.33	98.23	63.73	105.59	98.82	31.25	49.42	56.25	59.24	51.02	56.50	749.21	225.00	3.33
B: DOWN TIME RESULTS IN HOURS															
1	3.55	1.52	41.55	3.92	14.82	10.30	7.97	0.98	14.65	2.88	11.62	0.22	113.98	120.00	0.95
2	11.72	14.22	31.07	7.08	17.10	17.53	8.28	25.83	6.67	9.65	7.95	1.92	159.02	211.00	0.75
3	4.43	5.13	42.25	29.15	21.67	53.48	16.70	10.02	32.63	25.35	52.07	3.50	296.38	223.00	1.33
4	18.02	24.62	55.00	37.08	25.68	19.02	3.83	14.73	48.67	23.75	31.20	0.85	302.45	166.00	1.82
5	30.10	30.52	43.18	27.82	53.43	15.18	5.30	8.20	20.45	54.03	43.45	21.43	353.09	225.00	1.57
C: REVENUE LOSS RESULTS IN NAIRA															
1	5,456	2,310	62,146	39,822	26,965	18,175	14,478	1,887	34,014	3,974	21,741	514	231,482	120.00	1,929.02
2	21,885	31,543	62,255	13,639	23,204	34,151	18,118	62,147	13,977	20,487	17,519	4,401	323,326	211.00	1,532.35
3	9,080	8,502	67,978	30,791	36,347	84,545	21,700	15,254	48,899	40,958	88,957	4,765	457776	223.00	2,052.81
4	47,573	31,178	118,074	71,621	57,641	34,706	6,448	32,004	99,965	47,054	80,602	2,268	629,134	166.00	3,789.96
5	35,632	61,924	77,176	47,129	106,051	29,388	8,597	17,199	35,830	115,313	99,586	55,948	689,773	225.00	3,065.66

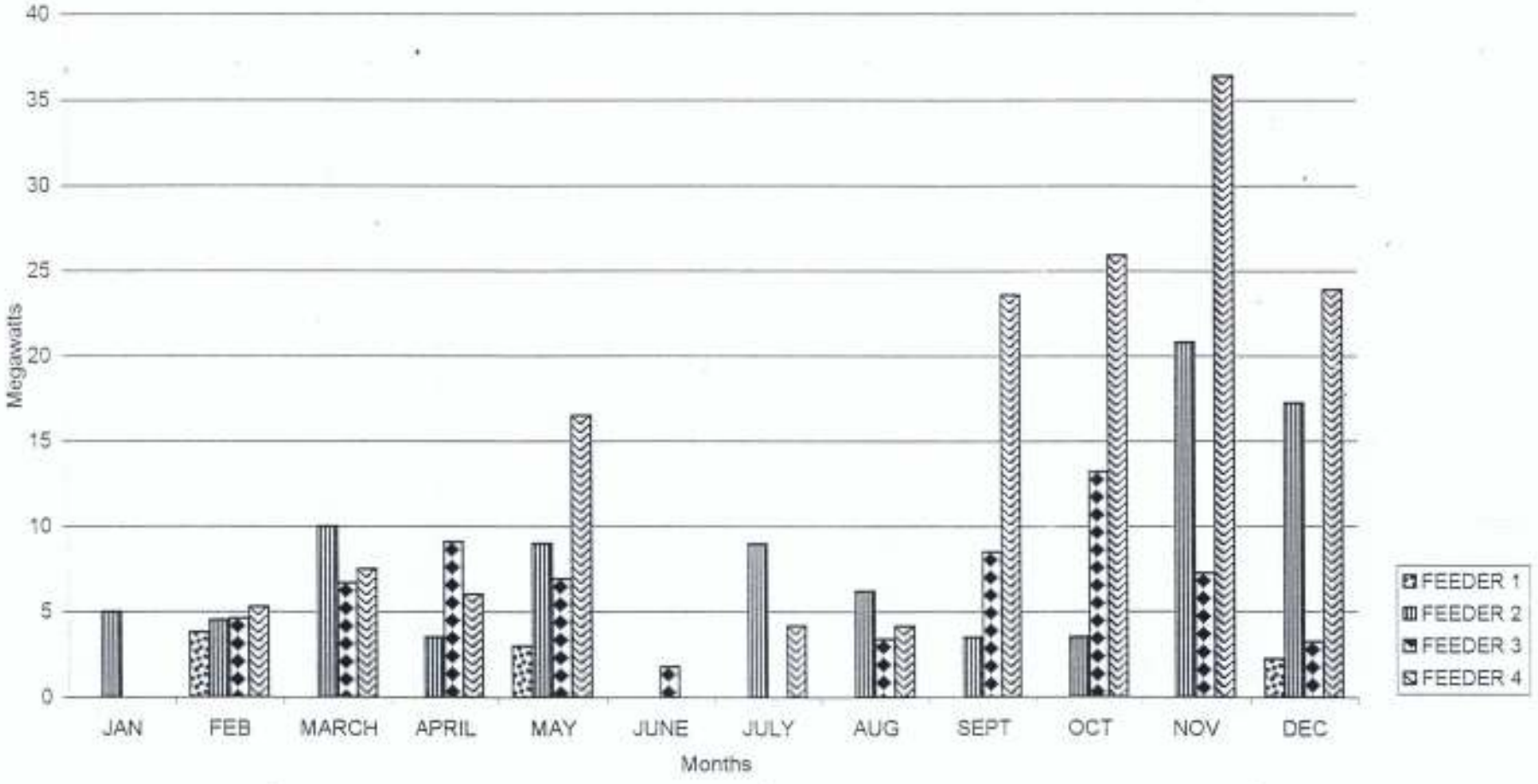

Fig. 3.1: 1998 Feeder-by-feeder load loss.

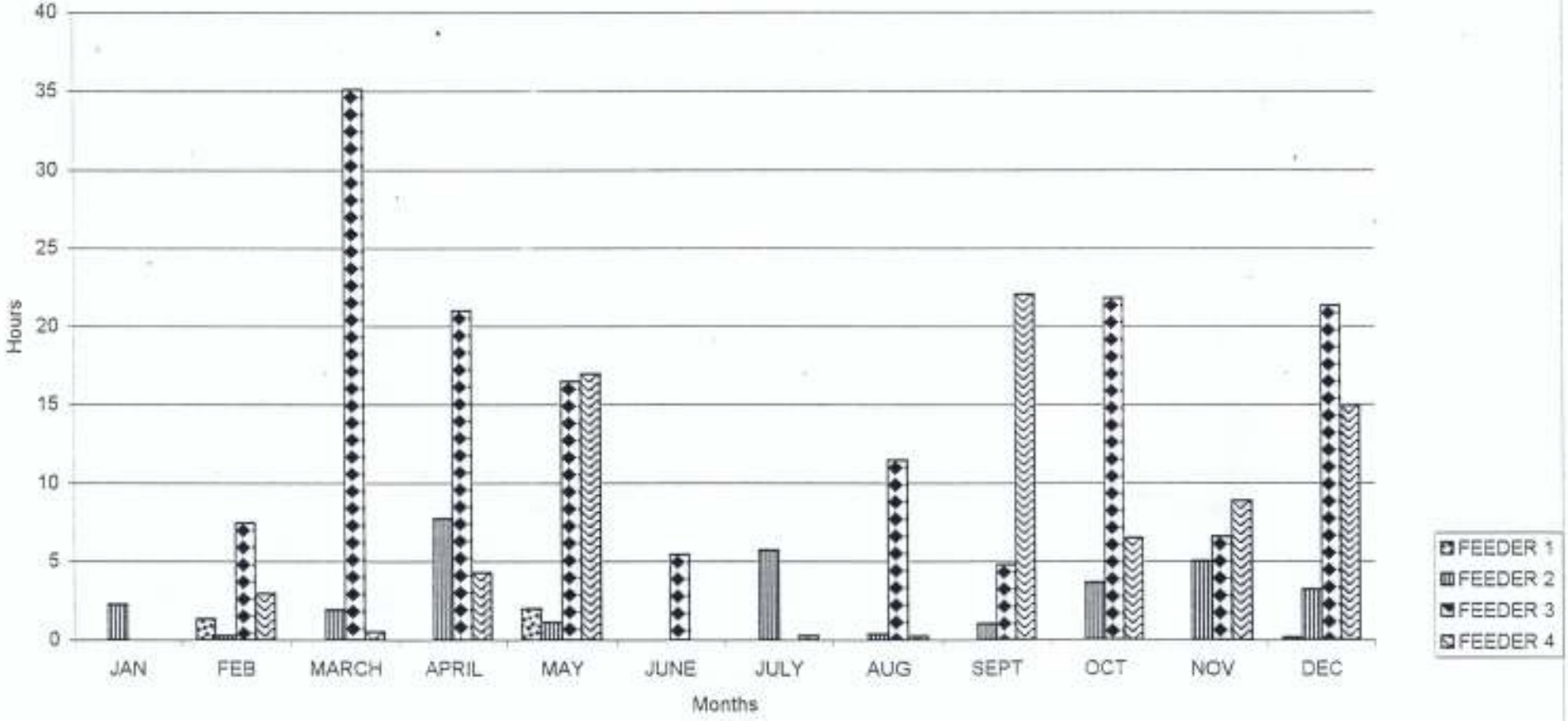

Fig.3.2: 1998 Feeder-by-feeder downtime

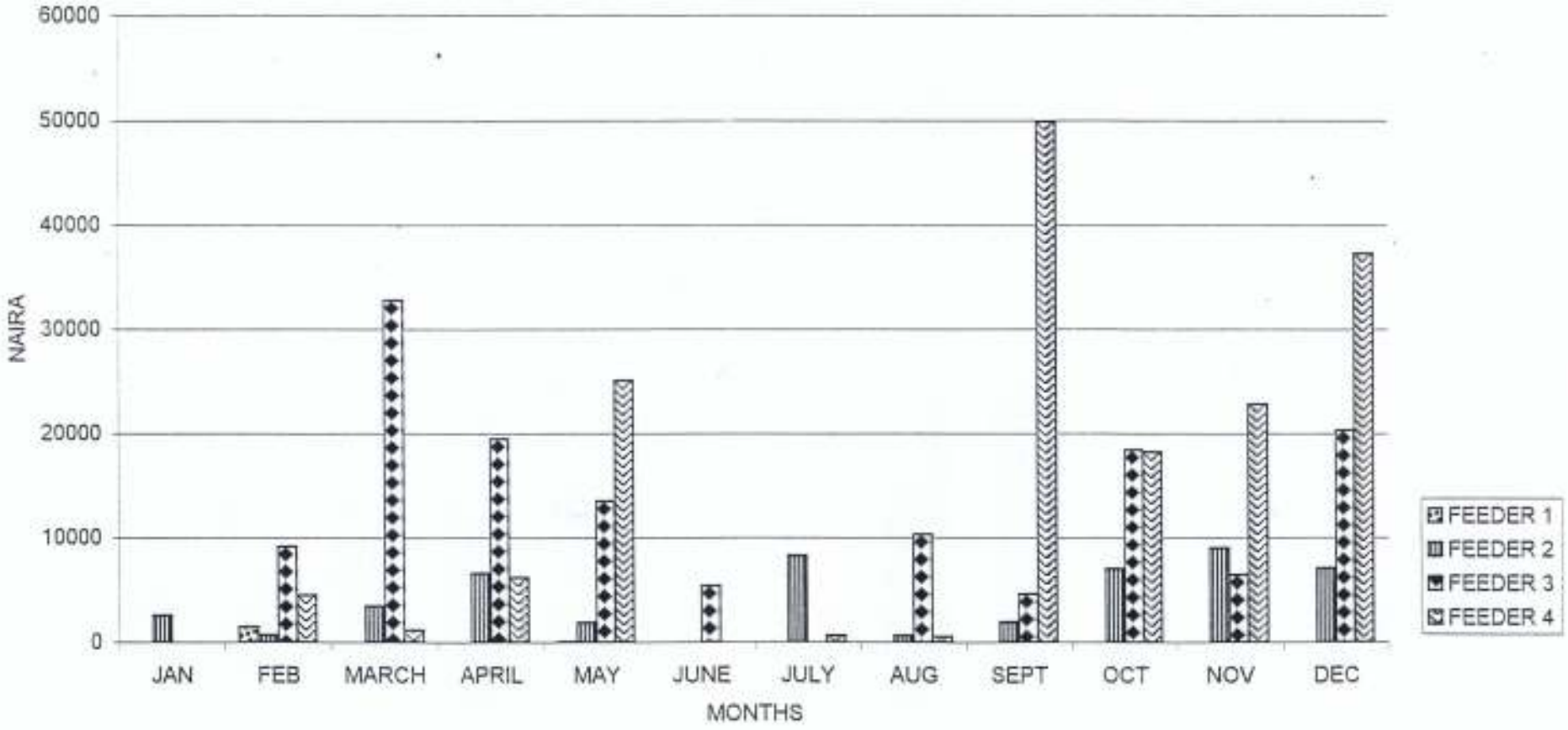

Fig. 3.3: 1998 Feeder-by-feeder revenue loss.

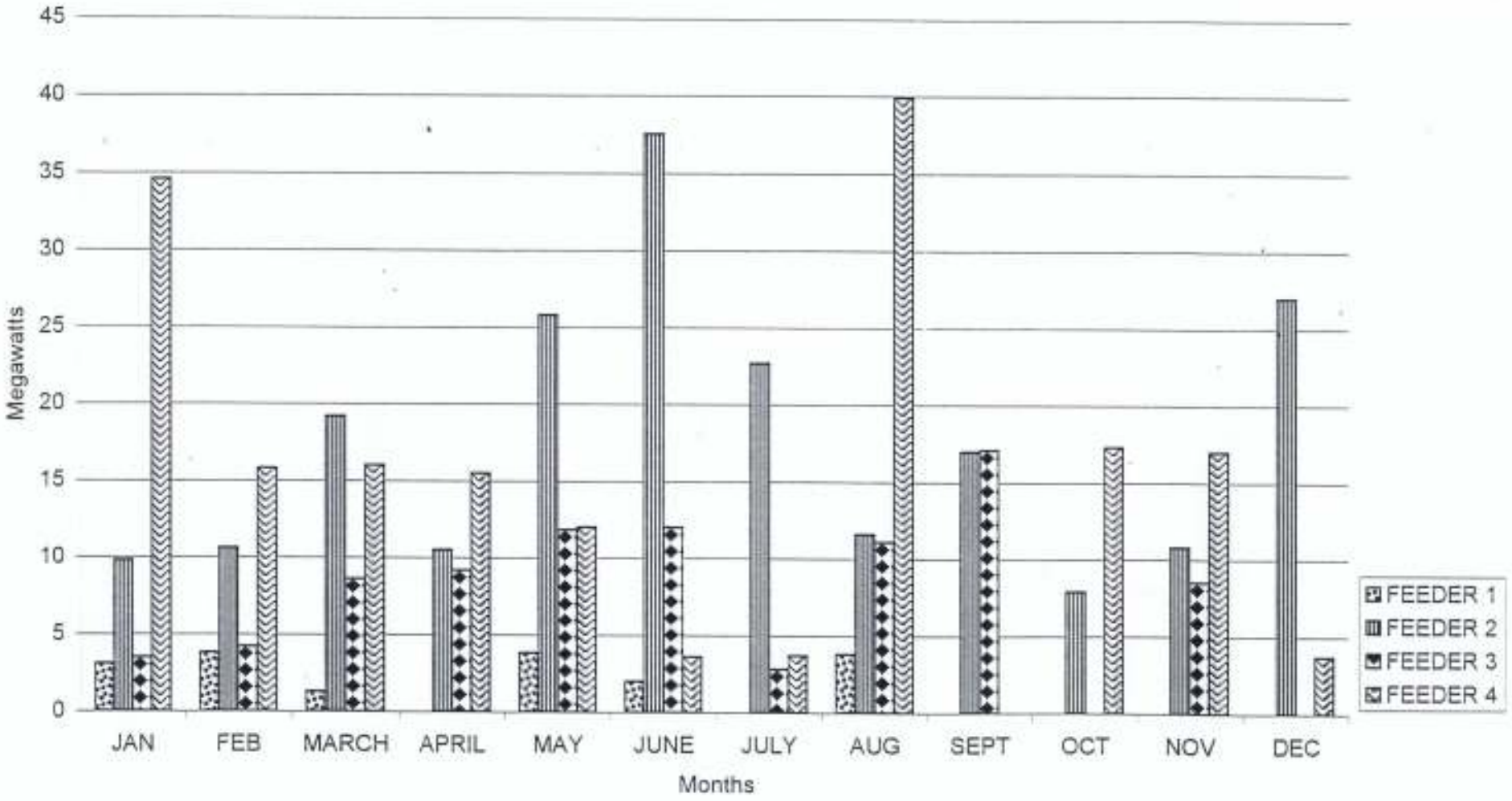

Fig.3.4: 1999 Feeder-by-feeder load loss.

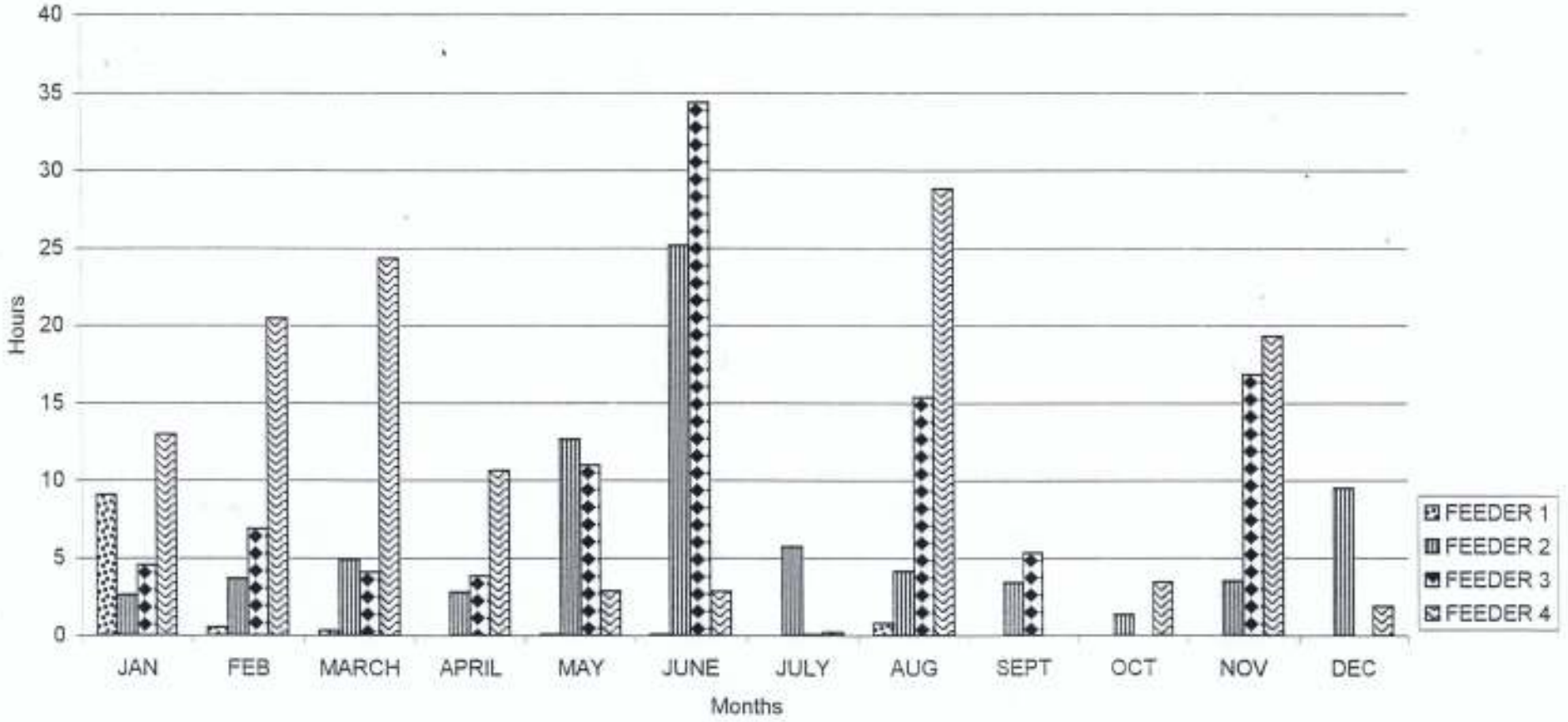

Fig. 3.5: 1999 Feeder-by-feeder downtime.

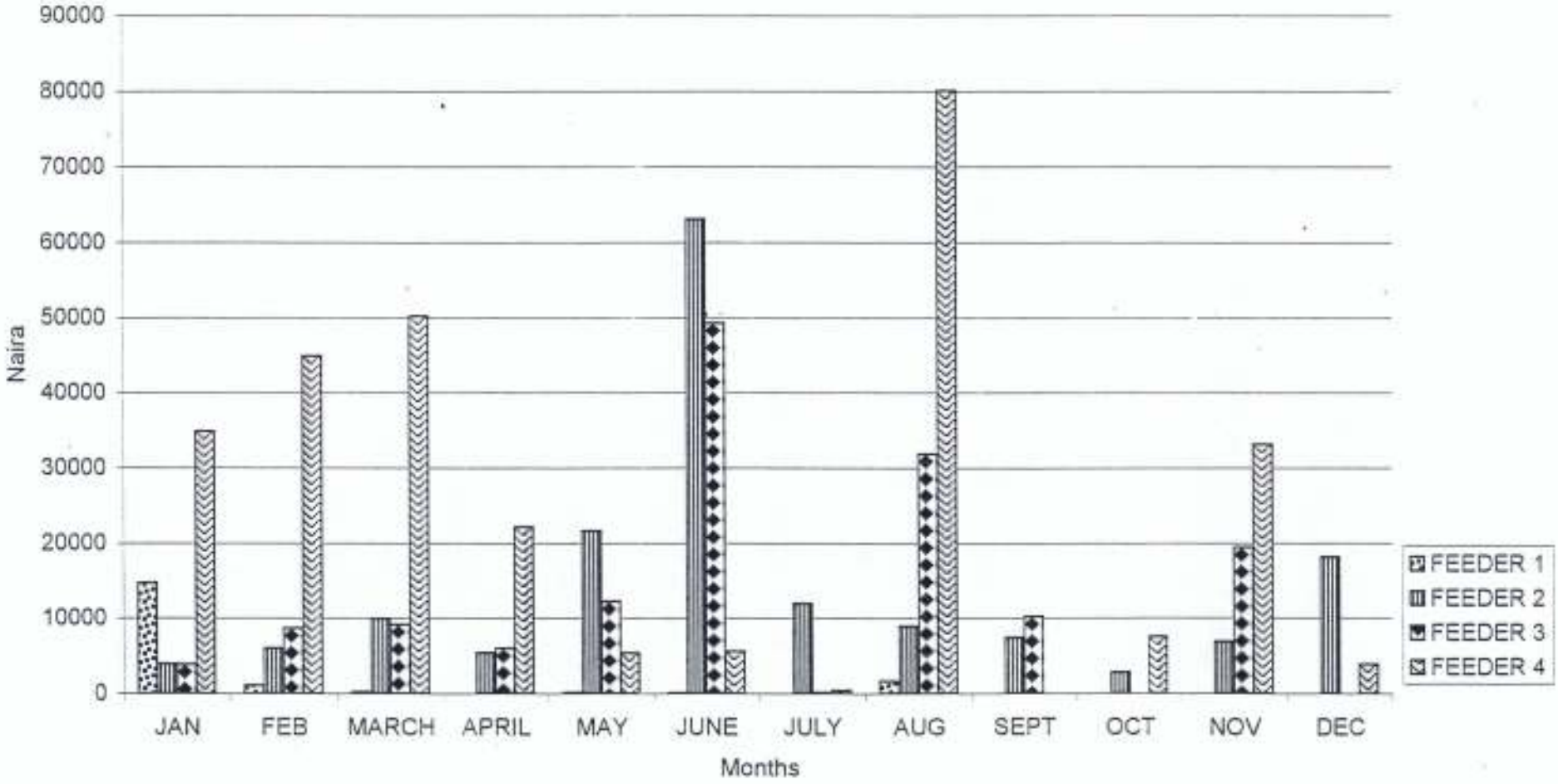

Fig. 3.6: 1999 Feeder-by-feeder revenue loss.

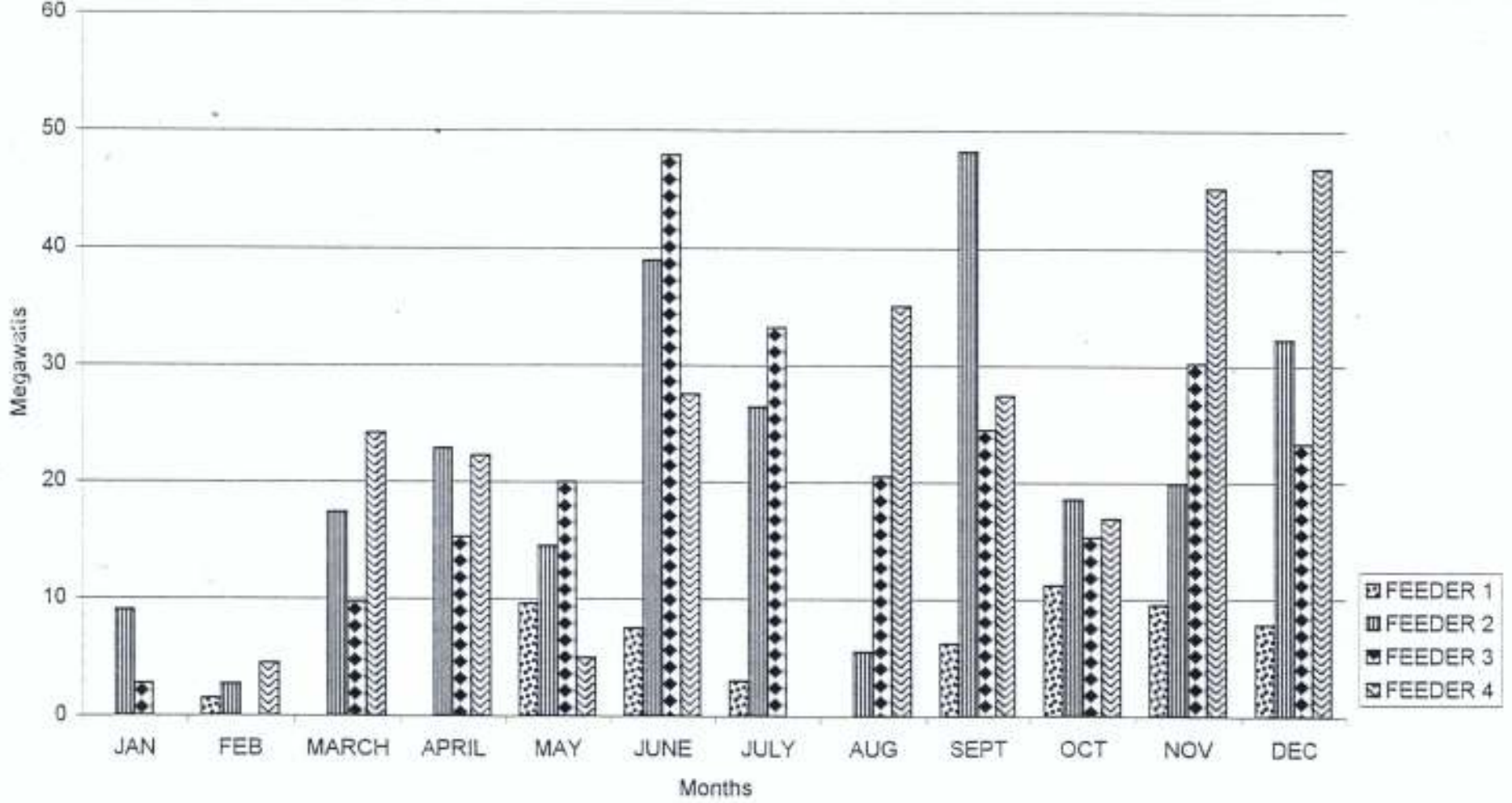

Fig. 3.7: 2000 Feeder-by-feeder load loss.

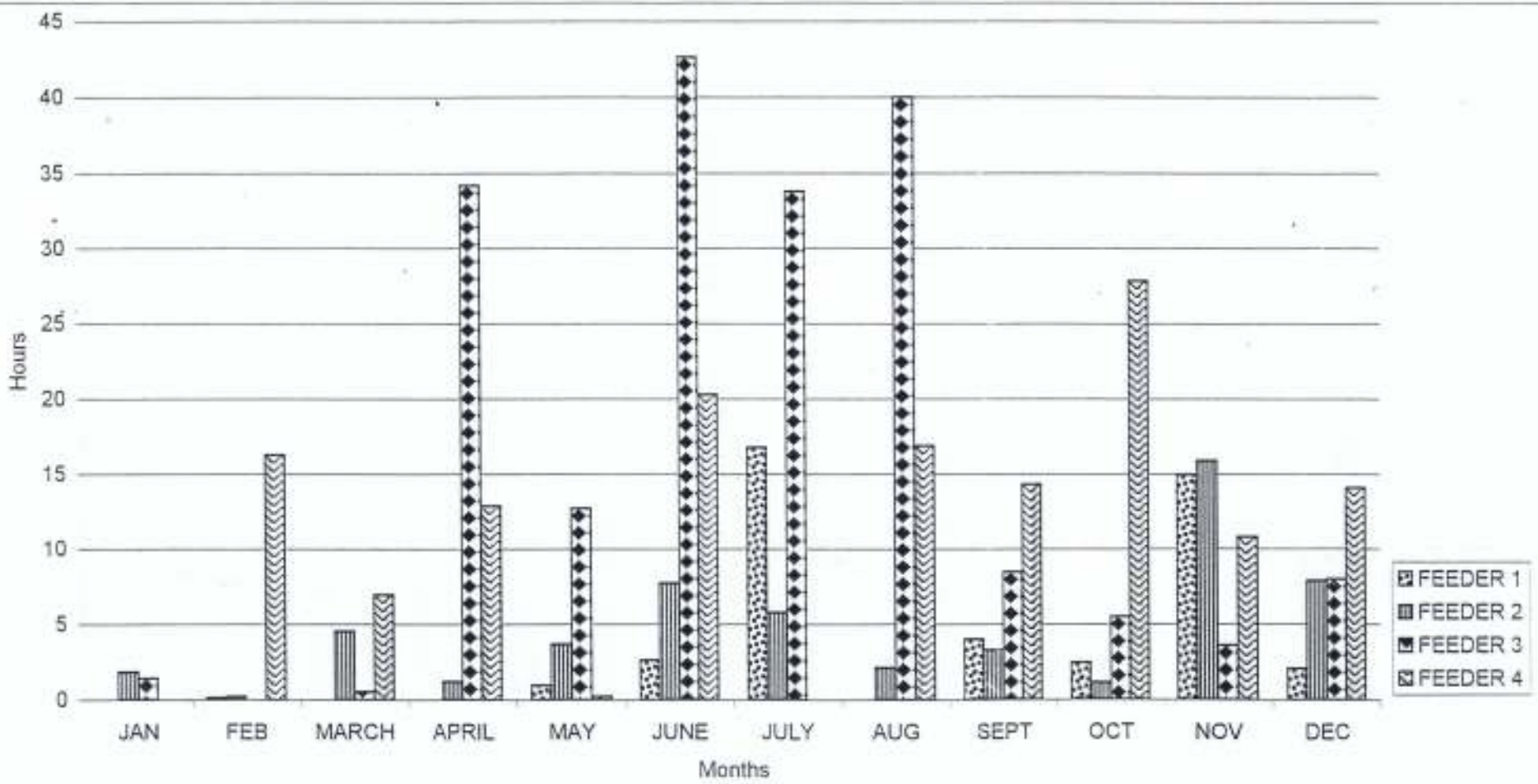

Fig. 3.8: Year 2000 Feeder-by-fereder downtime.

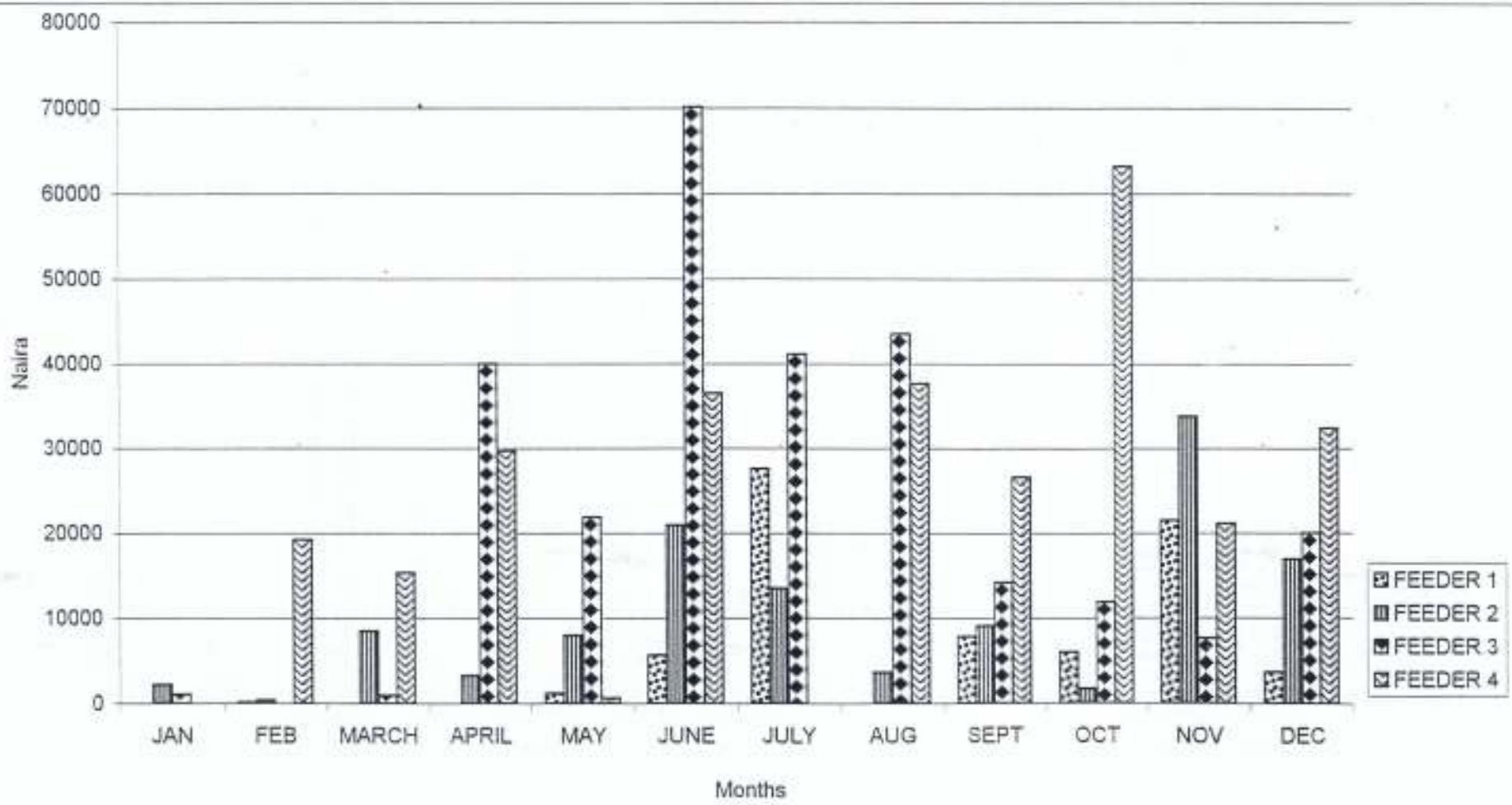

Fig. 3.9: Year 2000 feeder-by-feeder revenue loss.

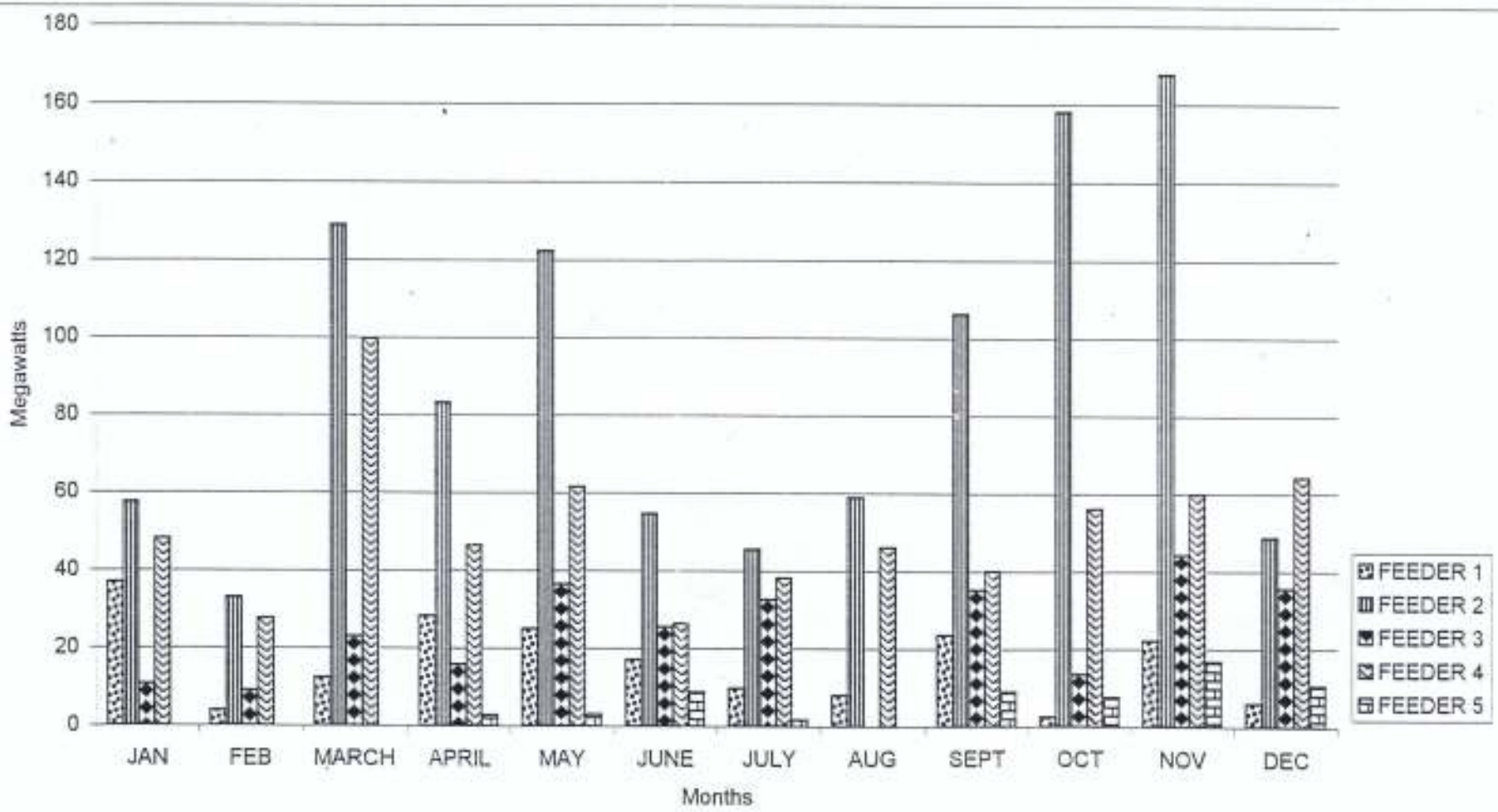

Fig. 3.10: Year 2001 feeder-by-feeder load loss.

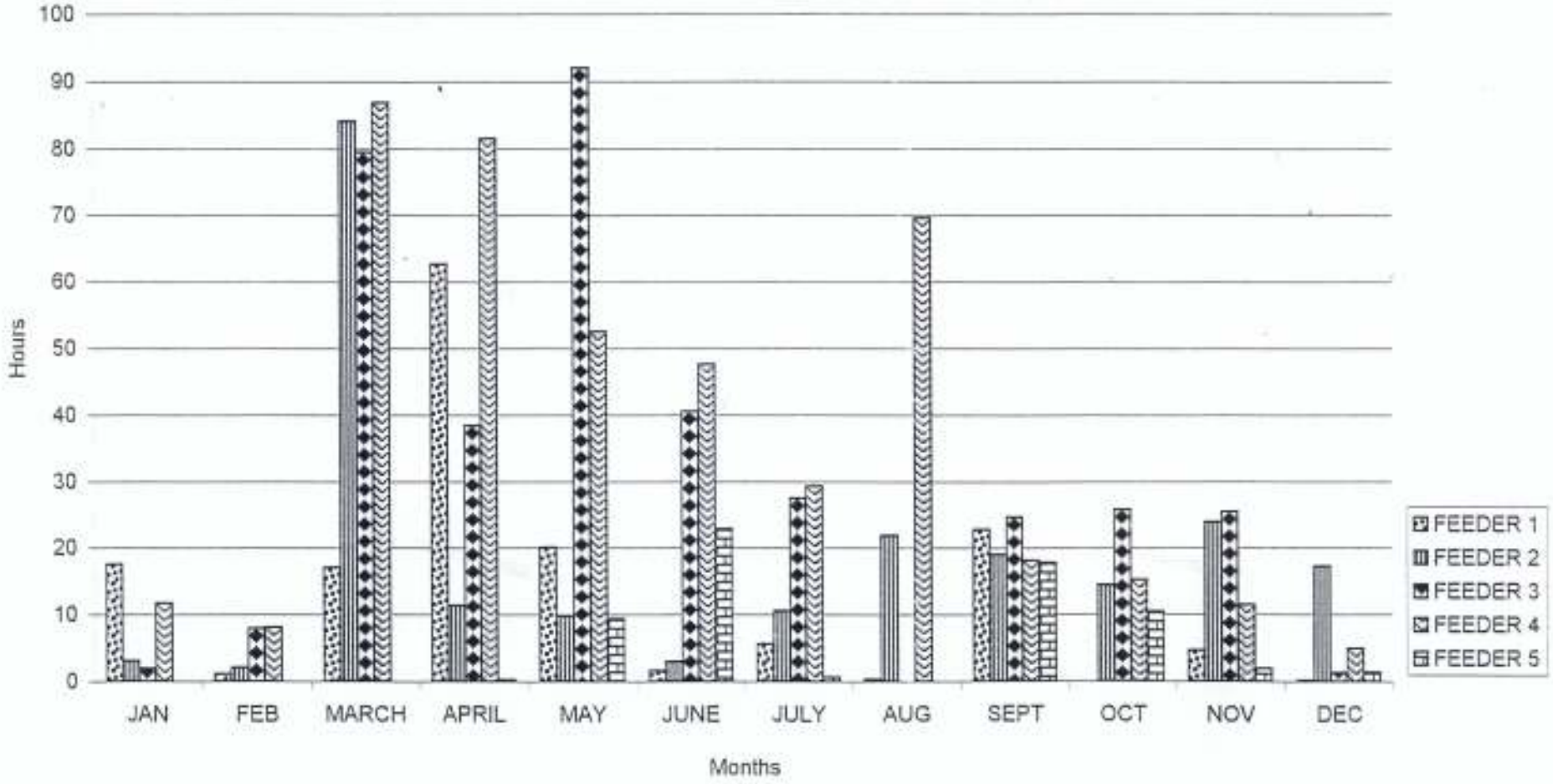

Fig. 3.11: Year 2001 feeder-by-feeder downtime.

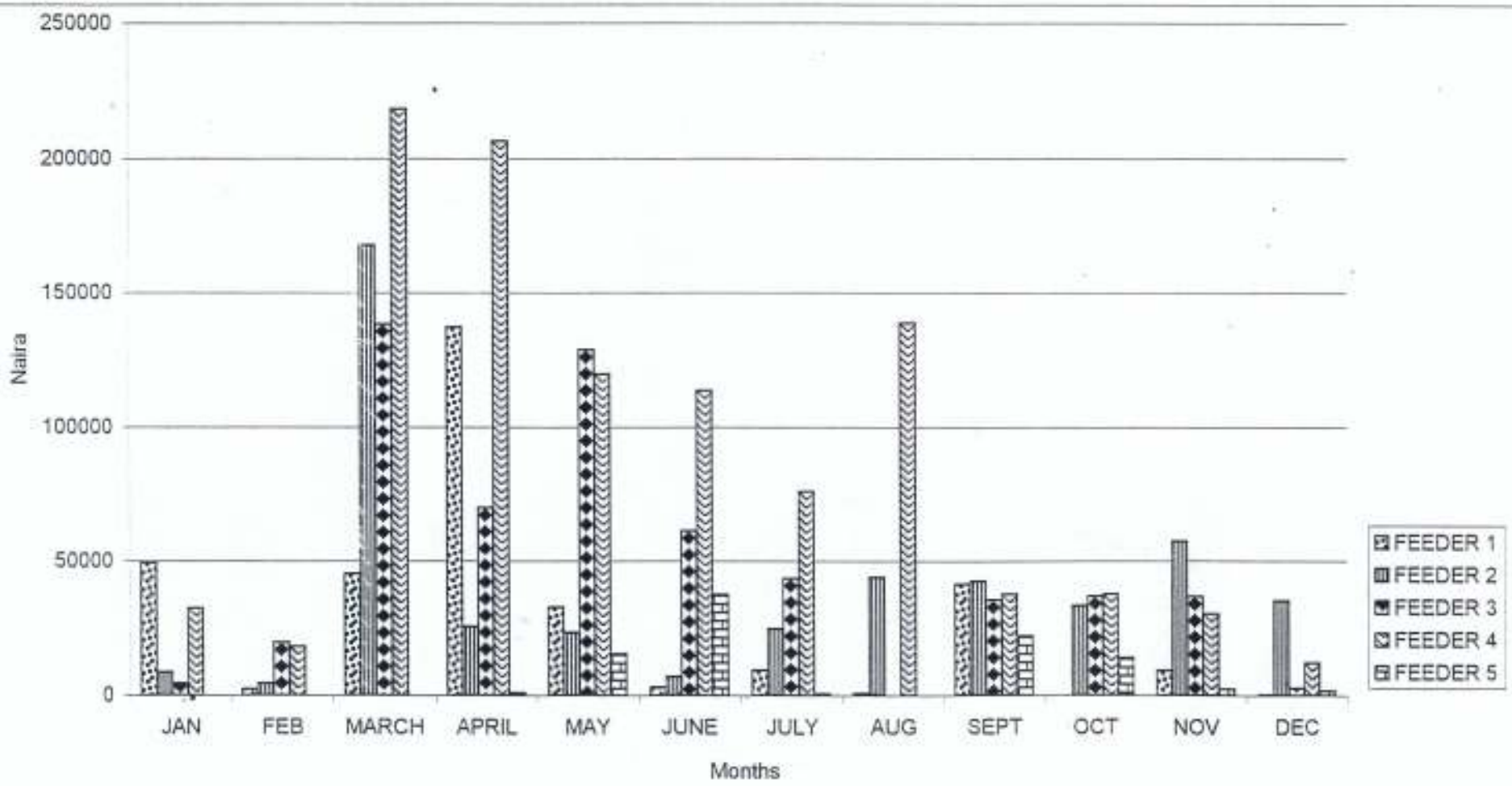

Fig. 3.12: Year 2001 feeder-by-feeder revenue loss.

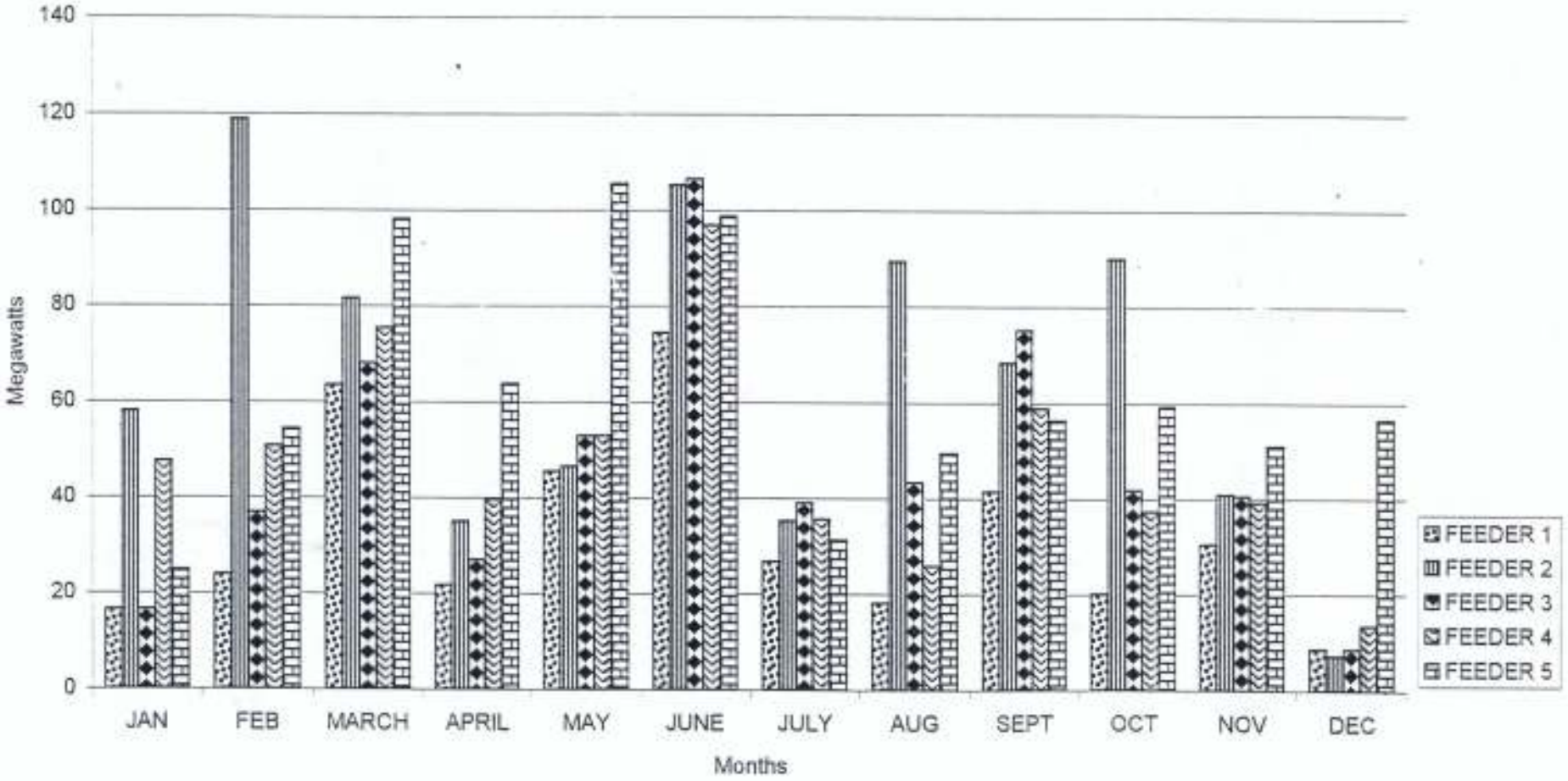

Fig. 3.13: Year 2002 feeder-by-feeder load loss.

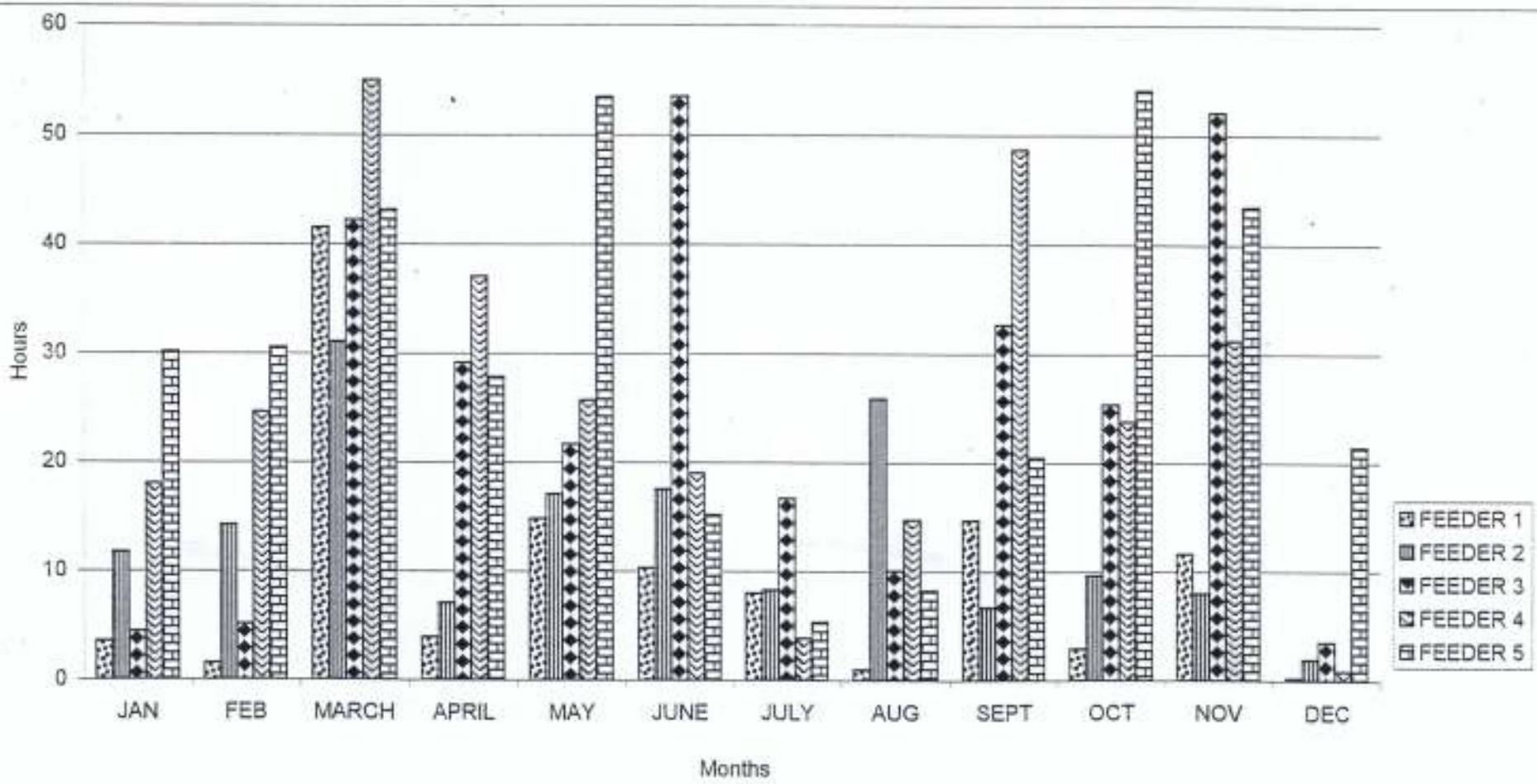

Fig. 3.14: Year 2002 feeder-by-feeder downtime.

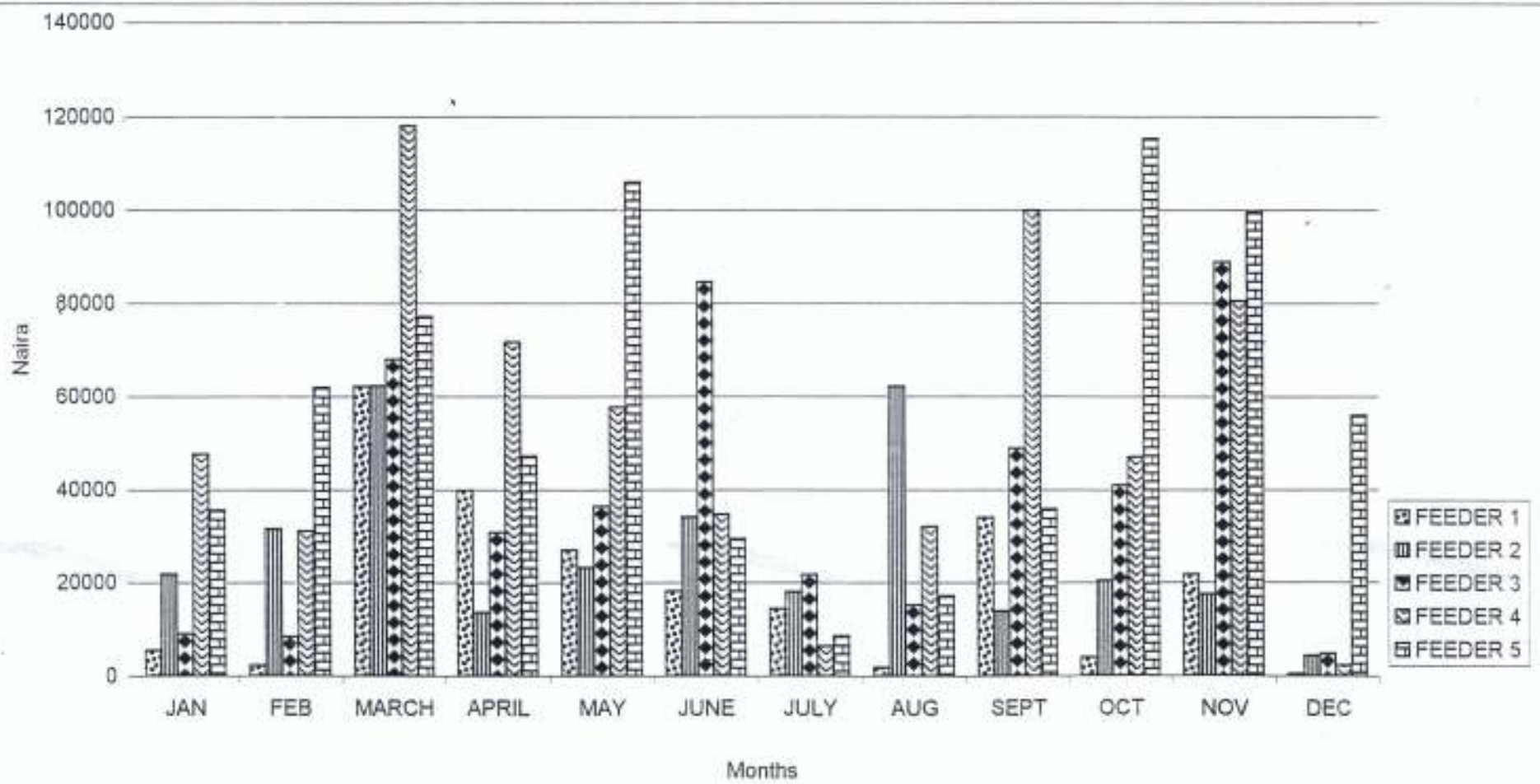

Fig. 3.15: Year 2002 feeder-by-feeder revenue loss.

Table 3.6: Five years feeder-by-feeder load loss results in megawatts.

YEARS	FEEDERS					TOTAL
	1	2	3	4	5	
1998	9.05	92.20	64.70	153.40	-	319.35
1999	17.83	210.47	88.83	179.09	-	496.22
2000	56.38	256.29	242.69	254.71	-	810.07
2001	195.08	1064.83	281.43	614.30	59.72	2215.36
2002	391.22	776.42	556.48	573.40	749.21	3046.73
GRAND TOTAL	669.56	2400.21	1234.13	1774.90	808.93	6887.73

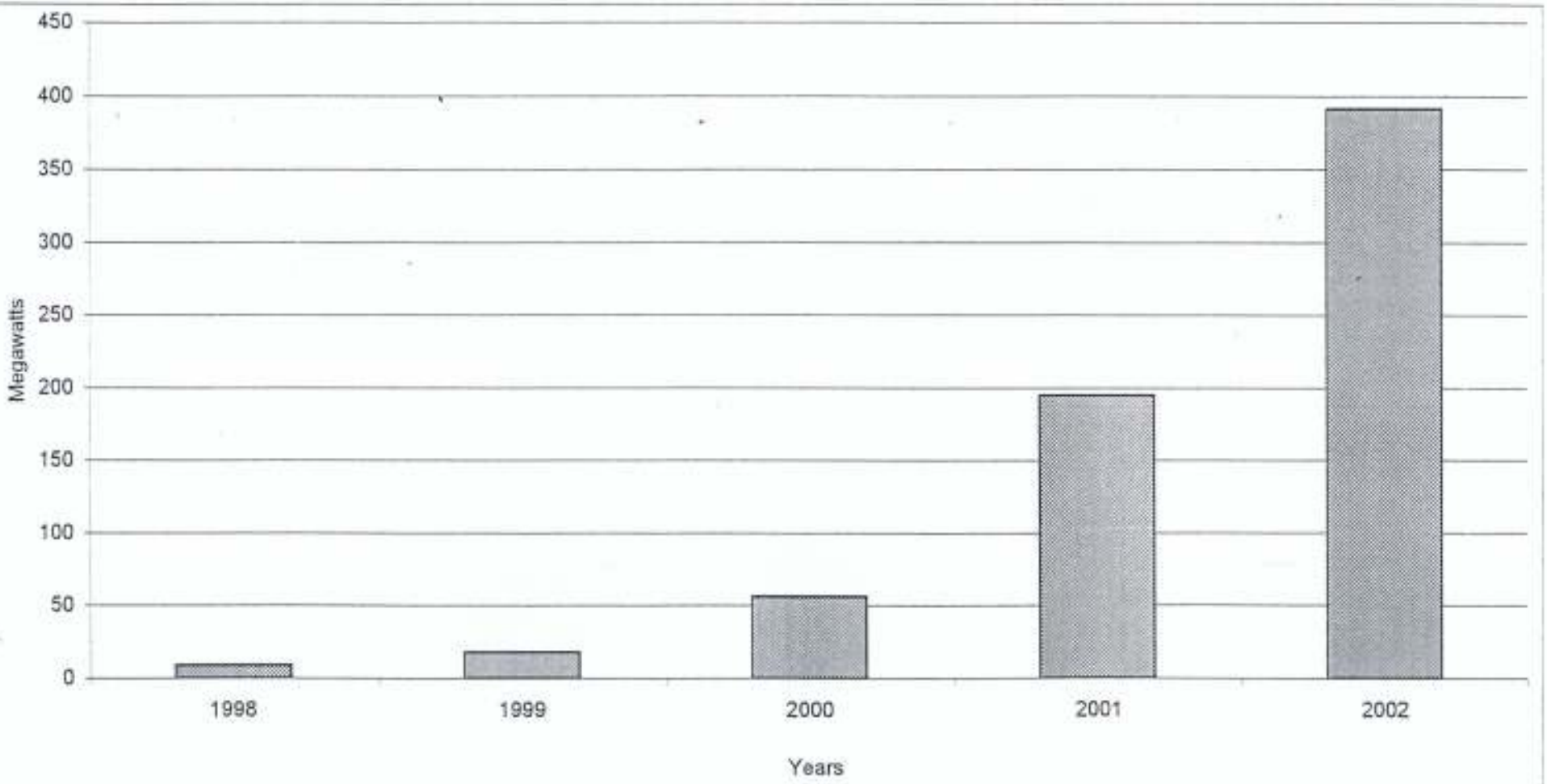

Fig. 3.16: Feeder 1 load loss for 5 years.

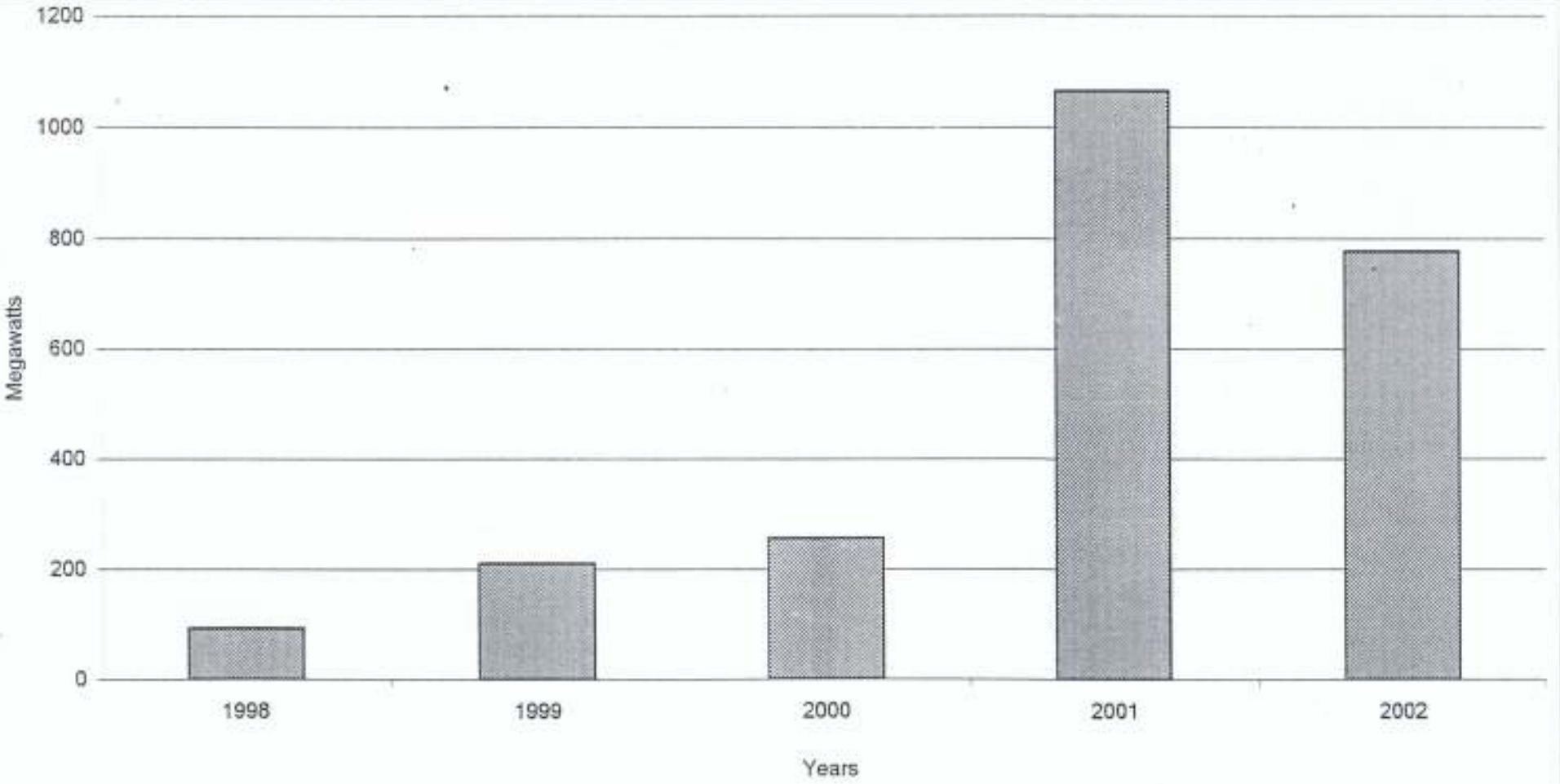

Fig. 3.17: Feeder 2 load loss for 5 years.

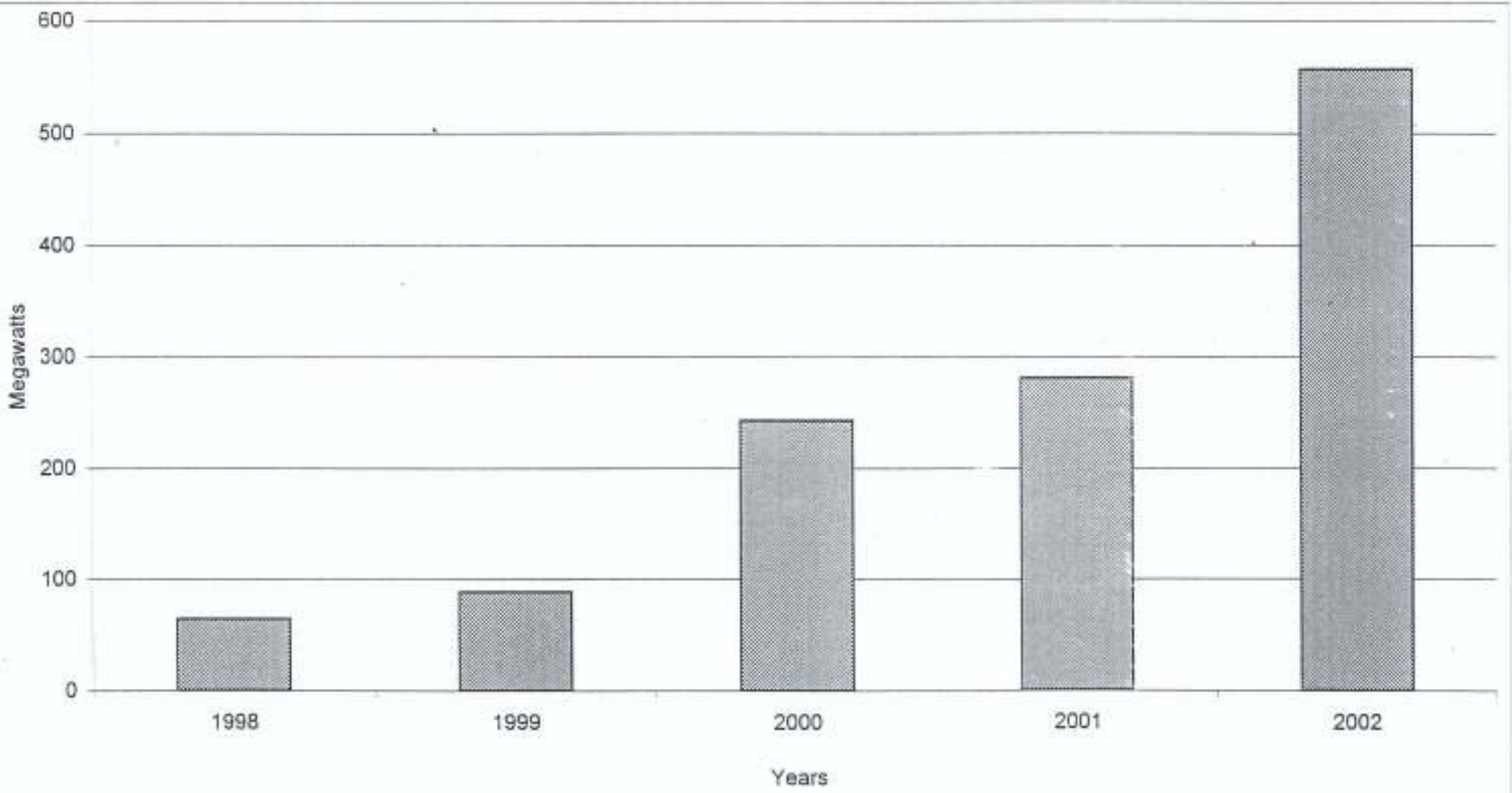

Fig. 3.18: Feeder 3 load loss for 5 years.

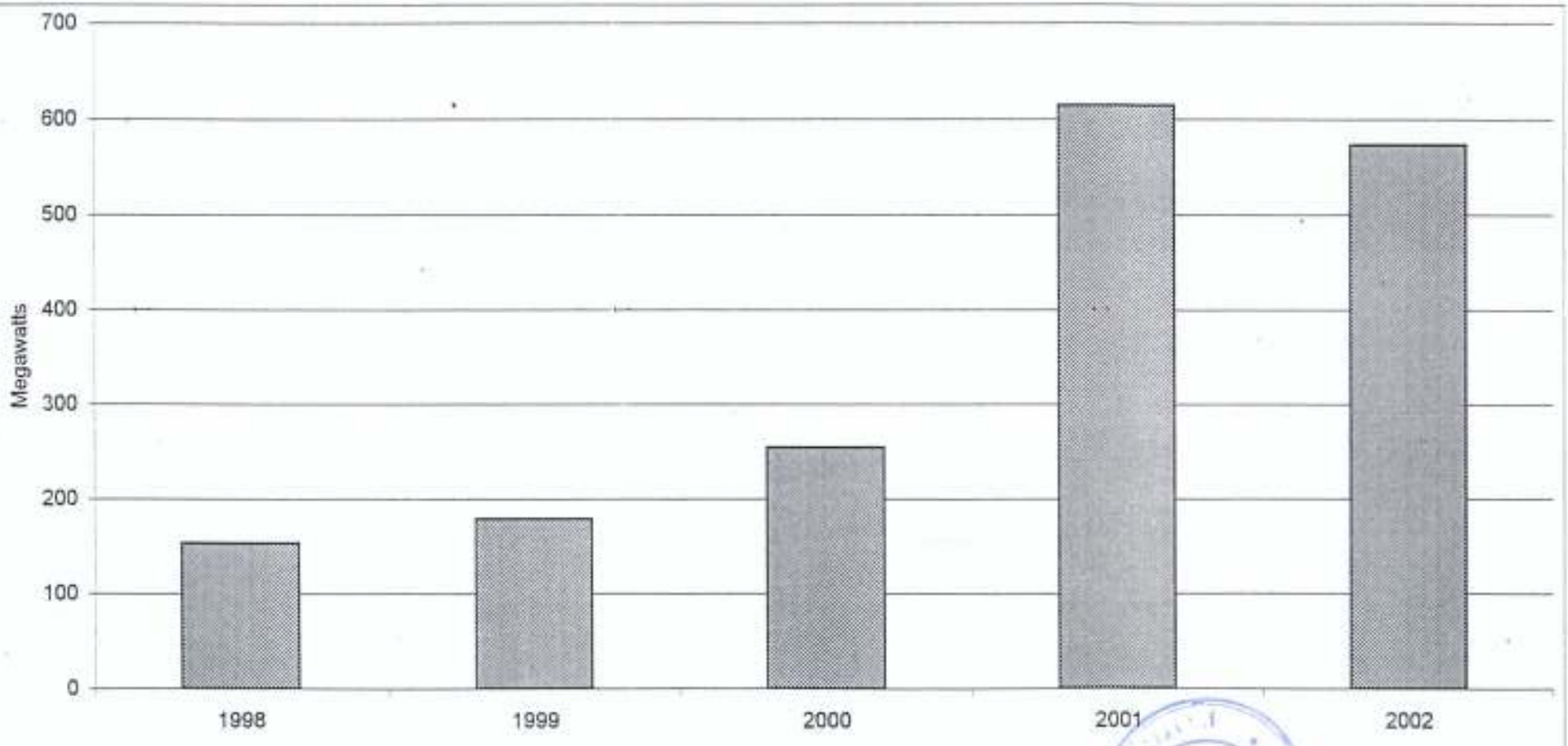

Fig. 3.19: Feeder 4 load loss for 5 years.

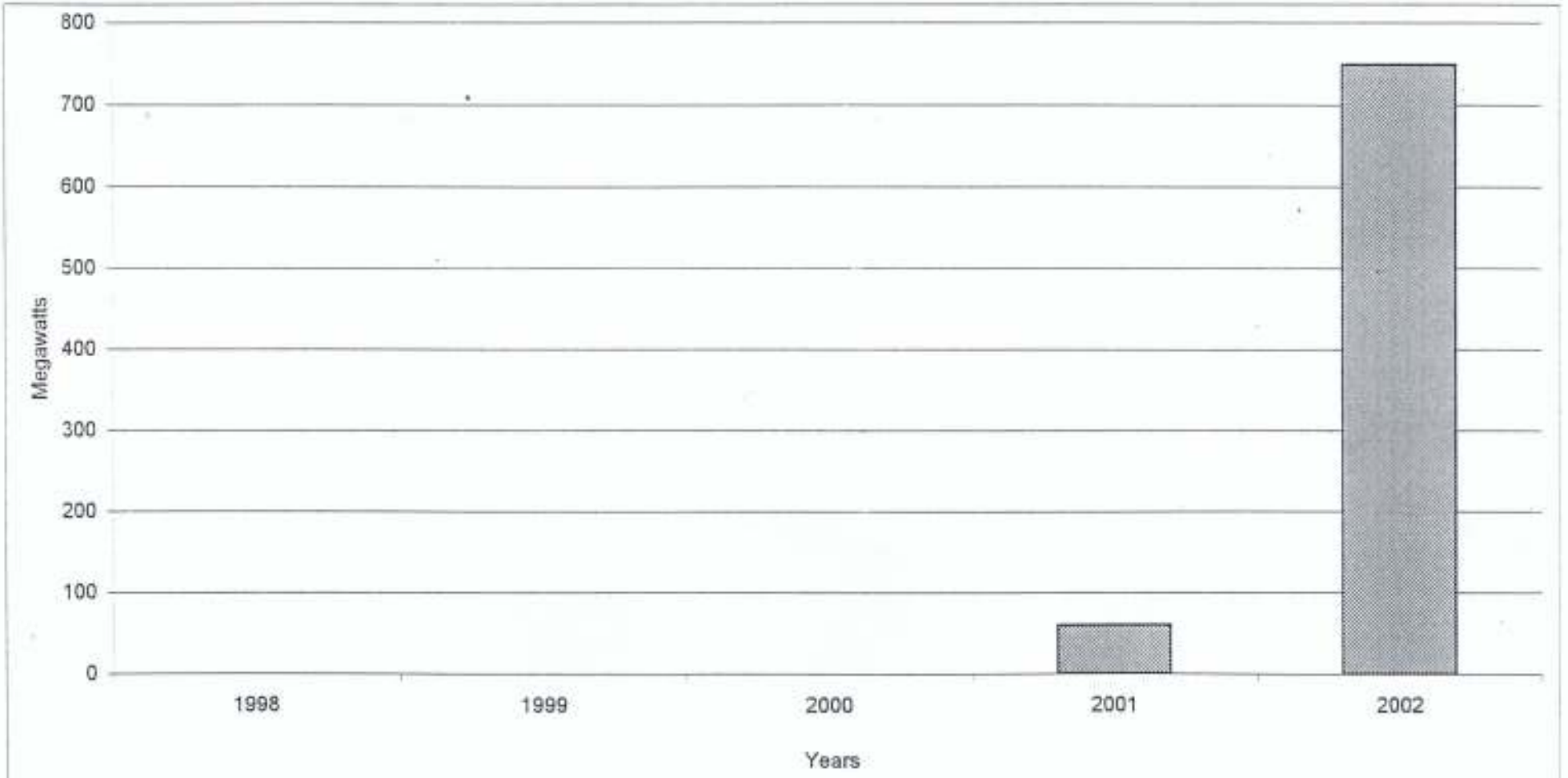

Fig. 3.20: Feeder 5 load loss for 5 years.

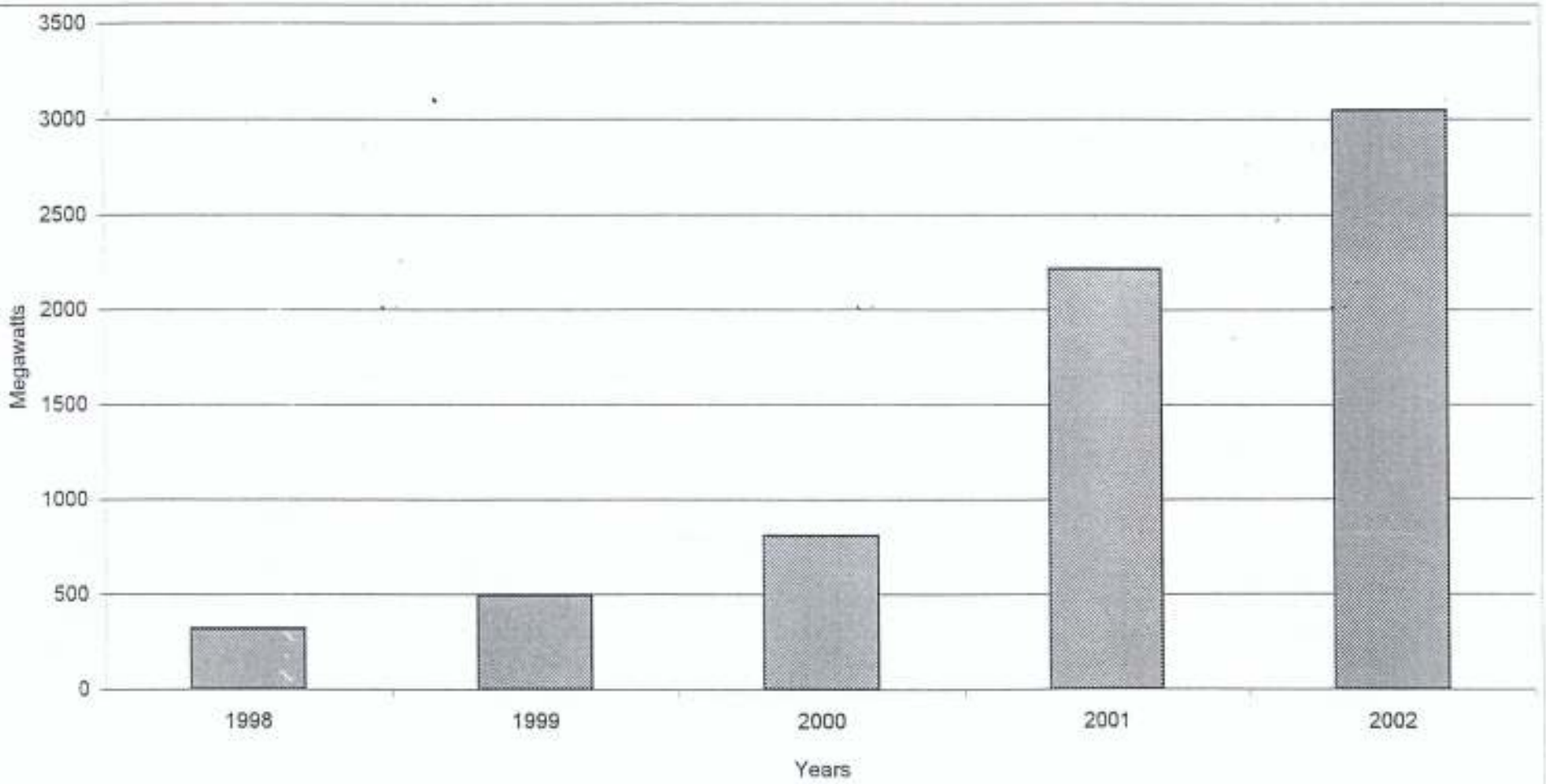

Fig. 3.21: Combined feeders load loss for 5 years.

Table 3.7: Five years feeder-by-feeder downtime results in hours

YEARS	FEEDERS					TOTAL
	1	2	3	4	5	
1998	3.52	31.60	151.37	77.50	-	263.99
1999	10.87	74.35	102.72	127.72	-	315.66
2000	43.93	54.20	190.80	140.45	-	350.93
2001	153.86	220.87	365.28	437.35	64.80	1242.16
2002	113.98	159.06	296.38	302.45	353.09	1223.94
GRAND TOTAL	326.16	540.04	1106.55	1085.47	419.89	3476.11

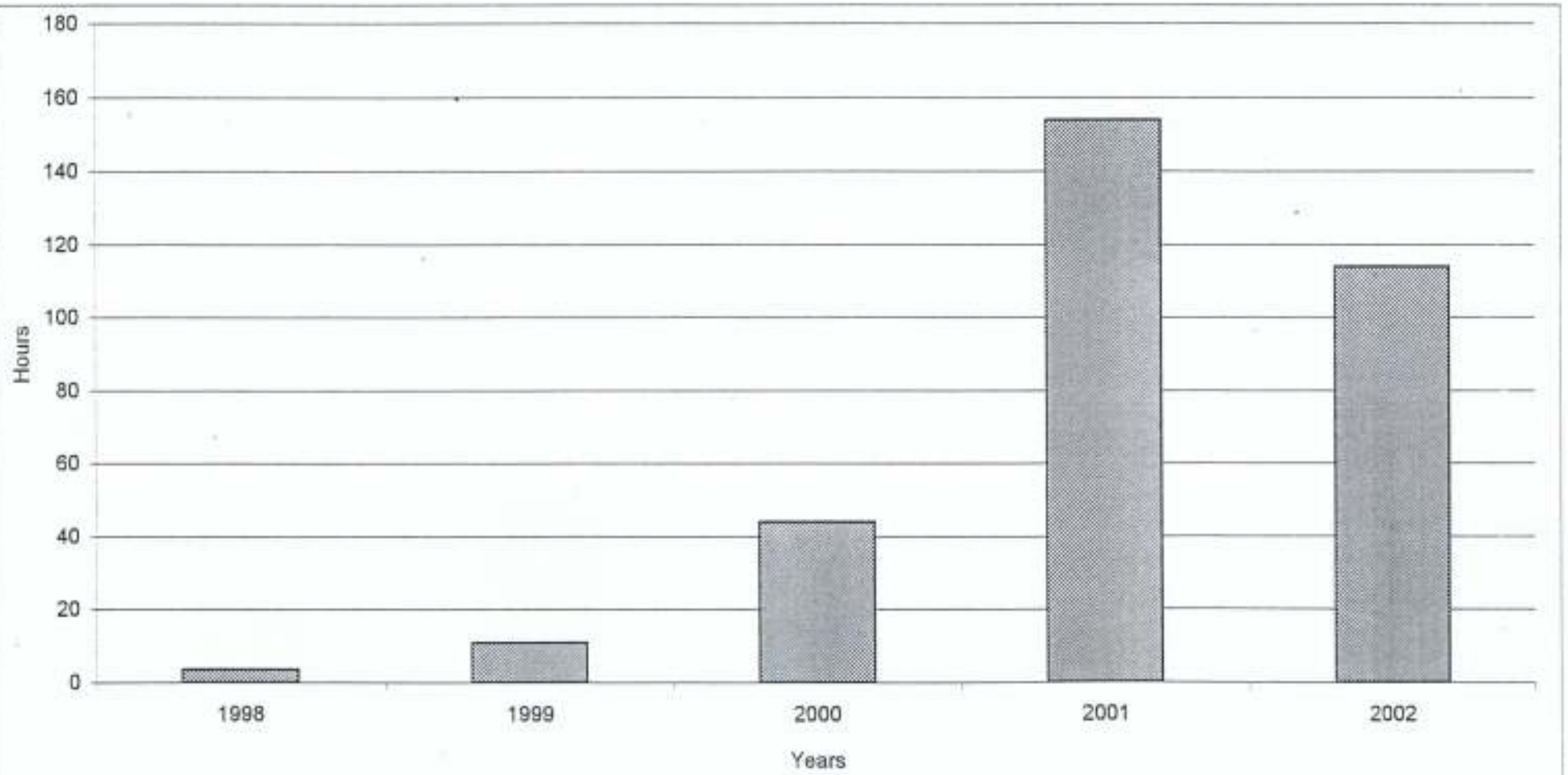

Fig. 3.22: Feeder 1 downtime for 5 years.

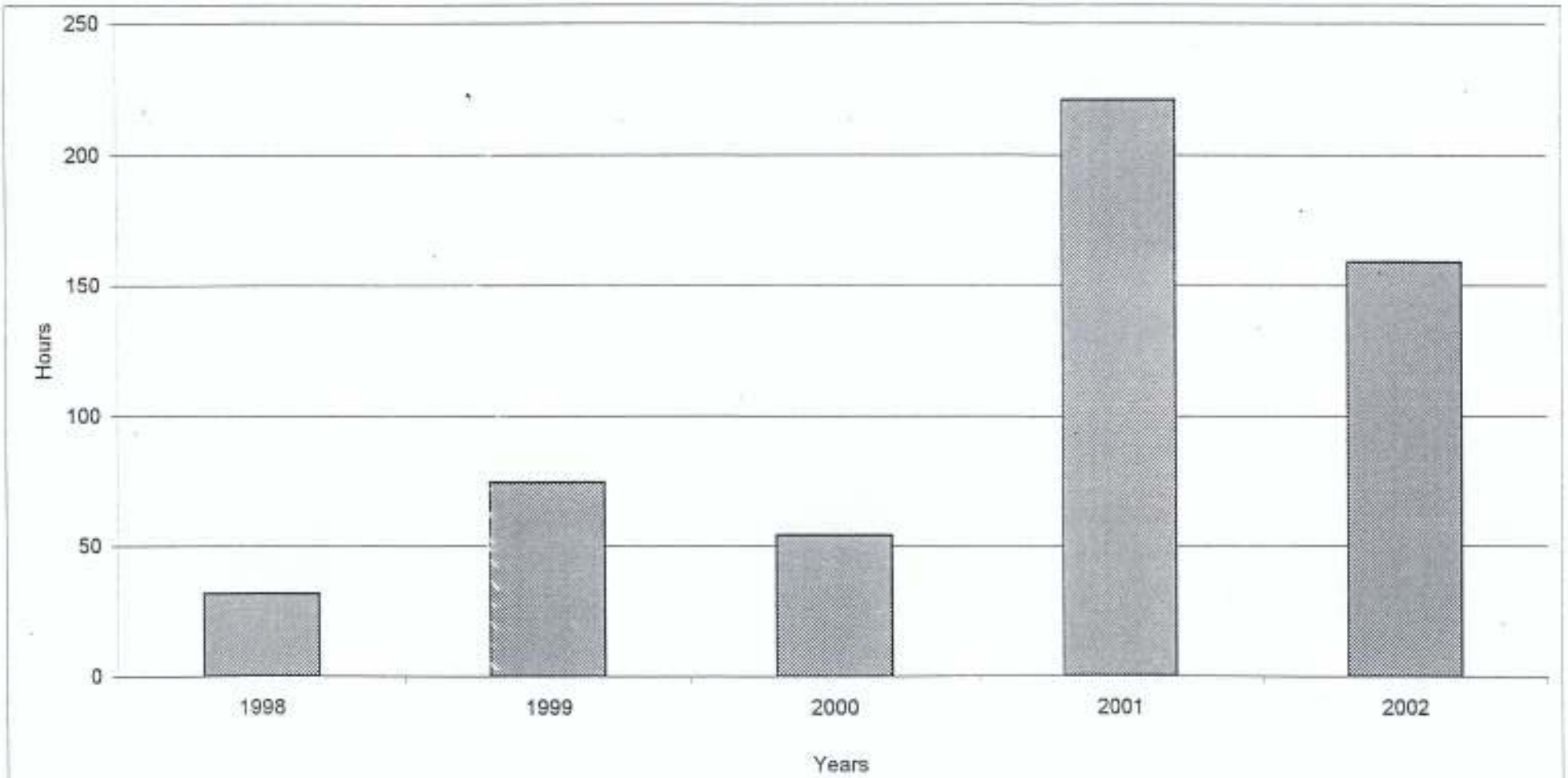

Fig. 3.23: Feeder 2 downtime for 5 years.

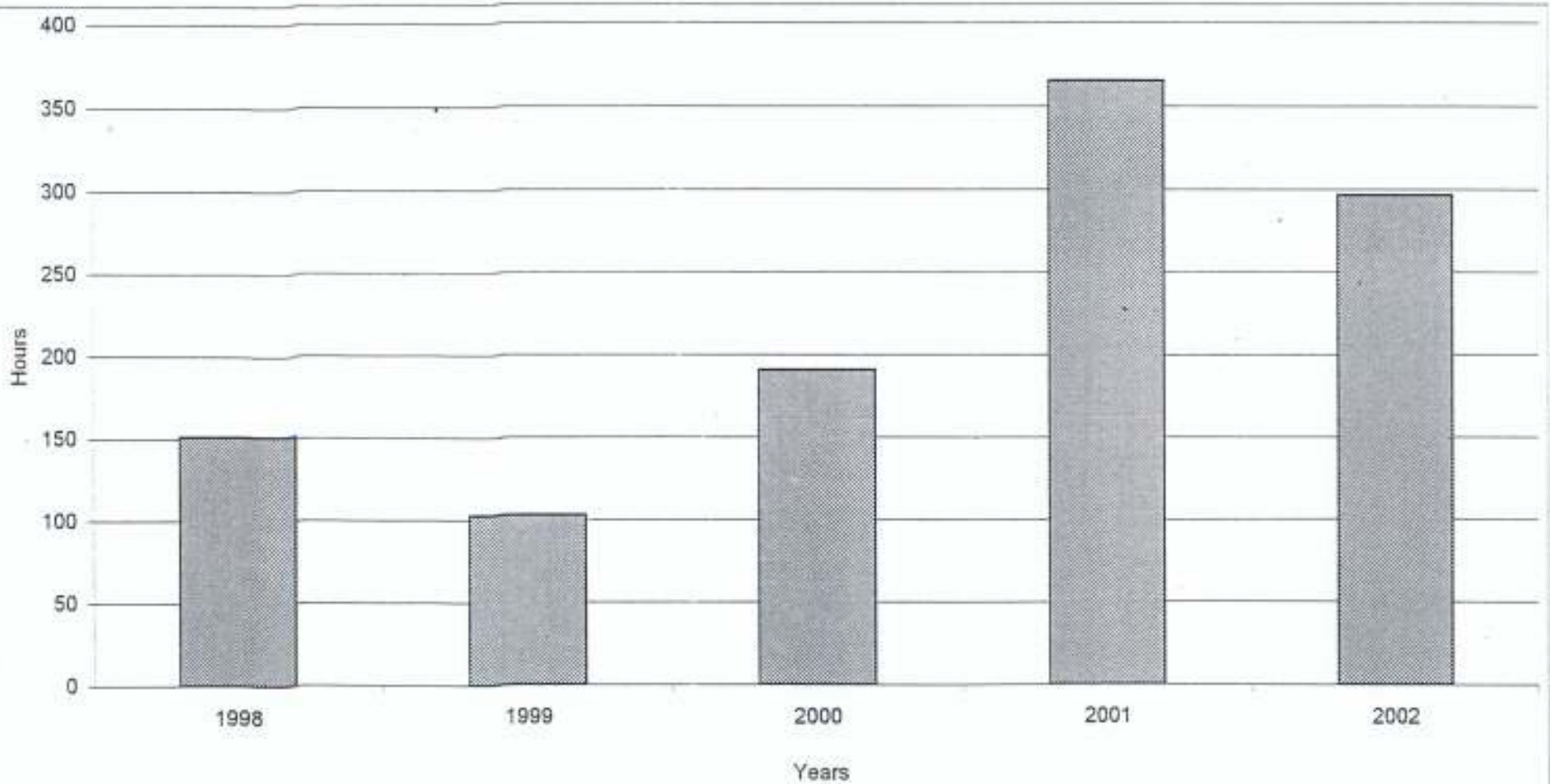

Fig. 3.24: Feeder 3 downtime for 5 years.

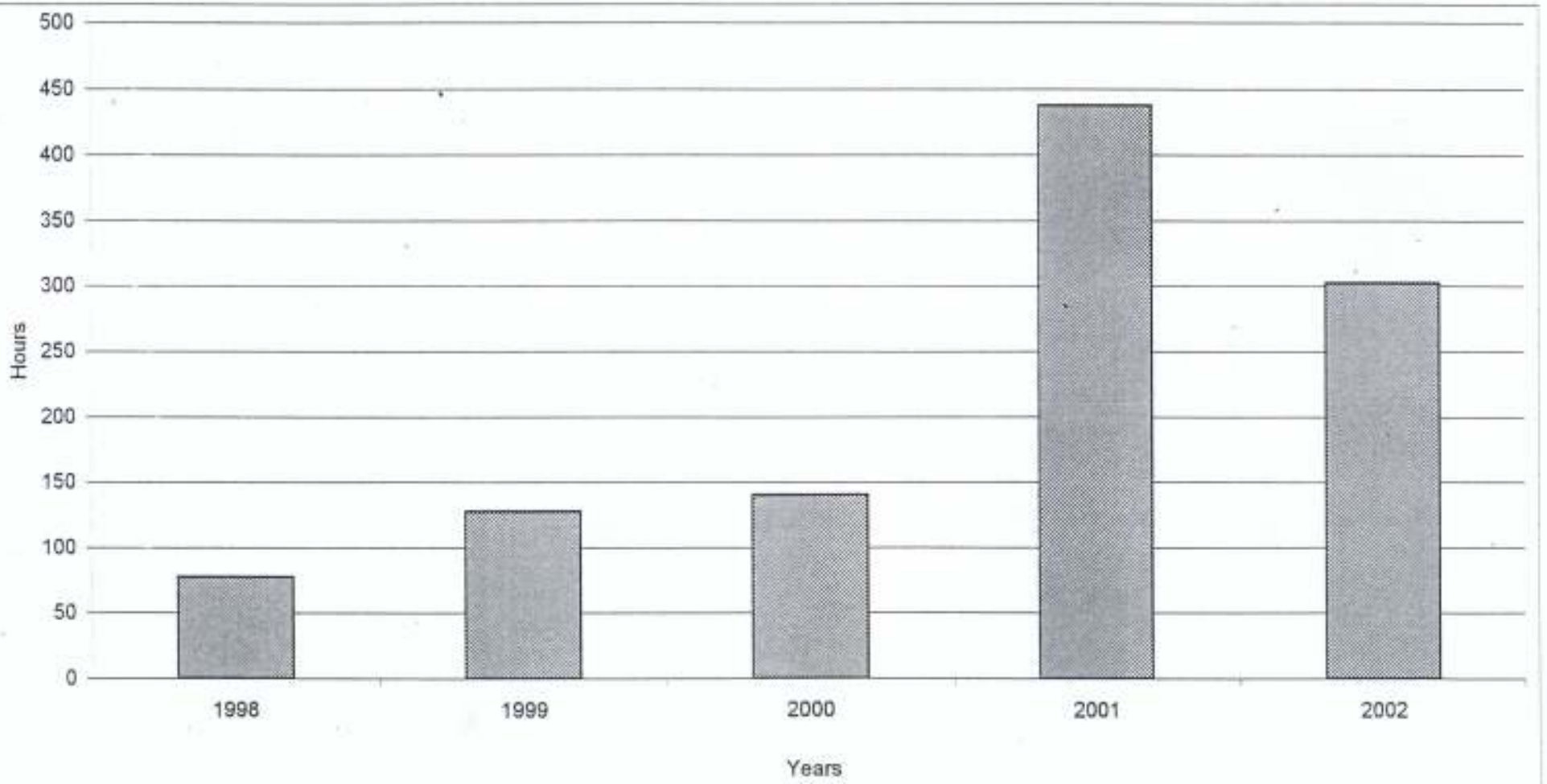

Fig. 3.25: Feeder 4 downtime for 5 years.

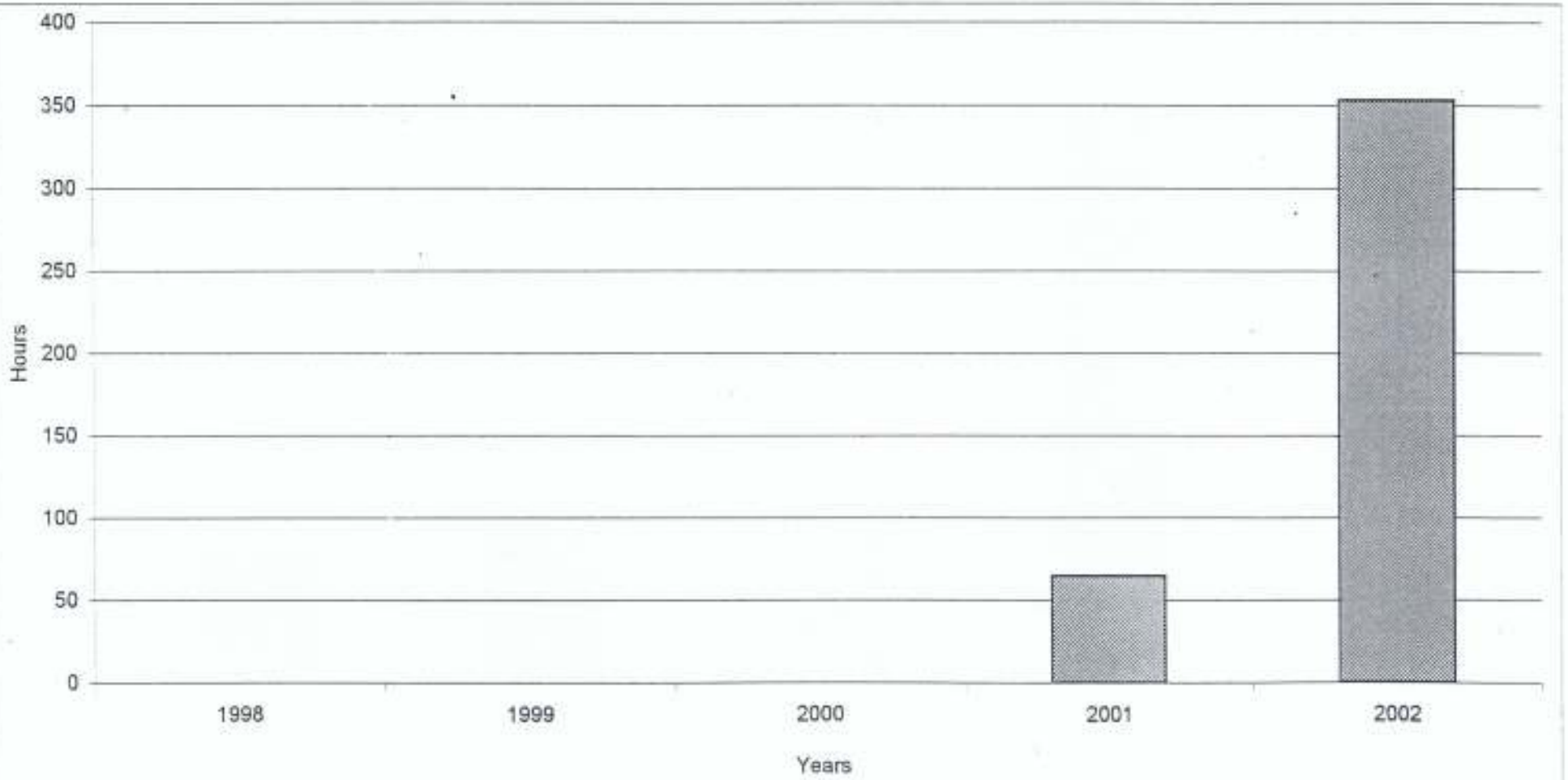

Fig. 3.26: Feeder 5 downtime for 5 years.

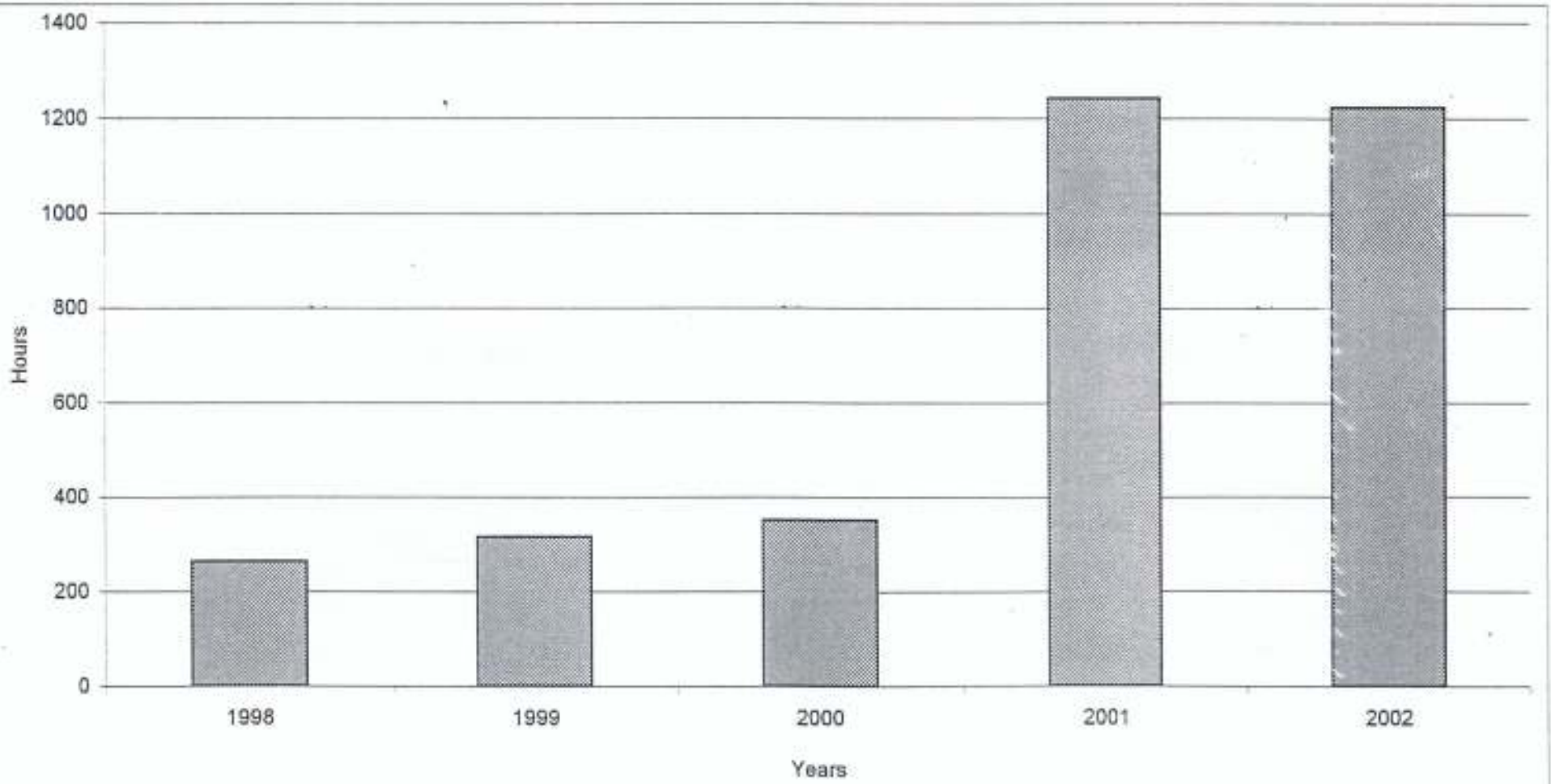

Fig. 3.27: Combined feeders downtime for 5 years.

Table 3.8: Five years feeder-by-feeder revenue loss results in naira

YEARS	FEEDERS					TOTAL
	1	2	3	4	5	
1998	4,953	49,137	140,383	166,322	-	360,795
1999	17,952	166,236	150,737	287,916	-	622,841
2000	75,556	121,959	273,325	282,524	-	752,364
2001	330,858	474,176	577,703	1,041,174	94,450	2,518,361
2002	231,482	323,326	457,776	629,134	689,773	2,311,419
GRAND TOTAL	660,801	1,134,834	1,598,924	2,407,070	784,223	6,565,852

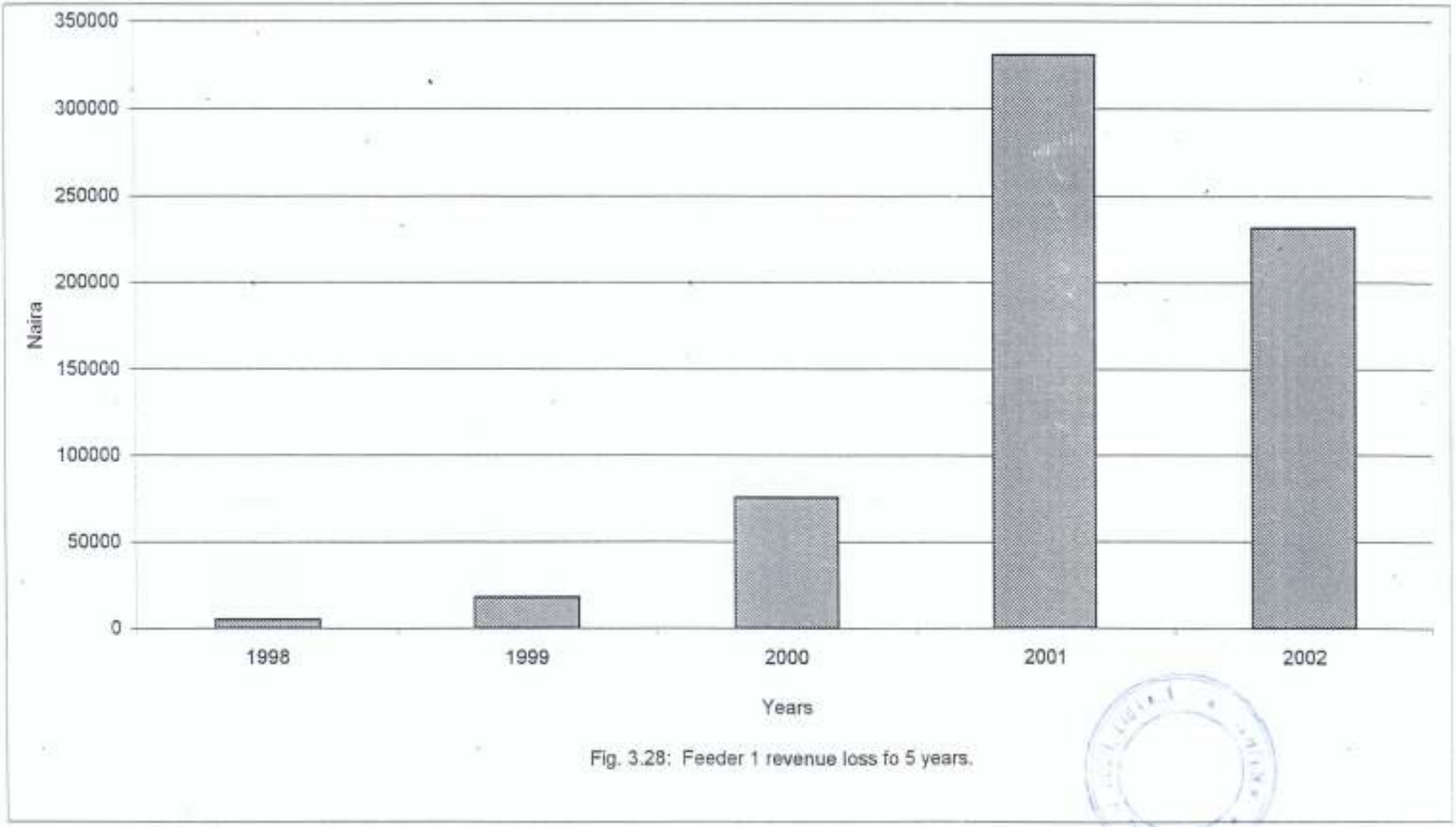

Fig. 3.28: Feeder 1 revenue loss fo 5 years.

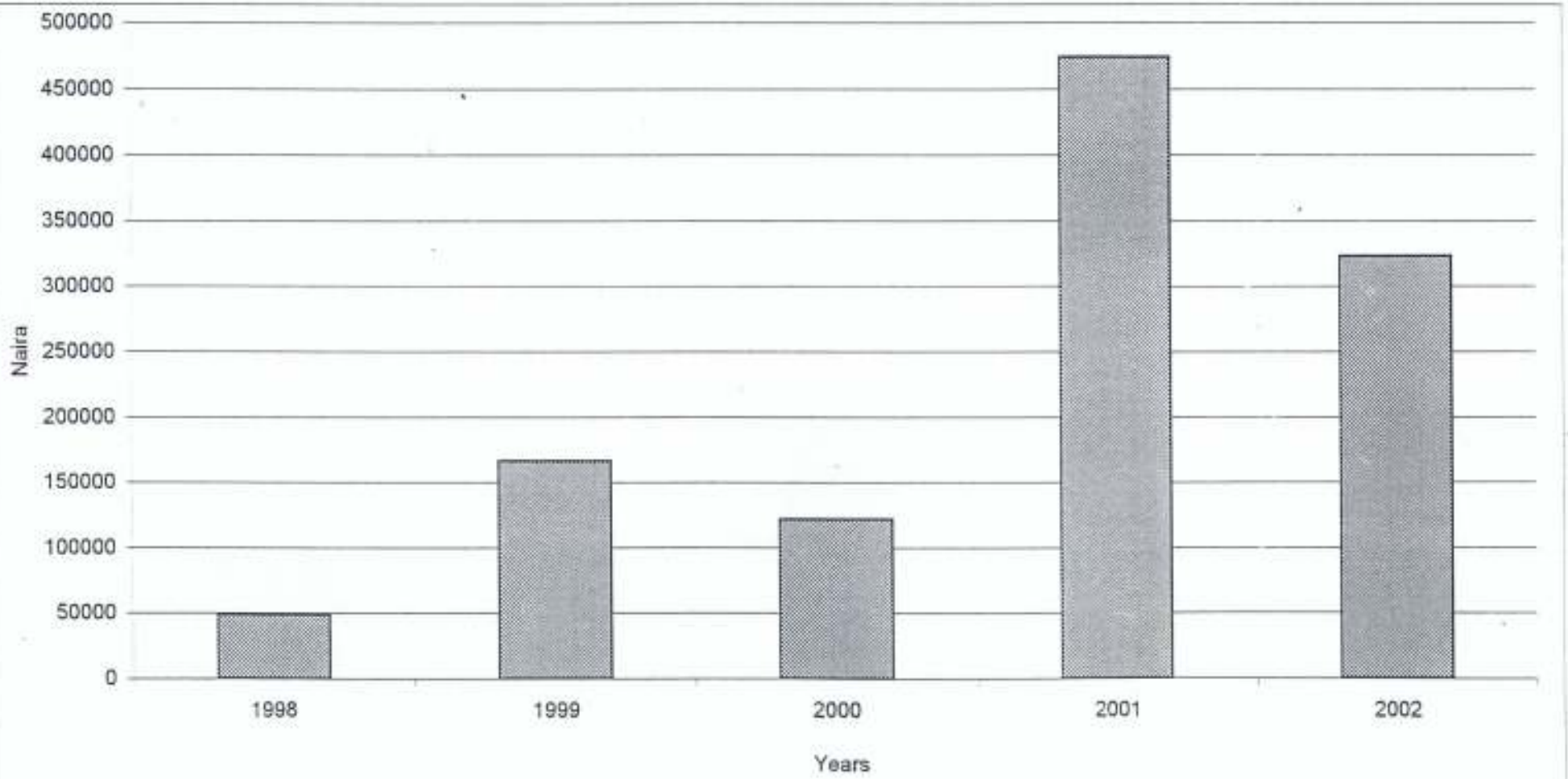

Fig. 3.29: Feeder 2 revenue loss for 5 years.

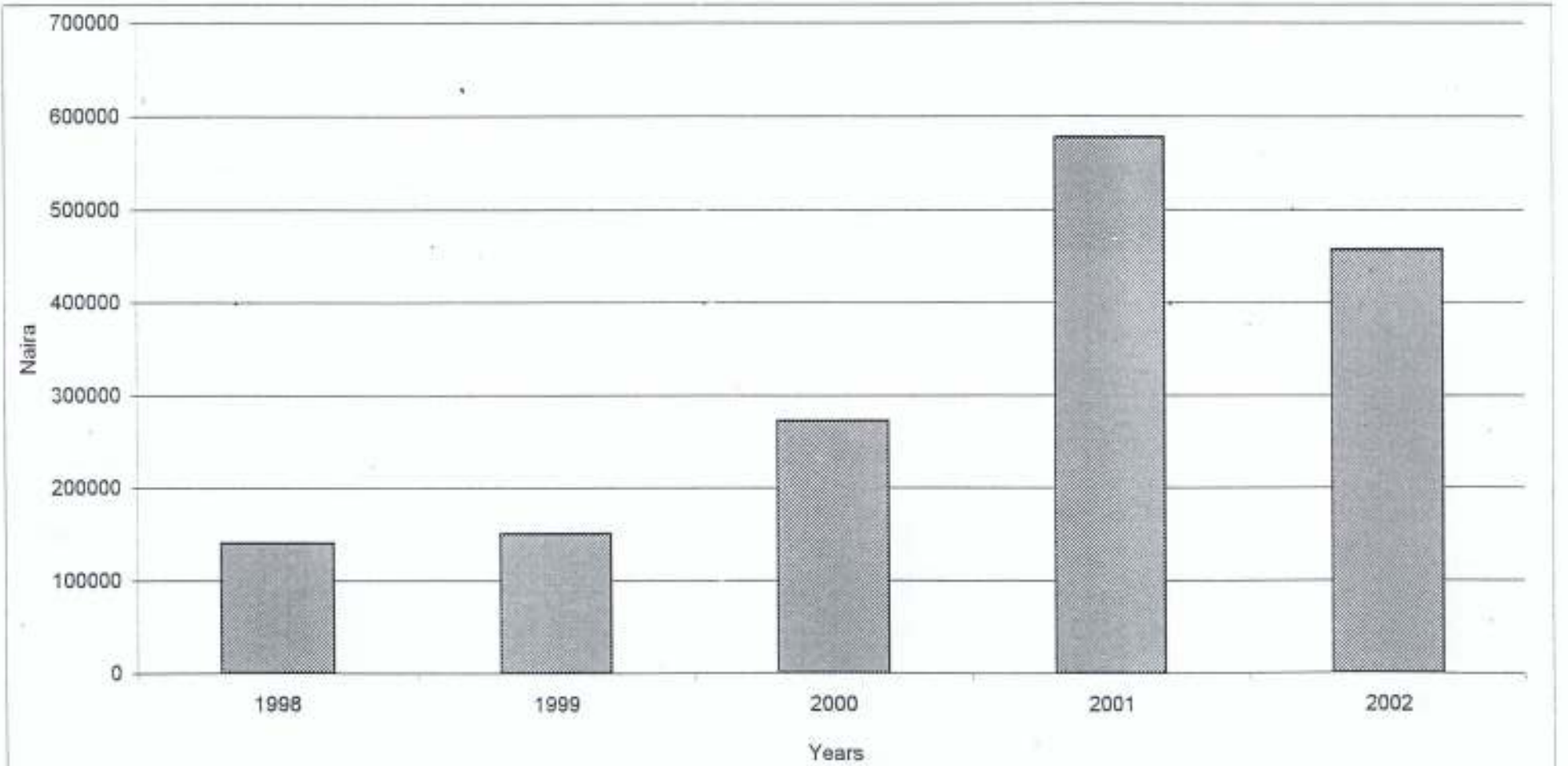

Fig. 3.30: Feeder 3 revenue loss for 5 years.

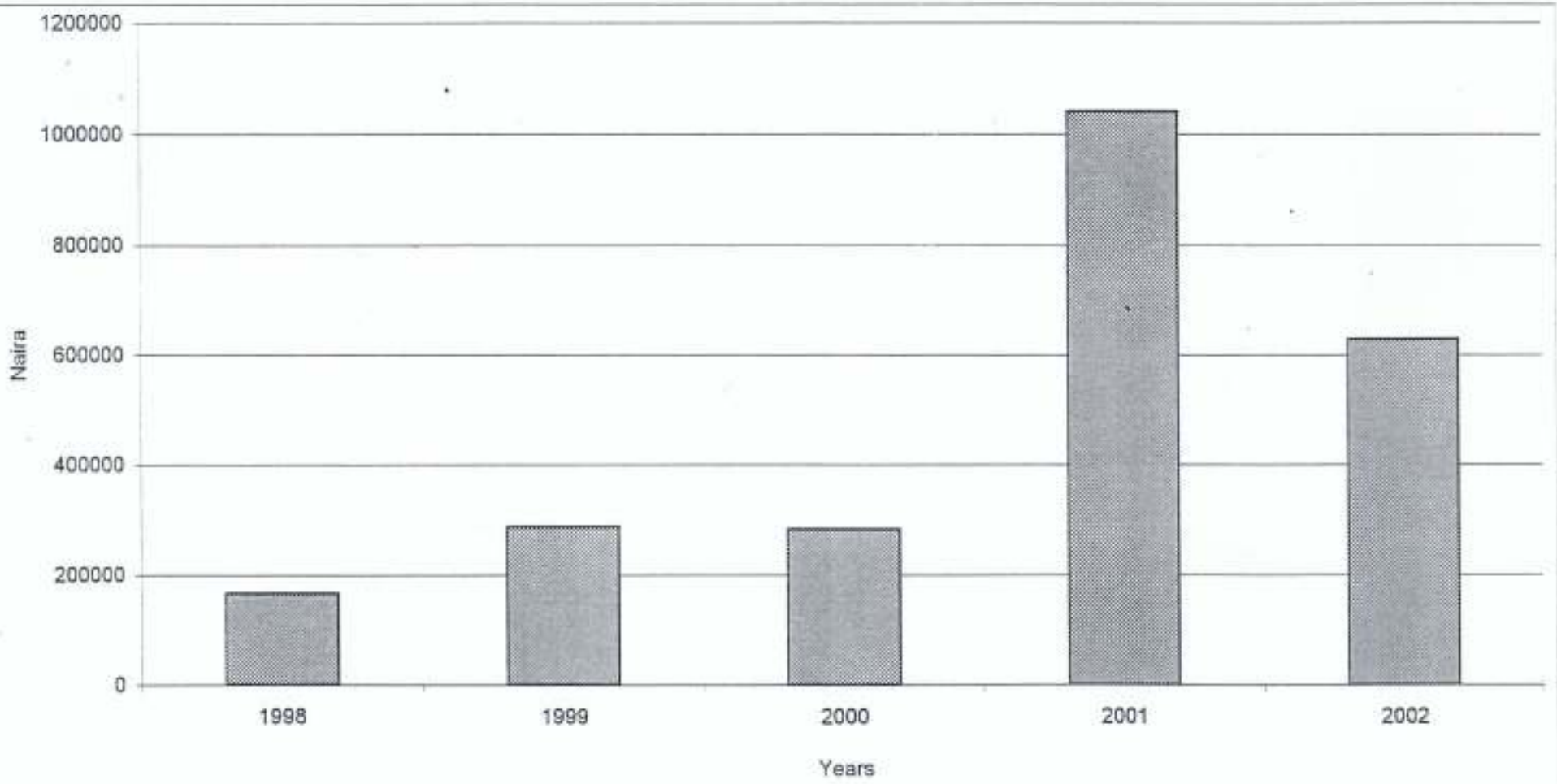

Fig. 3.31: Feeder 4 revenue loss for 5 years.

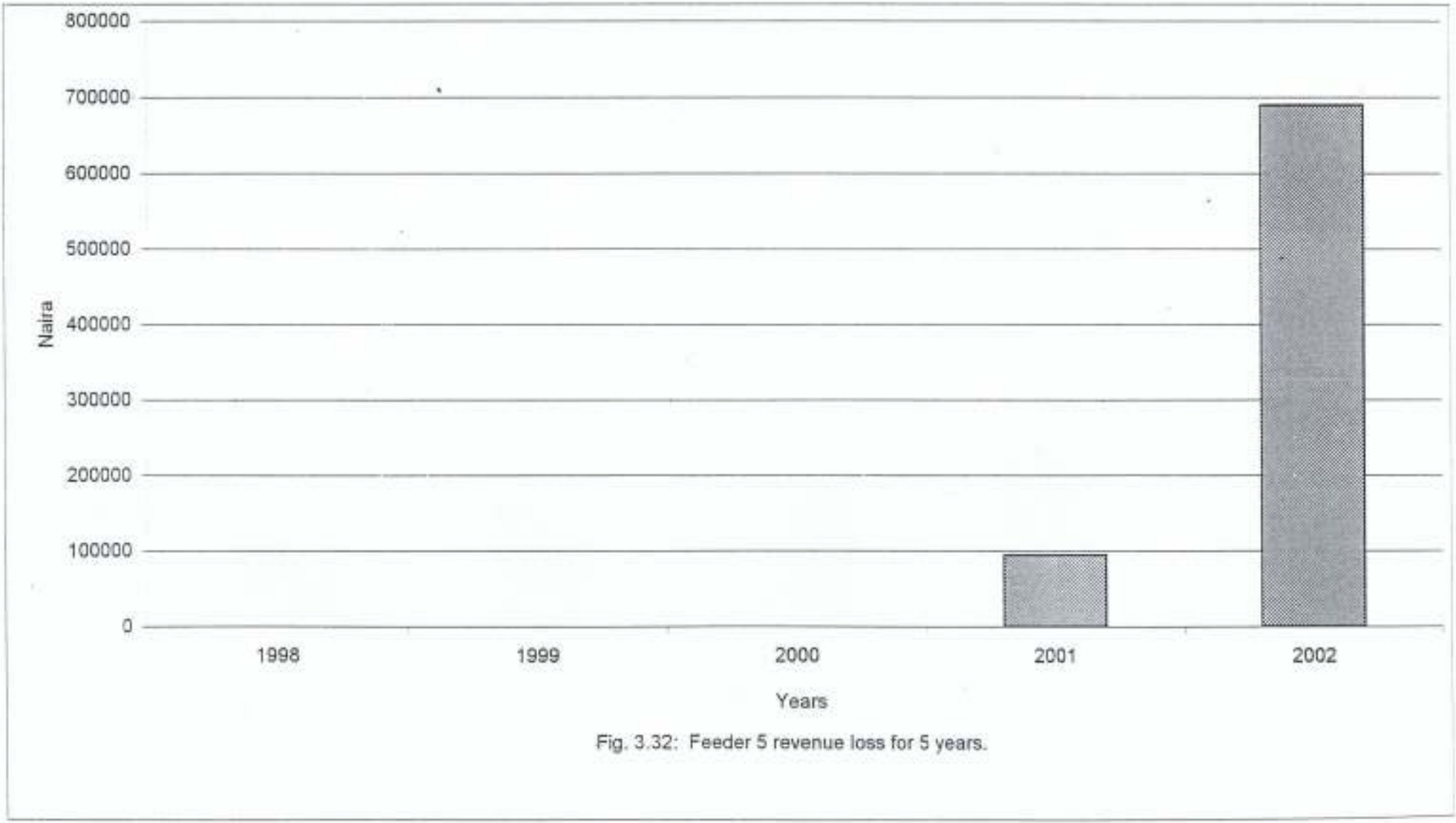

Fig. 3.32: Feeder 5 revenue loss for 5 years.

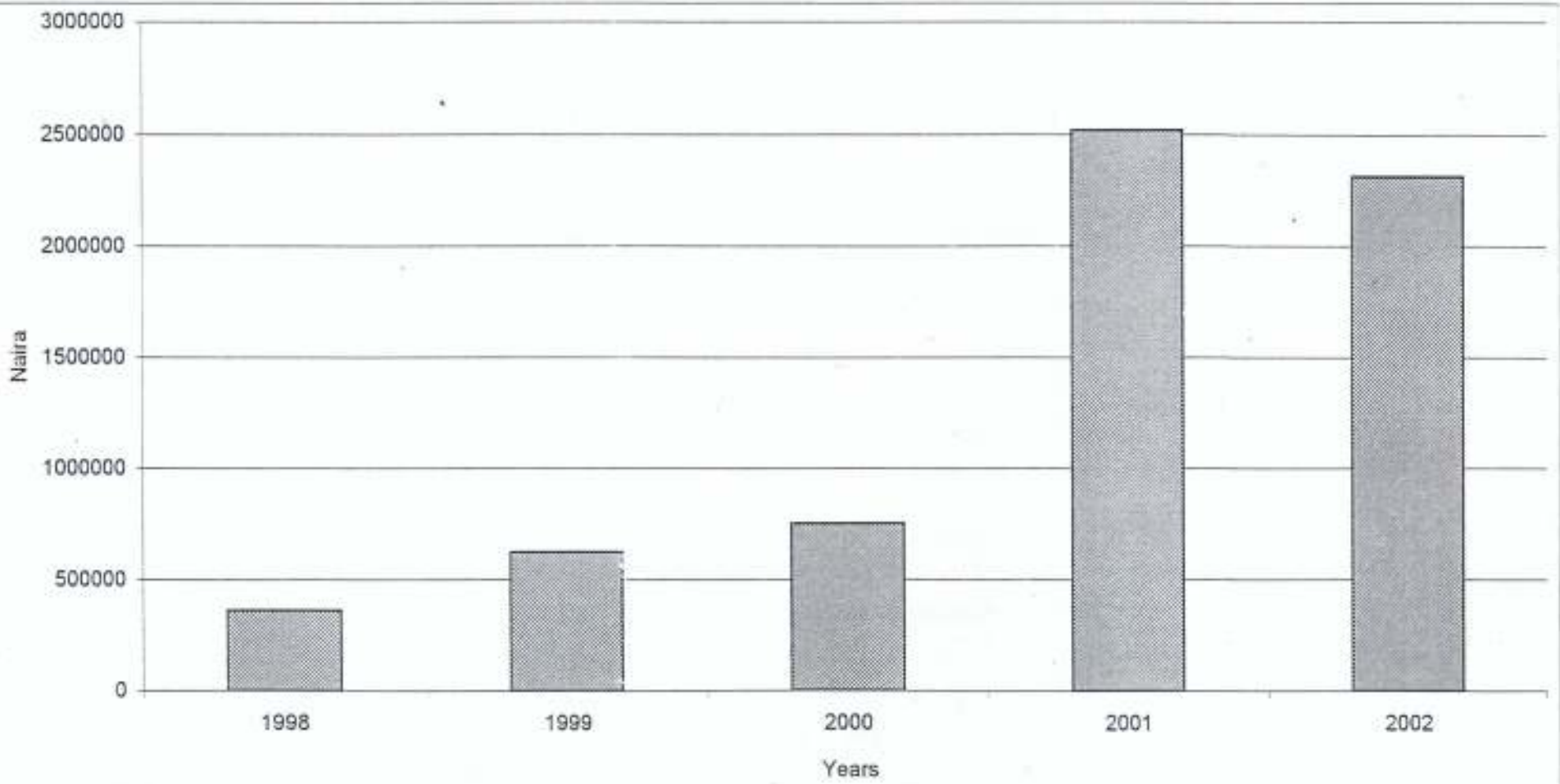

Fig. 3.33: Combined feeders revenue loss for 5 years.

Table 3.9a: Frequency of fault on red phase

	1998	1999	2000	2001	2002	TOTAL
FEEDER 1	1	4	1	6	7	19
FEEDER 2	3	13	12	49	30	107
FEEDER 3	1	6	7	11	10	35
FEEDER 4	9	9	10	32	18	78
FEEDER 5	-	-	-	1	5	6

Table 3.9b: Frequency of fault on yellow phase

	1998	1999	2000	2001	2002	TOTAL
FEEDER 1	2	3	14	47	15	81
FEEDER 2	17	27	43	178	72	337
FEEDER 3	31	21	61	78	82	273
FEEDER 4	16	17	45	55	52	185
FEEDER 5	-	-	-	18	96	114

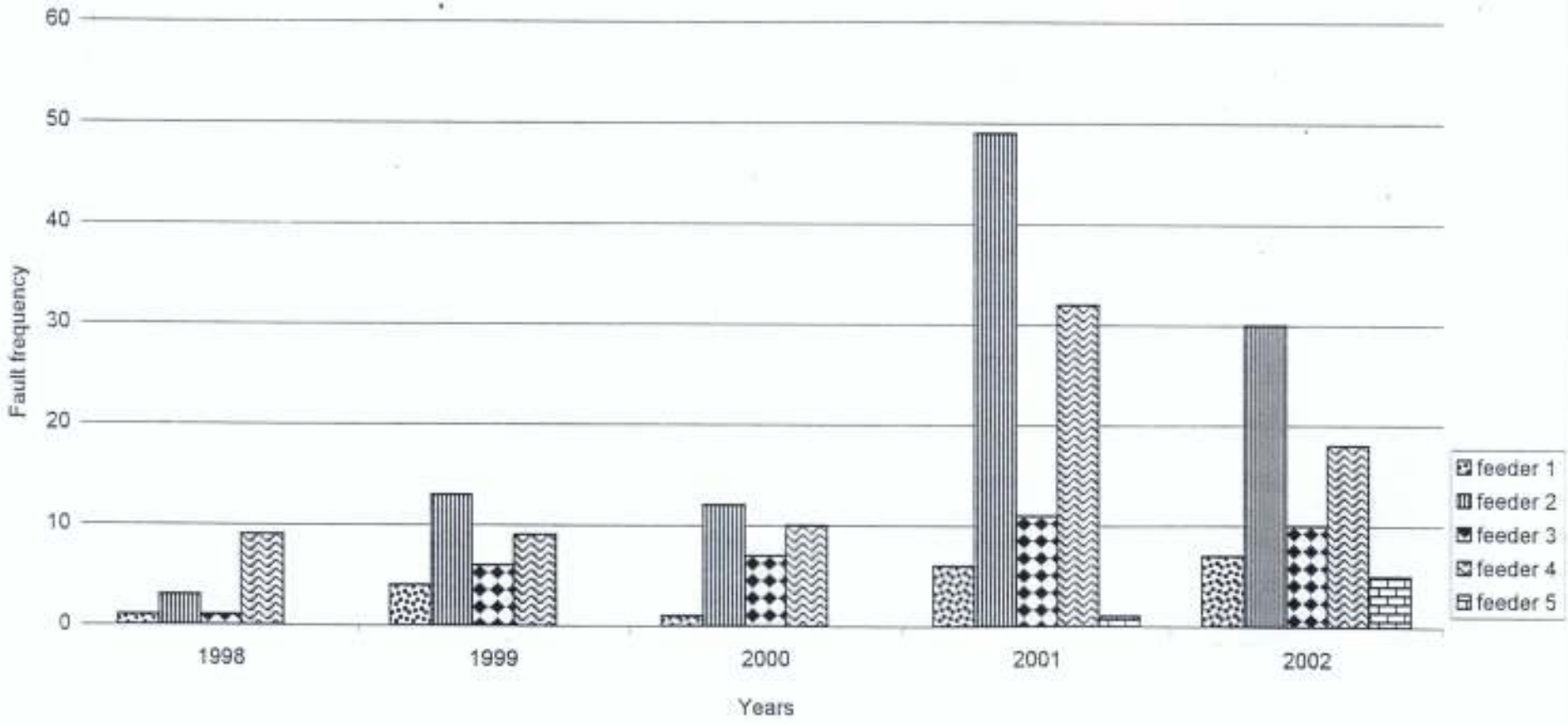

Fig. 3.34: Frequency of fault on red phase

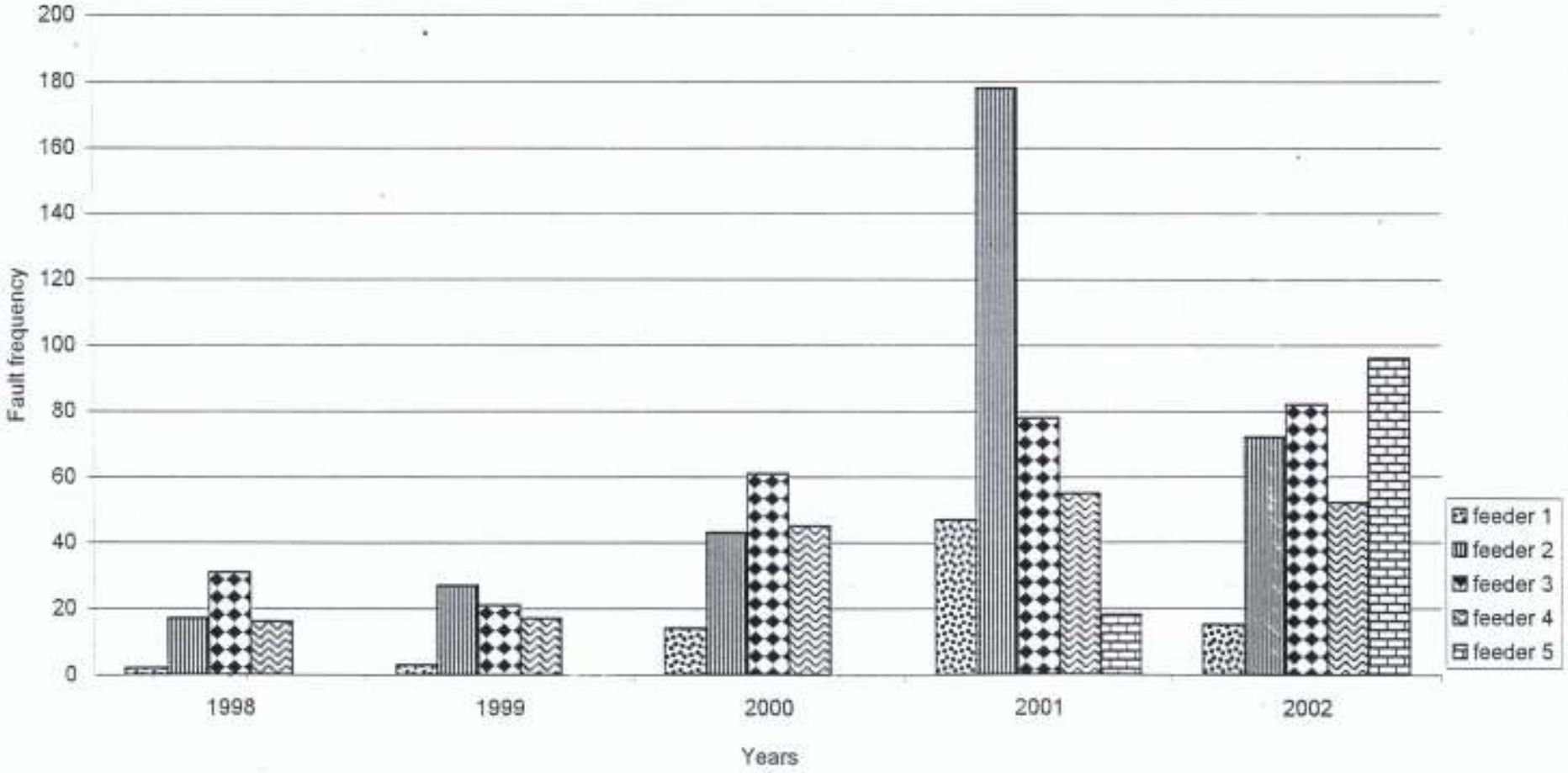

Fig. 3.35: Frequency of fault on yellow phase.

Table 3.9c: Frequency of fault on blue phase

	1998	1999	2000	2001	2002	TOTAL
FEEDER 1	1	5	4	4	7	21
FEEDER 2	9	21	13	59	42	144
FEEDER 3	6	7	16	5	5	39
FEEDER 4	14	17	11	47	16	105
FEEDER 5	-	-	-	1	6	7

Table 3.9d: Frequency of fault on the phases

	1998	1999	2000	2001	2002	TOTAL
RED	14	32	30	99	70	245
YELLOW	66	68	163	376	317	990
BLUE	30	50	44	116	76	316

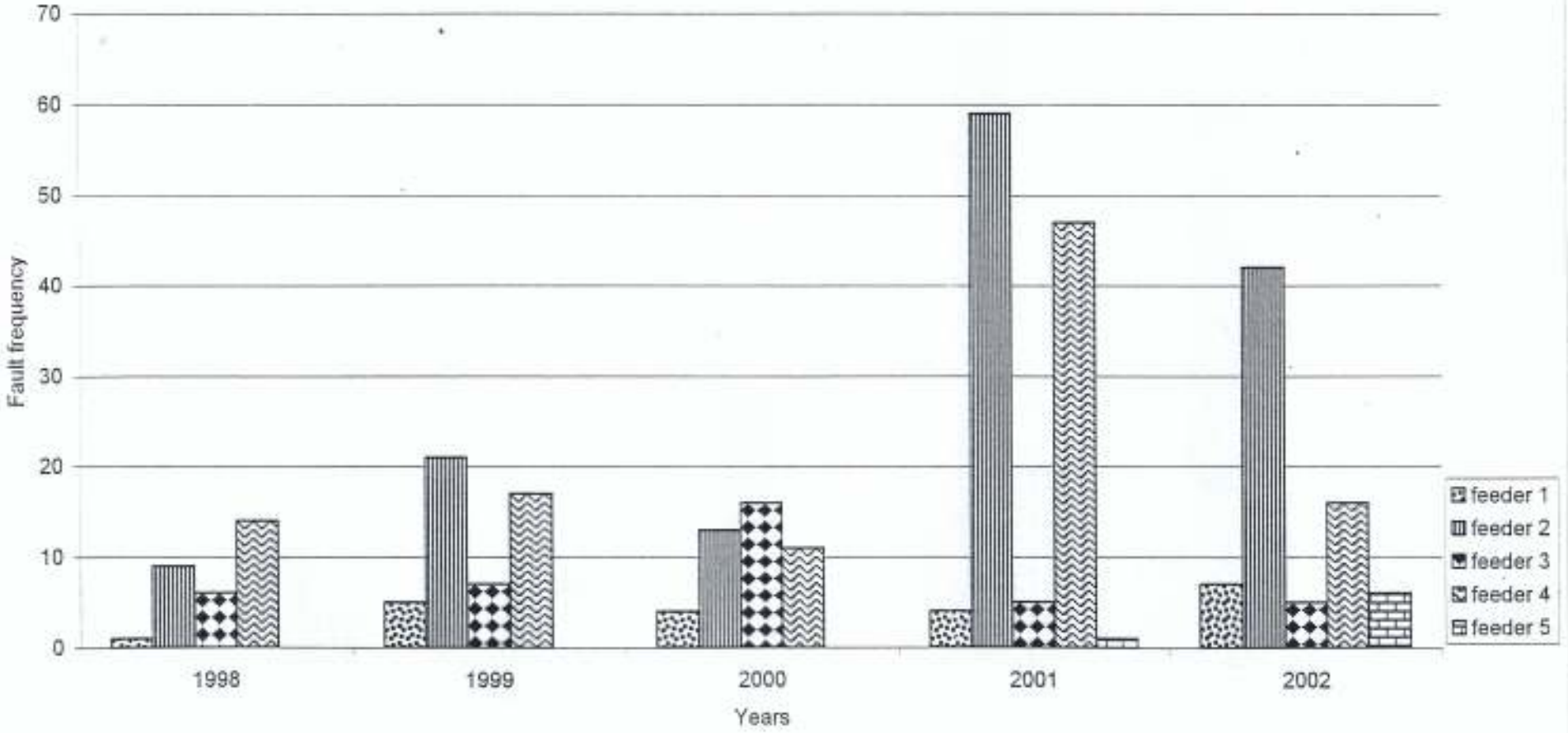

Fig. 3.36: Frequency of fault on blue phase.

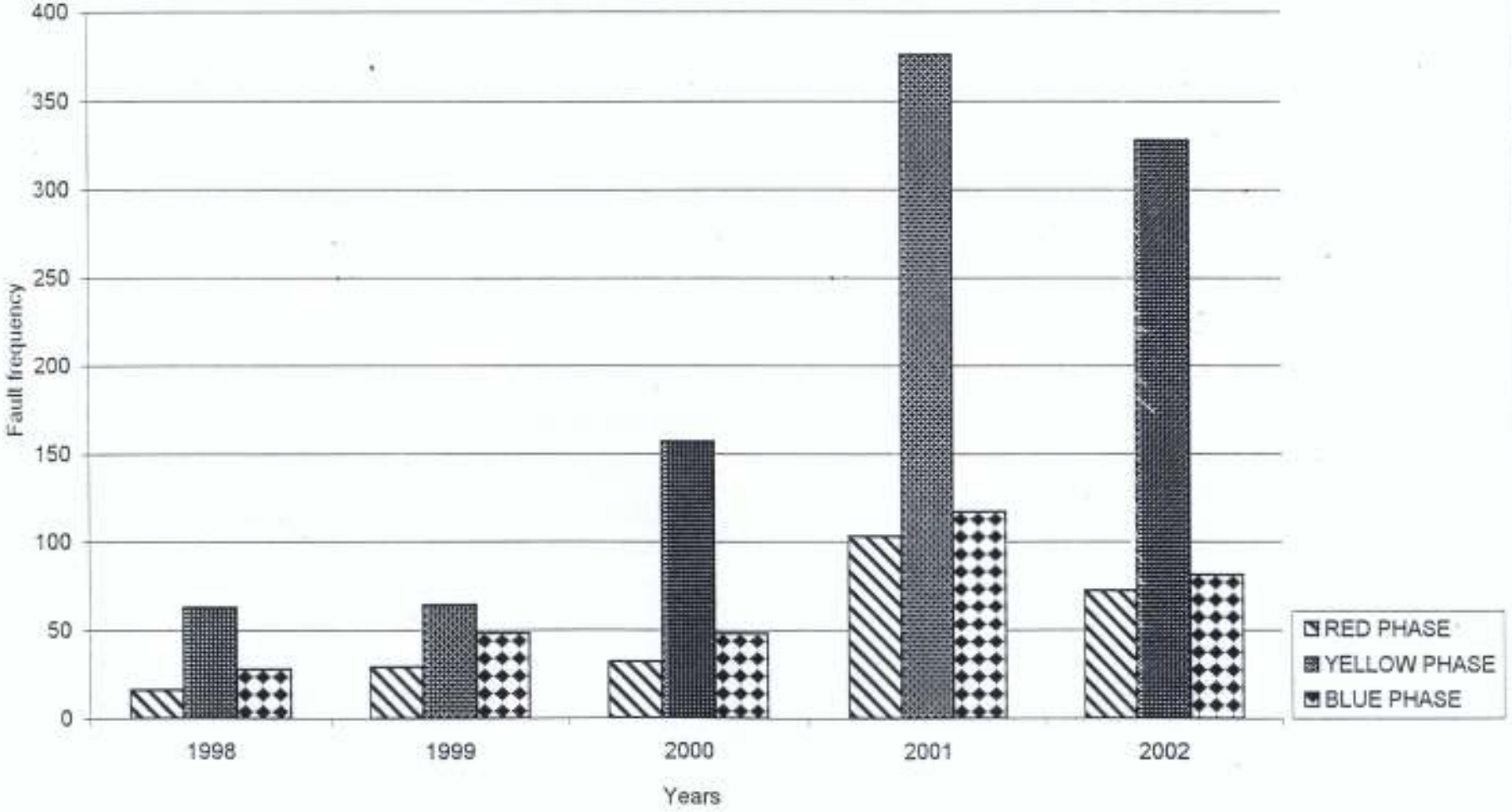

Fig. 3.37: Frequency of fault on the phases for 5 years.

Table 3.10: Failure rate of the system for each year.

YEARS	ANNUAL TOTAL				FAILURE RATE
	FAULT FREQ.	TIME (HRS.)	DOWNTIME (HRS.)	OPERATING TIME (HRS.)	
1998	107	8760	263.99	8,496.01	0.0126
1999	138	8760	315.66	8,444.34	0.0163
2000	227	8784	350.93	8,433.07	0.0269
2001	596	8760	1242.16	7,517.84	0.0793
2002	902	8760	1223.94	7,536.06	0.1197
TOTAL	1,970	43,824	3,396.68	40,427.32	0.0487

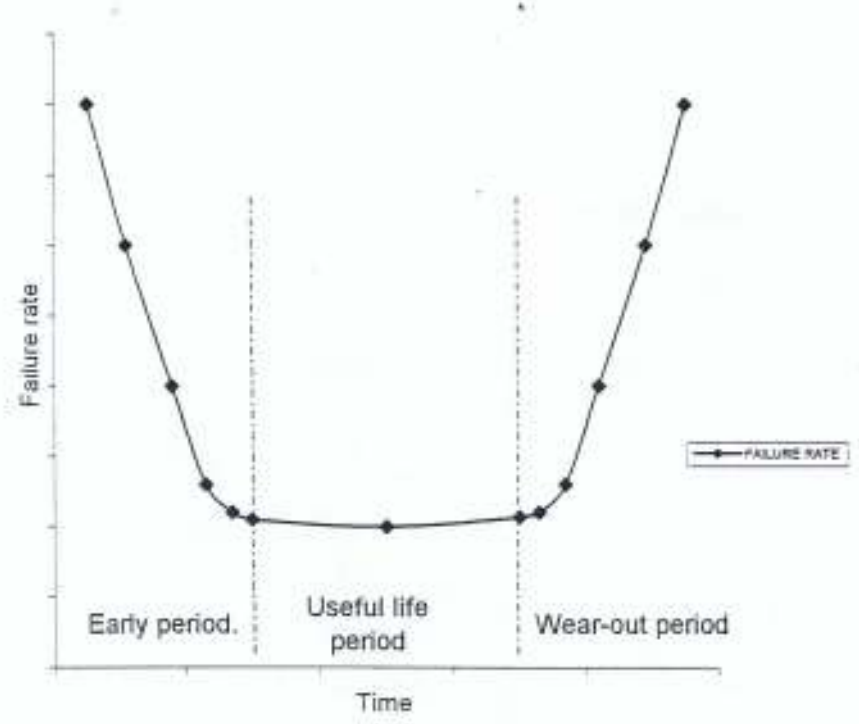

Fig. 3.38a. Hypothetical failure-rate-time curve.

Source: Simpson A. (1976), pp 13.

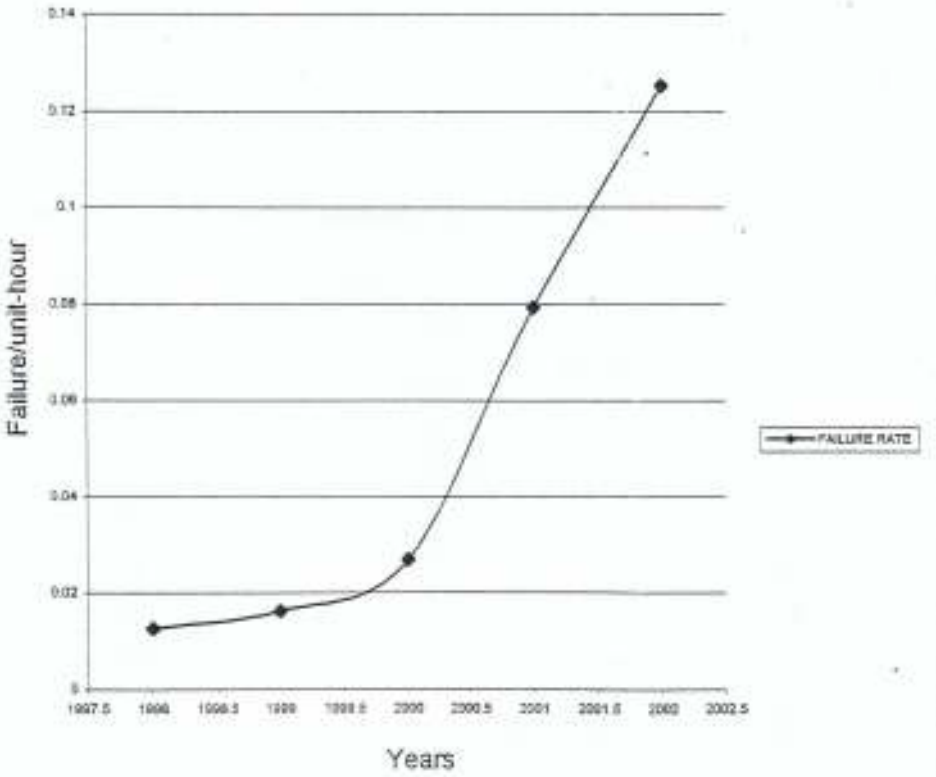

Fig. 3.38b: Failure-rate-time graph for 5 years (1998-2002)

Table 3.11: Statistical summary of fault frequency on 11/0.415kV network (1998-2002).

MONTHS	1998		1999		2000		2001		2002	
	FAULT FREQ.	CUMUL. FAULT FREQ.	FAULT FREQ.	CUMUL. FAULT FREQ.	FAULT FREQ.	CUMUL. FAULT FREQ.	FAULT FREQ.	CUMUL. FAULT FREQ.	FAULT FREQ.	CUMUL. FAULT FREQ.
JAN.	2	2	15	15	6	6	33	33	44	44
FEB.	7	9	10	25	4	10	19	52	82	126
MAR.	9	18	12	37	12	22	65	117	114	240
APRIL	9	27	11	48	16	38	45	162	58	298
MAY	12	39	17	65	16	54	69	231	97	395
JUNE	1	40	16	81	31	85	39	270	151	546
JULY	4	44	8	89	23	108	35	305	54	600
AUG.	5	49	15	104	21	129	26	331	61	661
SEPT.	12	61	9	113	27	156	67	398	92	753
OCT.	15	76	6	119	16	172	67	465	72	825
NOV.	19	95	11	130	28	200	88	553	54	879
DEC.	12	107	8	138	27	227	43	596	23	902

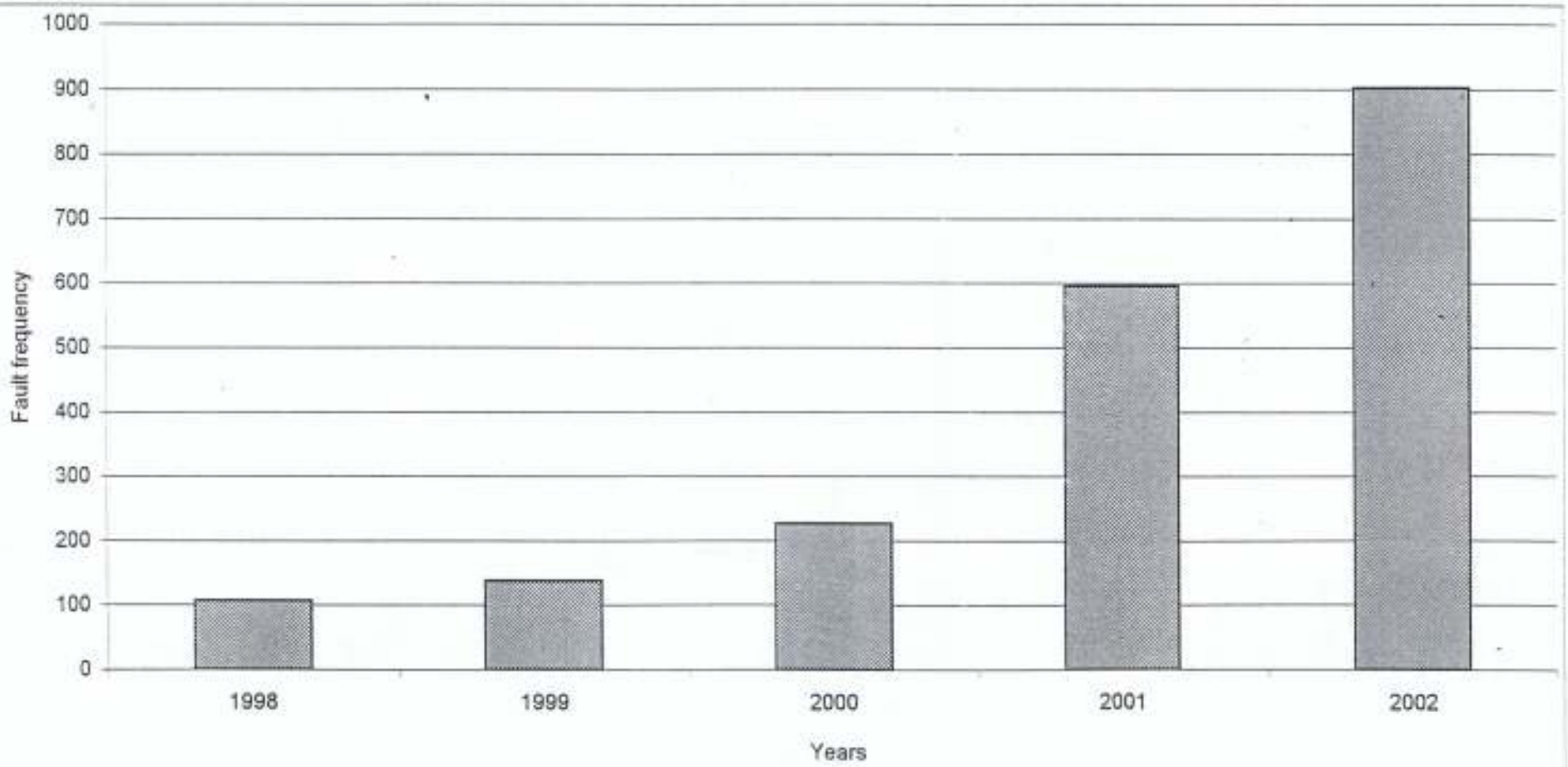

Fig. 3.39: Fault frequency on 11/0.415kV Akure township main substation (1998-2002).

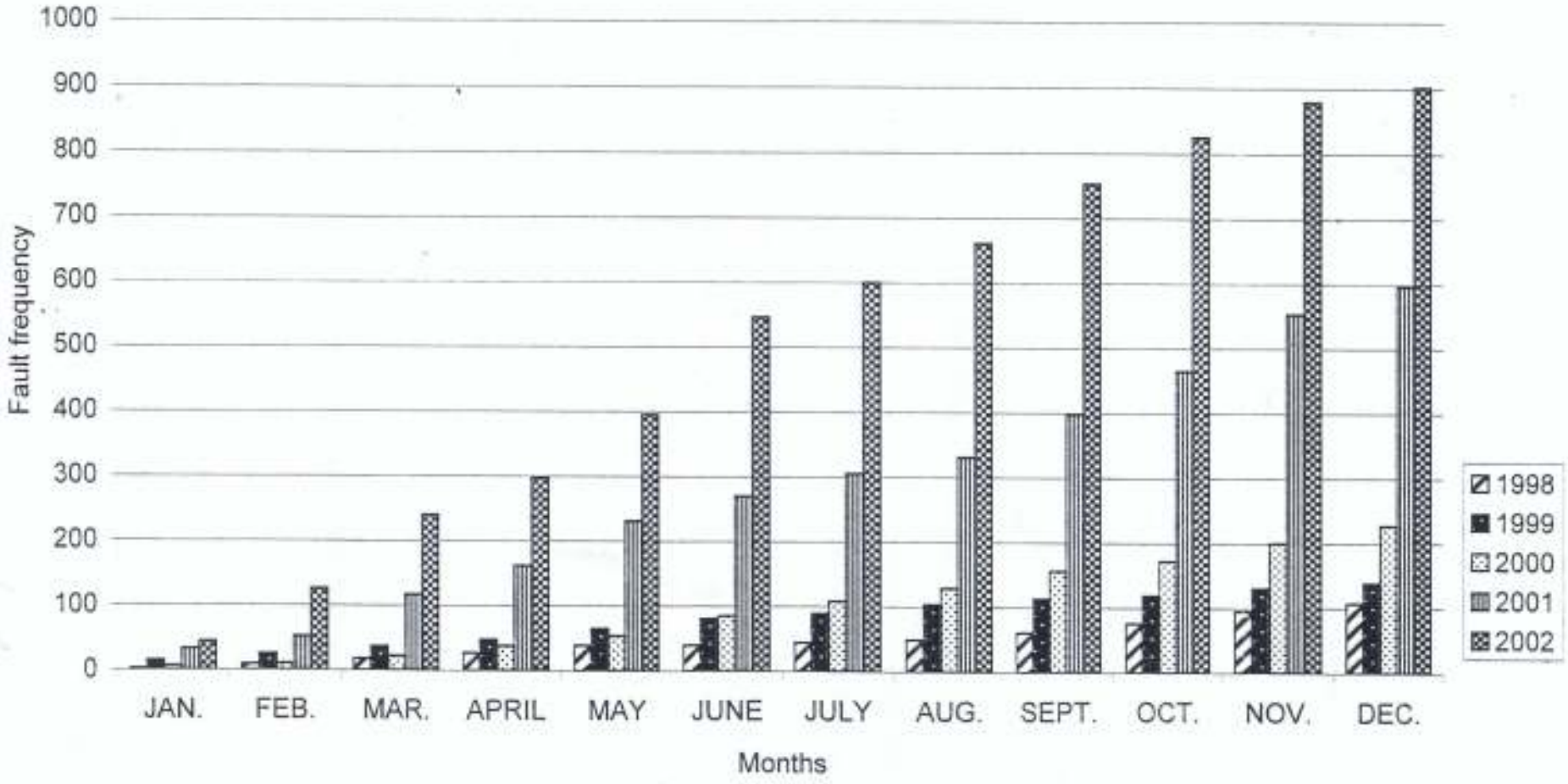

Fig. 3.40: Fault frequency on 11/0.415kV Akure township main substation (1998-2002).

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF RESULTS

4.1 GRAPHICAL ANALYSIS

This involves the visual symbolic representation of the collated fault data. It gives a clear and distinct picture in mind at a glance.

Fig.3.39 shows the chart of total of fault frequency on 11/0.415kV Akure township network. The fault increases as the year increases.

Fig. 3.37 shows the chart of frequency of fault on the phases. Yellow phase suffers more faults than any of the other phases, which is as a result of phase load distribution imbalance. The practice in many areas is the connection of single-phase meter with 3-phase 4-wire conductors or 2-phase 3-wire conductor supply. It is expected that with this arrangement, whenever there is a phase failure, any of the other "live" phases is connected to the load. When the phase that failed is restored, the loads are not always returned to their original phase so as to maintain the balance. Thus, this practice promotes more faults on such a phase and reduces the life span of the affected transformer.

4.1.1 Economic Impact of Faults.

Figures 3.21, 3.27 and 3.33 show the combined feeders load loss, downtime and revenue loss for the 5 years. For the load loss, it increases as the year increases. The downtime also increases as the year increases except in the year 2002 where an improvement was made on maintenance. This little improvement had safe NEPA authority N206,942 as referred to revenue loss between year 2001 and 2002.

The relationship between load loss, downtime and revenue loss is;

Revenue Loss (₦) = Load Loss (MW) x Downtime (Hrs) x Unit price (₦)

Note:- The unit price for 11kV network is ₦550/MW.

SERVICE AREA OF EACH FEEDER

FEEDER 1

This feeder covers Ilesha road – Oyemekun road, stop at cathedral Junction. Oyemekun road – Adegbola – Ayedun – Stadium – Oshodi – Araromi – High school – St John – Ijomu – Plaza in Akure methropolis.

FEEDER 2

This feeder covers Ilesha road – Ondo road through bye-pass – Nicon building at Isikan – Adesida road – Police station (A division) – Old secretariat – State house – G.R.A – Alagbaka Oda. Adesida road – Ijomu. NEPA junction – Ala – Idiagba titun – Oluwatuyi – Ijoka – Odopo in Akure metropolis.

FEEDER 3

This feeder covers Ilesha road – Awule – FUTA – OSRC – Coop – CUDA- F.G.G.C. – FUTA recreation center in Akure metropolis.

FEEDER 4

This feeder covers Ilesha road – Ondo road through Alpha Motel – Idanre road – Irowo – Youth center – Aquinas – St Luke – Olukayode – Hospital – Oshile in Akure metropolis.

FEEDER 5

This feeder covers Ilesha road – Fanibi – Empress hotel – Oke Aro – Ibi press – Idanre road – Green park. Fanibi – Agric – Ondo motor park – Fembo along old Aponmu road in Akure metropolis.

4.2 MATHEMATICAL ANALYSIS

4.2.1. The feeder-by-feeder analysis for the period of 5 years

Table 4.1: Summary of feeder-by-feeder analysis.

S/N	Description	Feeder 1	Feeder 2	Feeder 3	Feeder 4	Feeder 5
1.	Feeder Load	16	60	38	13	33
2.	Route Length	12km	17km	15km	11km	14km
3.	% of fault on red phase	9.22%	17.23%	8.10%	17.33%	2.30%
4.	% of fault on yellow phase	39.32%	54.27%	63.19%	41.11%	43.68%
5.	% of fault on blue phase	10.19%	23.19%	9.03%	23.33%	2.68%
6.	% of trial reclosure made	33.50%	53.78%	42.13%	41.56%	28.35%
7.	% of fault on over others	10.46%	31.52%	21.93%	22.84%	13.25%
8.	Load Loss percentage	10.01%	35.89%	18.48%	26.58%	12.11%
9.	Downtime percentage	9.38%	15.54%	31.83%	31.23%	12.08%
10.	Revenue Loss percentage	10.06%	17.28%	24.35%	36.66%	11.94%
11.	Peak Load Loss	5.50MW	5.67MW	5.50MW	5.60MW	5.17MW
12.	Loss Factor	121.74	423.32	224.89	316.95	156.47

4.2.2. Reliability indices.

Failure rate λ = $\frac{\text{Fault frequency}}{\text{Period of occurrence}}$ failure per unit-hour

= $\frac{1970}{(43824-3396.68)}$

= 0.04873 failure/ unit-hour

= 48.73failure/1000-hour

Mean time between failures (MTBF) = $\frac{1}{\lambda}$ (Hrs)

= $\frac{1}{0.04873}$

= 20.52 hours

Mean Downtime (MDT) = Mean time to repair (MTTR)

= $\frac{\text{Total downtime (Hr)}}{\text{Fault frequency}}$

= $\frac{3396.68}{1970}$

= 1.724 Hours.

Availability, A = $\frac{\text{MTBF} - \text{MTTR}}{\text{MTBF}}$

= $\frac{20.52 - 1.724}{20.52}$

= 0.916 = 91.6%

4.2.3. Reliability analysis on yearly basis

Now that we have the failure rate for each year (Table 3.10), let us consider the reliability of the system for say one day – 24 hours for each of the years.

Using expression

$R = e^{-\lambda t}$ = The probability that the system will work without failure in t hours

In 1998

$R = e^{-\lambda t}$ where $\lambda = 0.0126$ and $t = 24$

$= e^{-0.0126 \times 24}$

$= e^{-0.3024} = 0.7390$

In 1999

$R = e^{-\lambda t}$ where $\lambda = 0.0163$ and $t = 24$

$= e^{-0.0163 \times 24}$

$= e^{-0.3912} = 0.6762$

In 2000

$R = e^{-\lambda t}$ where $\lambda = 0.0269$ and $t = 24$

$= e^{-0.0269 \times 24}$

$= e^{-0.6456} = 0.5243$

In 2001

$R = e^{-\lambda t}$ where $\lambda = 0.0793$ and $t = 24$

$= e^{-0.0793 \times 24}$

$= e^{-1.9032} = 0.1491$

In 2002

$R = e^{-\lambda t}$ where $\lambda = 0.1197$ and $t = 24$

$= e^{-0.1197 \times 24}$

$= e^{-2.8728} = 0.0565$

Considering the reliability of the system for the specified period – 5 years.

i.e 1998 - 2002

$R = e^{-\lambda t}$ where $\lambda = 0.04873$ and $t = 24$

$= e^{-0.04873 \times 24}$

$= e^{-1.1695} = 0.3105$

From the above computation, it is clear that feeder 1 has the lowest load loss percentage of 10.01, followed by feeder 5 with 12.11%, feeder 3 with 18.48%, feeder 4 with 26.58% and finally feeder 2 has the highest load loss of 35.89%.

Considering the probability that the system will work without failure in 24 hours, the supply in 1998 was most reliable with 73.9%. Year 2002 had the least with 5.65%. The reliability of the system over the 5 years is very poor – 31.05%.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 CONCLUSION

Quality electricity supply to consumers is desirable for progress and advancement of the living standard of any people. Thus, the need for system reliability. To facilitate this, accurate monitoring of the power system is necessary to help the operator detect dangerous conditions that might damage equipment or cause loss of service.

It is a fact that the major difficulty in managing an ageing network is determination of asset life. In Nigeria today, no sufficient convincing statistics that proved a case to replace most aged assets (John 2001). But considering other conditions, the reliability of the system was determined as 31.05%.

Feeder 2 covered up to 17km and the consumers' energy demand is above the capacity of the circuit breaker. Hence, feeder 2 experienced more faults than others with 35.89% of the total faults. Out of the total faults recorded on the feeders, 63.83% were on yellow phase, which is as a result of phase distribution imbalance.

The percentage of the system working without failure in 5 years is 31.05%. This result shows that the system is unreliable. Comparing Fig. 3.38a and Fig. 3.38b also proved this. Regular routine preventive maintenance and quick response to fault reduce the system downtime and indeed increases the revenue inflow of the authority. The little improvement in year 2002 saved the authority ₦206,942 as referred to revenue loss.

5.2 RECOMMENDATION AND SUGGESTIONS FOR FURTHER WORK

The problem with the electricity industry in Nigeria is not that of distribution alone but that of generation since there is inadequate power generated. Although the installed capacity is about 6000MW, the available power is much less and is quite below the minimum consumers' demand. The available data as at year 2000 revealed that the total generated output capacity of our generating stations was 2,183MW of the total installed capacity of 5,888MW. This output is just 37.1% of the installed capacity. Government should look into means of having better efficiency in electric energy production sector.

System network restructuring.

The existing radial system network changed to ring system will provide supply to all consumers except at the fault's point.

System network re-distribution.

NEPA authority should re-distribute 11kV network and house-to-house servicing, so that the load on each feeder or phase will be balanced and unduly lengthy network route should be avoided.

Redundancy in the system.

This is the provision of "installed spares" whereby excess capacity is available at all time so that any unit needing repairs may be taken out of use without interrupting consumers' supply. Thus mitigating the effects of faults.

Increased repair facilities.

Whereby it is assured that sufficient repairs facilities are available at all times to carry out corrective maintenance, system downtime (MTTR) would be reduced to the barest minimum to effect the repair. This in overall saves the authority a lot of revenue loss.

Planned maintenance.

Certain parts of the system or equipment received attention and perhaps replacement before fault occurs, this would reduce the incidence of system / equipment failure.

REFERENCES

Abitogun, N. (2003): "Will electricity ever be stable?" A newspaper report by 'Weekend Hope' of 15th March 2003, p 7.

Billinton, R. and Allan, R.N. (1992): "Reliability Evaluation of Engineering System Concepts & Techniques". Plenum Press, New York, pp 6-19, 69-76, 160-167.

David, J. S. (1988): "Reliability and Maintainability in Perspective". Macmillan press Ltd London, pp 17-71.

Dhillon, B.S. and Reiche, H. (1987): "Reliability and Maintainability Management". C.B.S Publishers and Distributors, pp 604 – 701.

Goran, S. and Ronald, N. A. (2001): "Performance Regulation of Distribution System". IEE Power Journal Vol.15. No 6, pp 295 –303.

Heizer, J. and Render, B. (1988): "Production and Operations Management". Strategies and Tactics Allyn and Bacon Incorporated, pp 551 – 680.

John, H. (2001): "Urban Network Development". IEE Power Journal Vol.15. No 5, pp 224 –232.

Kavinesh, S. (2001):"Electricity Network Reliability Optimization". Kavi@ihug.co.nz.

Oni, J.O. (2002): "Assessment of Reliability Indices on Non-Complex Power Generation System". Accepted for publication in Journal of Engineering Application.

Simpson, A. (1976): "Testing Method and Reliability". Power Macmillan press Ltd London, pp 9-20.

Turan, G. (1987): "Modern Power System Analysis". John Wiley, New York, pp146-170, 218-324.

BIBLIOGRAPHY

Billinton, R. and Allan, R.N. (1982): "Reliability Evaluation of Power Systems" Pitman Advanced Publishing Program.

Dahunsi, P. I. (2000): "Load Management Studies & Impact of the Domestic Load on the Nigerian System". Accepted for publication JSET, Enugu.

Weedy, B.M. (1978): "Electric Power Systems". John Wiley, New York, pp 246-288.

Weedy, B.M. and Cory B. J. (1998): "Electric Power Systems". John Wiley, New York, pp 273-314, 439 - 491.

APPENDIX I: FAULTS LOG ENTRY ON 11KV NETWORK (JAN. 1998 – DEC. 2002)
FEEDER 1

MONTH	DATE OF FAULT	TIME OF FAULT	TIME RESTORED	DURATION OF FAULT HR: MIN.	NATURE OF FAULT	PHASE AFFECTED	LOAD LOSS (MW)	REV. LOSS (₦)	REMARK
FEB.	7-2-98	2244	2344	01: 00	OC	R	2.00	1100	TRIAL RECLOSURE MADE & STAY
	12-2-98	1147	1208	00: 21	OC	B	1.80	347	TRIAL RECLOSURE MADE & STAY
				01: 21	**OC-2,EF-0**		**3.80**	**1447**	
MAY	17-5-98	1120	1320	02: 00	EF	Y	3.00	3300	TRIPPING UNITS RESET
				02: 00	**OC-0,EF-1**		**3.00**	**3300**	
DEC.	28-12-98	1424	1434	00: 10	EF	Y	2.25	206	TRIAL RECLOSURE MADE & STAY
				00:10	**OC-0,EF-1**		**2.25**	**206**	
JAN	20-1-99	0625	0655	00:30	OC	B	2.10	578	TRIAL RECLOSURE MADE & STAY
	21-1-99	0626	1500	08:34	EF	Y	3.00	14135	LINE CUT AMENDED
				09:04	**OC-1,EF-1**		**5.10**	**14713**	
FEB.	17-2-99	1859	1930	00:31	EF	Y	3.80	1080	TRIAL RECLOSURE MADE & STAY
				00:31	**OC-0,EF-1**		**3.80**	**1080**	
MAR.	12-3-99	1155	1215	00:20	EF	Y	1.30	238	LINE CUT AMENDED
				00:20	**OC-0,EF-1**		**1.30**	**238**	
MAY	15-5-99	1937	1942	00:05	OC	R,B	3.83	176	TRIAL RECLOSURE MADE & STAY
				00:05	**OC-1,EF-0**		**3.83**	**176**	
JUNE	2-6-99	1916	1920	00:04	OC	R	2.00	73	TRIAL RECLOSURE MADE & STAY
				00:04	**OC-1,EF-0**		**2.00**	**73**	
AUG.	9-8-99	2115	2203	00:48	OC	B	3.80	1672	TRIAL RECLOSURE MADE & STAY
				00:48	**OC-1,EF-0**		**3.80**	**1672**	
MAY	15-5-99	1937	1942	00:05	OC	R,B	3.83	176	TRIAL RECLOSURE MADE & STAY
				00:05	**OC-1,EF-0**		**3.83**	**176**	
JUNE	2-6-99	1916	1920	00:04	OC	R	2.00	73	TRIAL RECLOSURE MADE & STAY
				00:04	**OC-1,EF-0**		**2.00**	**73**	
AUG.	9-8-99	2115	2203	00:48	OC	B	3.80	1672	TRIAL RECLOSURE MADE & STAY
				00:48	**OC-1, EF-0**		**3.80**	**1672**	
FEB	28-2-00	2226	2235	00:09	OC	B	1.50	124	TRIAL RECLOSURE MADE & STAY
				00:09	**OC-1, EF-0**		**1.50**	**124**	TRIAL RECLOSURE MADE & STAY
MAY	6-5-00	0905	0912	00:07	EF	Y	2.00	128	TRIAL RECLOSURE MADE & STAY
	11-5-00	0020	0040	00:20	OC	B	1.80	330	TRIAL RECLOSURE MADE & STAY
	20-5-00	2200	2220	00:20	OC	R	2.00	367	TRIAL RECLOSURE MADE & STAY

	28-5-00	1355	1405	00:10	EF	Y	3.80	348	TRIAL RECLOSURE MADE & STAY
				00:57	**OC-2, EF-2**		**9.60**	**1173**	
JUNE	24-6-00	0742	0954	02:12	EF	Y	4.00	4820	FAULT AMENDED
	28-6-00	1300	1325	00:25	EF	Y	3.50	802	TRIAL RECLOSURE MADE & STAY
				02:37	**OC-0, EF-2**		**7.50**	**5642**	
JULY	7-6-00	2035	1320	16:45	EF	Y	3.00	27,638	HT WIRE CUT AMENDED
				16:45	**OC-0, EF-1**		**3.00**	**27,638**	
SEPT	2-9-00	1606	1905	02:59	EF	Y	4.00	6563	FAULT AMENDED
	11-9-00	1920	2022	01:02	EF	Y	2.25	1279	CUT LINE AMENDED
				04:01	**OC-0, EF-2**		**6.25**	**7842**	
OCT	15-10-00	1200	1325	01:25	OC	B	5.50	4285	FAULT AMENDED
	24-10-00	1324	1406	00:42	OC	B	3.20	1232	TRIAL RECLOSURE MADE & STAY
	31-10-00	1300	1320	00:20	EF	Y	3.50	458	TRIAL RECLOSURE MADE & STAY
				02:27	**OC-2, EF-1**		**14.20**	**5975**	
NOV	2-11-00	1230	1945	07:15	EF	Y	3.50	13956	WIRE CUT AMENDED
	7-11-00	0552	1021	04:29	EF	Y	1.50	3699	WIRE CUT AMENDED
	20-11-00	2339	0052	01:13	EF	Y	2.50	1673	TRIAL RECLOSURE MADE & STAY
	27-11-00	1600	1800	02:00	EF	Y	2.00	2200	FAULT AMENDED
				14:57	**OC-0, EF-4**		**9.50**	**21.528**	
DEC	21-12-00	2206	2354	01:48	EF	Y	3.00	2970	FAULT AMENDED
	26-12-00	1215	1230	00:15	EF	Y	4.83	664	TRIAL RECLOSURE MADE & STAY
				02:03	**OC-0, EF-2**		**7.83**	**3634**	
JAN.	2-1-01	2130	2153	00:23	EF	Y	5.00	1054	TRIAL RECLOSURE MADE & STAY
	5-1-01	1916	1033	15:17	EF	Y	5.17	43458	JUMPER CUT AMENDED
	19-1-01	0651	0655	00:04	EF	Y	3.83	140	TRIAL RECLOSURE MADE & STAY
	20-1-01	0012	0015	00:03	EF	Y	4.33	119	TRIAL RECLOSURE MADE & STAY
	22-1-01	0655	0703	00:48	EF	Y	4.00	1760	TRIAL RECLOSURE MADE & STAY
	28-1-01	0753	0800	00:47	EF	Y	5.50	2370	TRIAL RECLOSURE MADE & STAY
	30-1-01	0545	0555	00:10	EF	Y	4.33	397	TRIAL RECLOSURE MADE & STAY
	31-1-01	0447	0449	00:02	EF	Y	4.67	86	TRIAL RECLOSURE MADE & STAY
				17:34	**OC-0,EF-8**		**36.83**	**49375**	
FEB.	1-2-01	0828	0935	01:07	EF	Y	3.83	2352	TRIAL RECLOSURE MADE & STAY
				01:07	**OC-0,EF-1**		**3.83**	**2352**	
MAR.	26-3-01	1905	2018	01:13	EF	Y	2.42	1619	TRIAL RECLOSURE MADE & STAY
	27-03-01	1214	1220	00:06	EF	Y	4.92	271	TRIAL RECLOSURE MADE & STAY
	27-03-01	1712	0859	15:47	EF	Y	5.00	43404	BAD INSULATIONS REPLACED AT ARAROMI S/S
				17:06	**OC –0,EF -3**		**12.34**	**45294**	
APRIL	3-4-01	2022	2027	00:05	EF	Y	4.00	183	TRIAL RECLOSURE MADE & STAY

	3-4-01	2255	2045	21:50	EF	Y	4.33	51.996	FAULT CLEARED
	12--4-01	1852	2020	01:28	EF	Y	3.92	3.162	JUMPER CUT AT S/S
	16-4-01	1748	1756	00:08	EF	Y	2.58	189	RMU AMENDED
	19-4-01	0910	0921	00:11	EF	Y	3.50	353	TRIAL RECLOSURE MADE & STAY
	22-4-01	1933	0810	36:37	OC/EF	B.R.Y	3.92	78.945	TRIAL RECLOSURE MADE & STAY
	26-4-01	1507	1510	00:03	EF	Y	3.00	83	11 KV LINE RESTING ON XARMS AMENDED AT ARAROMI
	26-4-01	1540	1801	01:21	EF	Y	3.00	2228	TRIAL RECLOSURE MADE & STAY
				62:43	**OC-1, EF-8**		**28.25**	**137.139**	
MAY	1-5-01	1007	1125	01:18	EF	Y	2.42	1730	ARAROMI S/S ISOLATED
	3-5-01	1155	1515	03:20	OC	R	1.67	3062	FAULT AMENDED AT ARAROMI
	8-5-01	1310	1315	00:05	EF	Y	3.33	153	TRIAL RECLOSURE MADE & STAY
	9-5-01	0455	1450	09:55	EF	Y	3.50	19,090	FAULT CLEARED
	10-5-01	1459	2025	65"06	EF	Y	2.83	7.938	11 KV LINE CUT AT ARAROMI AMMMENDED
	10-5-01	1910	1923	00:13	EF	Y	3.67	437	TRIAL RECLOSURE MADE & STAY
	15-5-01	1935	1939	00:04	EF	Y	4.33	159	TRIAL RECLOSURE MADE & STAY
	28-5-01	2245	2250	00:05	EF	Y	3.25	149	TRIAL RECLOSURE MADE & STAY
				20:06	**OC-1, EF-7**		**25.00**	**32,718**	
JUNE	4-6-01	2052	2140	00:48	EF	Y	3.33	1465	UPRISER CUT AT STORE S/S AMENDED
	5-6-01	2145	2155	00:01	EF	Y	2.75	252	TRIAL RECLOSURE MADE & STAY
	10-6-01	1946	2016	00:30	OC/EF	B.Y	3.67	1009	TRIAL RECLOSURE MADE & STAY
	17-6-01	0558	0604	00:06	EF	Y	3.67	202	TRIAL RECLOSURE MADE & STAY
	17-6-01	0607	0610	00:03	OC/EF	R.Y	3.67	101	HT SIDE OF THE FEEDER ISOLATED
				01:37	**OC-2, EF – 5**		**17.09**	**3029**	
JULY	6-7-01	2214	2219	00:05	EF	Y	4.00	183	TRIAL RECLOSURE MADE & STAY
	10-7-01	1220	1232	00:12	EF	Y	2.67	294	TRIAL RECLOSURE MADE & STAY
	19-7-01	1439	1959	05:20	EF	Y	3.00	8800	TRIAL RECLOSURE MADE & STAY
				05:37	**OC-0, EF- 3**		**9.67**	**9277**	
AUG.	12-8-01	0846	0854	00:08	EF	Y	4.17	**306**	TRIAL RECLOSURE MADE & STAY
	23-8-01	0715	0727	00:12	EF	Y	3.83	421	TRIAL RECLOSURE MADE & STAY
				00:20	**OC-0, EF- 2**		**8.00**	**727**	
SEPT.	1-9-01	0952	0954	00:02	EF	Y	3.33	61	TRIAL RECLOSURE MADE & STAY
	1-9 -01	1705	2005	03:00	OC	R.B	2.67	4406	FAULT CLEARED AT OLAOLUWA S/S
	6-9-01	1909	1915	00:06	EF	Y	3.83	211	TRIAL RECLOSURE MADE & STAY
	8-9-01	1222	1237	00:15	EF	Y	1.33	61	HEAVY RAINFALL
	14-9-01	1349	1358	00:09	EF	Y	2.08	172	TRIAL RECLOSURE MADE & STAY

	16-9-01	0606	1815	12:09	EF	Y	3.50	23.389	HT RESTING ON LT SEPARATED AT AJAYEOBA S/S
	23-9-01	1555	2255	07:00	OC/EF	R,Y	3.33	12.821	CUT HT LINE ALONG CHAMPION JUNCTION AMENDED
	30-9-01	0635	0644	00:09	EF	Y	3.50	289	TRIAL RECLOSURE MADE & STAY
				22:50	**OC-2, EF-7**		**23.57**	**41410**	
OCT	19-10-01	1156	1158	00:02	EF	Y	2.50	46	TRIAL RECLOSURE MADE & STAY
				00:02	**OC- 0, EF-1**		**2.50**	**46**	TX POWER FAILURE
	1-11-01	2138	2145	00:07	-	-	2.00	128	TX POWER FAILURE
	7-11-01	2233	2301	00:28	-	-	2.50	642	TX POWER FAILURE
	7-11-01	1211	1239	00:28	-	-	3.50	898	TX POWER FAILURE
NOV.	8-11-01	1550	1640	00:50	-	-	3.50	1604	TX POWER FAILURE
	9-11-01	2344	2352	00:08	-	-	2.67	196	TX POWER FAILURE
	21-01-01	1451	1514	00:23	-	-	3.83	807	FAULT CLEARED
	22-11-01	0855	1111	02:16	OC/EF	RBY	4.00	4987	LINE CUT AMENDED
				04:40	**OC-1, EF-1**		**22:00**	**9257**	
DEC.	5-12-01	0942	0945	00:03	EF	Y	3.50	96	TX POWER FAILURE
	30-12-01	0909	0915	00:06	-	-	2.50	138	TX POWER FAILURE
				00:09	**OC-0, EF-1**		**6.00**	**234**	
	2-1-02	2005	2022	00:17	-	-	4.00	603	TX POWER FAILURE
	4-1-02	1630	1637	00:07	-	-	3.00	193	TX POWER FAILURE:
JAN	15-1-02	1938	1938	00:05	OC/EF	R,Y	3.33	153	TRIAL RECLOSURE MADE & STAY
	18-1-02	0618	0635	00:17	OC	B	3.00	468	CUT Y-Ø UPRISER WAS SEPARATED
	28-1-02	1438	1725	02:47	OC/EF	R,Y	3.20	4019	JUMPER CUT AMENDED
				03:33	**OC-3,EF-2**		**16.53**	**5456**	
	4-2-02	1414	1430	00:16	-	-	3.33	488	TX POWER FAILURE
	5-2-02	1833	1840	00:07	-	-	3.83	246	TX POWER FAILURE
	13-2-02	1947	1951	00:04	-	-	4.00	147	TX POWER FAILURE
FEB	16-2-02	1045	1049	00:04	-	-	3.20	110	TX POWER FAILURE
	17-2-02	0617	0640	00:26	-	-	2.00	477	TX POWER FAILURE:
	24-2-02	0835	0850	00:15	-	-	2.17	298	TX POWER FAILURE:
	25-2-02	0621	9626	00:05	-	-	2.08	95	TX POWER FAILURE
	27-2-02	1331	1345	00:14	-	-	3.50	449	TX POWER FAILURE:
				01:31	**OC-0,EF-0**		**23.91**	**2310**	
MARCH	5-3-02	1922	1950	00:28	-	-	4.00	1027	TX POWER FAILURE:
	6-3-02	2320	2323	00:03	-	-	3.17	87	TX POWER FAILURE:
	7-3-02	1455	1510	00:15	OC/EF	R,B,Y	4.50	619	TRIAL RECLOSURE MADE & STAY
	8-3-02	0616	0620	00:04	-	-	2.00	23	TX POWER FAILURE:

	10-3-02	1707	1714	00:07	-	-	3.83	246	TX POWER FAILURE:
	12-3-02	0428	0547	01:19	-	-	2.83	2049	TX POWER FAILURE:
	13-3-02	2205	0554	07:49	-	-	3.00	12,898	TX POWER FAILURE:
	14-3-02	1840	1852	00:12	-	-	4.17	459	TX POWER FAILURE
	17-3-02	1911	1915	00:04	-	-	4.17	153	TX POWER FAILURE:
	18-3-02	2618	0628	00:10	EF	Y	3.33	305	TRIAL RECLOSURE MADE & STAY
	19-3-02	1324	1850	05:26	OC	B	2.67	7979	TX POWER FAILURE:
	21-3-02	1931	1936	00:05	-	-	4.00	183	TX POWER FAILURE
	21-3-02	1943	1958	00:13	-	-	4.00	477	TX POWER FAILURE:
	22-3-02	0504	0507	00:03	-	-	2.00	55	TX POWER FAILURE:
	23-3-02	1134	1136	00:02	-	-	3.00	9793	TX POWER FAILURE:
	23-3-02	0126	0703	05:37	-	-	3.17	9793	TX POWER FAILURE:
	26-3-02	1245	1545	03:00	-	-	3.50	5775	TX POWER FAILURE
	28-3-02	2057	2103	00:06	-	-	4.00	220	TX POWER FAILURE
	29-3-02	1935	1205	16:30	EF	Y	2.17	19693	TRIAL RECLOSURE MADE & STAY
				41:33	**OC-2, EF-3**		**63.51**	**62,146**	
	1-4-02	1927	0924	13:57	OC/EF	B,Y	4.50	34526	FAULT AMENDED
	2-4-02	1406	1412	00:06	EF	Y	4.00	320	TRIAL RECLOSURE MADE & STAY
APRIL	9-4-02	2027	2044	00:17	-	-	4.00	623	TX POWER FAILURE:
	10-4-02	0039	0335	02:56	-	-	2.08	3356	TX POWER FAILURE:
	19-4-02	1435	1445	00:10	-	-	4.17	**382**	TX POWER FAILURE
	25-4-02	1023	1049	00:26	-	-	3.00	715	TX POWER FAILURE:
				03:55	**OC-0, EF-1**		**21.75**	**39,822**	
	6-5-02	0051	1100	00:09	-	-	3.00	248	TX POWER FAILURE:
	8-5-02	1915	1928	00:13	-	-	3.17	378	TX POWER FAILURE
	8-5-02	0045	0110	00:25	-	-	2.00	458	TX POWER FAILURE:
	8-5-02	0535	0558	00:23	-	-	2.00	423	TX POWER FAILURE:
MAY	10-5-02	0941	0950	00:09	-	-	2.82	233	TX POWER FAILURE:
	10-5-02	1342	1353	00:11	-	-	3.50	1925	TX POWER FAILURE:
	10-5-02	1727	1800	00:33	EF	Y	4.00	1210	TRIAL RECLOSURE MADE & STAY
	13-5-02	1313	1354	00:41	OC	B	5.00	1879	TRIAL RECLOSURE MADE & STAY
	14-5-02	2020	2028	00:08	-	-	3.83	281	TX POWER FAILURE:
	18-5-02	0944	2051	11:07	-	-	3.00	18343	TX POWER FAILURE:
	26-5-02	0929	0935	00:06	-	-	3.00	165	TX POWER FAILURE:
	29-5-02	1040	1108	00:28	-	-	3.83	983	TX POWER FAILURE
	31-5-02	0806	0812	00:12	-	-	2.83	311	TX POWER FAILURE
	31-5-02	1114	1145	00:04	-	-	3.50	128	TX POWER FAILURE
				14:49	**OC-1,EF-1**		**45.48**	**26965**	
JUNE	1-6-02	1224	1228	00:04	-	-	3.83	140	TX POWER FAILURE:
	1-6-02	2330	2350	00:20	-	-	3.83	458	TX POWER FAILURE

	4-6-02	1829	1835	00:06	EF	Y	2.50	220	TRIAL RECLOSURE MADE & STAY
	7-6-02	0522	0640	01:13	-	-	4.00	1338	TX POWER FAILURE:
	8-6-02	0950	0957	00:07	-	-	2.00	139	TX POWER FAILURE:
	8-6-02	1355	1420	00:25	-	-	2.17	956	TX POWER FAILURE:
	8-6-02	1810	1952	01:42	-	-	4.17	3740	TX POWER FAILURE:
	8-6-02	2332	2341	00:18	-	-	4.00	660	TX POWER FAILURE:
	8-6-02	0716	0724	00:08	-	-	2.83	208	TX POWER FAILURE:
	9-6-02	1913	1918	00:05	-	-	3.83	176	TX POWER FAILURE:
	10-6-02	2030	2040	00:10	-	-	3.50	321	TX POWER FAILURE:
	10-6-02	0545	0600	00:15	-	-	2.00	275	TX POWER FAILURE:
	11-6-02	1755	1825	00:30	EF	Y	3.50	963	TRIAL RECLOSURE MADE & STAY
	13-6-02	1115	1125	00:10	-	-	3.50	321	TX POWER FAILURE
	18-6-02	1500	1575	00:15	-	-	4.00	550	TX POWER FAILURE
	18-6-02	1533	1750	02:17	-	-	4.00	5028	TX POWER FAILURE
	19-6-02	0950	1105	01:15	-	-	2.00	1375	TX POWER FAILURE:
	19-6-02	1540	1545	00:05	-	-	3.17	145	TX POWER FAILURE:
	20-6-02	2035	2040	00:05	EF	Y	4.00	183	TRIAL RECLOSURE MADE & STAY
	25-6-02	0420	0428	00:08	-	-	2.17	159	TX POWER FAILURE:
	28-6-02	0730	0751	00:21	-	-	2.17	418	TX POWER FAILURE
	28-6-02	0330	0835	00:05	-	-	2.17	99	TX POWER FAILURE:
	29-6-02	0634	0640	00:06	-	-	2.83	156	TX POWER FAILURE
	30-6-02	0602	0610	00:08	-	-	2.00	147	TX POWER FAILURE
				10:18	**OC-0, EF-3**		**74.34**	**18175**	
JULY	6-7-02	0450	0558	01:08	EF	Y	**2.58**	1608	FAULT CLEARED
	7-7-02	128	1230	00:02	-	-	4.00	73	TX POWER FAILURE
	14-07-02	1038	1145	01:07	OC	R	2.67	1640	FAULT AMENDED
	14-7-02	1305	1315	00:10	OC/EF	R,Y	2.67	245	TRIAL RECLOSURE MADE & STAY
	20-7-02	0612	0658	00:46	-	-	2.17	**915**	TX POWEER FAILURE
	21-7-02	2250	2255	00:05	-	-	3.00	138	TX POWER FAILURE:
	21-7-02	0450	0454	00:04	-	-	2.83	104	TX POWER FAILURE:
	23-7-02	0704	0738	00:34	-	-	2.83	882	TX POWER FAILURE:
	28-7-02	1913	2315	04:02	EF	Y	4.00	8873	FAULT AMENDED
				07:58	**OC-2,EF-3**		**26.75**	**14478**	
AUG.	10-8-02	2135	2140	00:05	-	-	4.17	191	TX POWER FAILURE
	23-8-02	1223	1228	00:05	-	-	3.00	138	TX POWER FAILURE
	27-8-02	1820	1850	00:30	-	-	**3.17**	**872**	TX POWER FAILURE
	29-8-02	2123	2135	00:12	-	-	4.00	440	NO RELAY INDICATION
	31-8-02	1848	1855	00:07	-	-	3.83	246	TX POWER FAILURE:
				00:59	**OC-0, EF-0**		**18.17**	**1887**	
SEPT	4-9-02	1006	1008	00:02	-	-	3.00	55	TX POWER FAILURE

	4-9-02	1500	1503	00:03	-	-	3.17	87	TX POWER FAILURE
	6-9-02	1625	1635	00:10	-	-	3.17	291	TX POWER FAILURE
	6-9-02	0605	0610	00:05	-	-	2.83	130	TX POWER FAILURE
	8-9-02	1845	1907	00:22	-	-	3.00	605	TX POWER FAILURE
	12-9-02	1643	1647	00:04	-	-	3.83	140	TX POWER FAILURE
	13-9-02	1947	0800	12:13	OC	B	4.33	29094	FAULT AMENDED
	15-9-02	1538	1643	01:05	-	-	4.00	2383	TX POWER FAILURE:
	16-9-02	1848	1855	00:07	-	-	3.83	246	TX POWER FAILURE
	17-9-02	1924	1940	00:16	OC	B	4.50	660	TRIAL RECLOSURE MADE & STAY
	21-9-02	0845	0850	00:05	-	-	2.83	130	TX POWER FAILURE
	28-9-02	1910	1917	00:07	-	-	3.00	193	TX POWER FAILURE:
				14:39	**OC-2,EF-0**		**41.49**	**34014**	
OCT	3-10-02	1813	1820	00:07	-	-	3.17	203	TX POWER FAILURE
	4-10-02	0141	0306	01:25	-	-	2.00	1558	TX POWER FAILURE:
	4-10-02	0705	0727	00:22	-	-	2.00	403	TX POWER FAILURE:
	10-10-02	0949	1003	00:14	-	-	2.17	278	NO RELAY INDICATION
	27-10-02	1652	1704	00:12	-	-	4.00	440	TX POWER FAILURE:
	29-10-02	1835	1900	00:25	-	-	3.83	878	TX POWER FAILURE:
	30-10-02	1800	1808	00:08	-	-	2.92	214	NO RELAY INDICATION
				02:53	**OC-0, EF-0**		**20.09**	**3974**	
NOV.	5-11-02	1726	1749	00:21	-	-	3.50	674	TX POWER FAILURE:
	7-11-02	0556	0600	00:04	-	-	2.17	80	TX POWER FAILURE:
	11-11-02	1339	1905	05:26	EF	Y	3.15	9413	FAULT AMENDED
	17-11-02	1300	1319	00:19	-	-	3.00	523	TX POWER FAILURE
	23-11-02	2040	2050	00:10	-	-	4.50	413	NO RELAY INDICATION
	24-11-02	1736	1719	00:05	OC	R	3.33	153	TRIAL RECLOSURE MADE & STAY
	25-11-02	1854	2354	05:00	-	-	3.67	10093	NO RELAY INDICATION
	30-11-02	1240	1244	00:04	-	-	3.67	135	NO RELAY INDICATION
		1346	1354	00:08		-	3.50	257	TX POWER FAILURE:
				11:37	**OC-1,EF-1**		**30:49**	**21741**	
DEC	1-12-02	1904	1911	00:06	OC	R	4.67	257	TRIAL RECLOSURE MADE & STAY
	31-12-02	1744	1751	00:07	-	-	4.00	257	TX POWER FAILURE:
				00:13	**OC-1, EF-0**		**8.67**	514	

APPENDIX II: FAULTS LOG ENTRY ON 11KV NETWORK (JAN. 1998 – DEC. 2002)
FEEDER 2

MONTH	DATE OF FAULT	TIME OF FAULT	TIME RESTORED	DURATION OF FAULT HR: MIN.	NATURE OF FAULT	PHASE AFFECTED	LOAD LOSS (MW)	REV. LOSS (₦)	REMARK
JAN.	19-1-98	0540	0749	02: 09	EF	Y	2.00	2365	ODA RMU OPENED
	28-1-98	1649	1656	00:: 07	EF	Y	3.00	193	TRIAL RECLOSURE MADE & STAY
				02: 16	**0C-0.EF-2**		**5.00**	**2558**	
FEB	11-2-98	2148	2205	00:17	.OC	R	4.50	701	TRIAL RECLOSURE MADE & STAY
				00:17	**0C-1.EF-0**		**4.50**	**701**	
MAR.	5-3-98	1340	1450	01:10	OC	B	3.30	2118	TREES WERE CUT DOWN
	25-3-98	1140	1210	00:30	OC	B	3.40	935	TRIAL RECLOSURE MADE & STAY
	28-3-98	0315	0329	00:14	OC	R	3.30	424	ODA RMU OPENED
				01:54	**0C-3.EF-0**		**10.00**	**3477**	
APR.	3-4-98	0400	1058	06:58	OC	B	1.50	5748	BROKEN XARMS CHANGED
	21/4/98	0324	0410	00:46	OC	B	2.00	843	TRIAL RECLOSURE MADE & STAY
				07:44	**OC-2.EF- 0**		**3.50**	**6591**	
MAY	10-5-98	0550	0627	00:37	OC	R	3.00	1018	TRIAL RECLOSURE MADE & STAY
	16-5-98	1947	2005	00:18	OC	B	3.00	495	ODA ROAD RMU OPENED
	17-5-98	1915	1928	00:13	EF	Y	3.00	358	TRIAL RECLOSURE MADE & STAY
				11:08	**OC-2. EF –1**		**9.00**	**1871**	
JULY	7-7-98	1514	1545	00:31	EF	Y	3.60	1023	ODA ROAD RMU OPENED
	11-7-98	1920	2022	01:02	EF	Y	2.25	1279	CUT LINE AMENDED
	19-7-98	1913	2244	03:31	EF	Y	3.10	5996	IJAPO LEG ISOLATED
				05:04	**OC-0. EF-3**		**8.95**	**8298**	
AUG.	20-8-98	2050	2100	00:10	OC	B	3.60	330	TRIAL RECLOSURE MADE & STAY
	24-8-98	1431	1444	00:13	EF	Y	2.60	309	TRIAL RECLOSURE MADE & STAY
				00: 23	**0C-1. EF-1**		**6.20**	**539**	
SEPT.	22-9-98	1851	1952	01:01	EF	Y	3.50	1957	TRIAL RECLOSURE MADE & STAY
				01:01	**OC-0.EF-1**		**3.50**	**1957**	
OCT.	18-10-98	0732	1110	03:38	EF	Y	3.50	6994	JUMPER CUT AMENDED
				03:38	**OC-0. EF-1**		**3.50**	**6994**	
NOV.	3-11-98	1905	1928	00:23	EF	Y	1.50	316	BROKEN XARMS CHANGED
	4-11-98	1150	1223	00:33	EF	Y	3.30	998	UPRISER AMENDED
	10-11-98	1950	2006	00:16	EF	Y	3.00	440	ODA RD. RMU OPENED

	12-11-98	2020	2035	00:15	EF	Y	3.00	413	TRIAL RECLOSURE MADE & STAY
	20-11-98	2001	2101	01:00	EF	Y	4.70	2585	TRIAL RECLOSURE MADE & STAY
	27-11-98	1108	1250	01:42	EF	Y	3.80	3553	ODA ROAD RMU OPENED
	28-11-98	0847	0937	00:50	EF	Y	1.50	688	TRIAL RECLOSURE MADE & STAY
				04:59	**OC-0, EF-7**		**20.80**	**8993**	
DEC.	5-12-98	1232	1344	01:12	OC	B	3.50	2310	TRIAL RECLOSURE MADE & STAY
	9-12-98	1910	1935	00:25	OC	B	5.08	1164	ODA ROAD RMU OPENED
	10-12-98	1901	1936	00:35	OC	B	5.17	1659	ODA ROAD RMU OPENED
	31-12-98	1905	2005	01:00	EF	Y	3.50	1925	ODA ROAD RMU OPENED
				03:12	**OC-3, EF –1**		**17.25**	**7058**	
JAN.	18-1-99	1955	2040	00:45	OC	R	1.50	619	TRIAL RECLOSURE MADE & STAY
	19-1-99	2328	0007	00:39	OC	R,B	2.00	715	ODA RMU OPENED
	20-1-99	0655	0717	00:22	OC	B	1.50	303	TRIAL RECLOSURE MADE & STAY
	26-1-99	1915	2007	00:52	OC	B	4.80	2,288	NEPA S/S OPENED
				02:38	**0C-4, EF-0**		**9.80**	**3925**	
FEB.	6-2 - 99	1320	1530	02:10	EF	Y	2.00	2383	ODA ROAD ISOLATED
	7-2 - 99	0750	0850	01:00	OC	R,B	4.70	2585	TRIAL RECLOSURE MADE & STAY
	27-2 - 99	2139	2211	00:30	OC	B	3.90	1073	TRIAL RECLOSURE MADE & STAY
				04:53	**OC-2,EF-1**		**10:60**	**6041**	
MAR.	1-3-99	0557	0627	00:30	EF	Y	3.80	1045	ODA RMU OPENED
	2-3-99	2025	2040	00.15	OC	B	4.60	633	TRIAL RECLOSURE MADE & STAY
	12-3-99	1759	1915	01:16	EF	Y	3.00	2090	TRIAL RECLOSURE MADE & STAY
	15-3-99	1501	1555	00.54	EF	Y	3.80	1881	TRIAL RECLOSURE MADE & STAY
	18-3-99	1220	1418	01:58	0C	B	4.00	4327	POLICE RMU OPENED
				04:53	**OC-2,EF-3**		**19.20**	**9976**	
APR.	5-4-99	1011	1213	02:02	EF	Y	3.50	3,914	TRIAL RECLOSURE MADE & STAY
	7-4-99	1115	1146	00:31	EF	Y	4.00	1,137	TRIAL RECLOSURE MADE & STAY
	28-4-99	1908	1922	00:14	OC	B	3.00	385	ODA ROAD RMU ISOLATED
				02:47	**OC-1,EF-2**		**10.50**	**5436**	
MAY	6-5-99	0558	0658	01:00	OC	R	4.00	2200	ODA ROAD RMU ISOLATED
	9-5-99	1141	1152	00:11	OC	B	3.16	319	TRIAL RECLOSURE MADE & STAY
	10-5-99	0438	0728	02:50	EF	Y	3.83	5,968	ALA ISOLATED
	10-5-99	0320	0359	00:39	EF	Y	3.75	1,341	TRIAL RECLOSURE MADE & STAY
	16-5-99	1955	2306	03:11	EF	Y	2.33	4,079	BROKEN CROSS-ARM CHANGED
	17-5-99	1930	2228	02:58	EF	Y	2.96	4,830	ODA ROAD ISOLATED
	25-5-99	1805	1925	01:20	EF	Y	2.83	2,075	ODA ROAD ISOLATED
	27-5-99	1832	1902	00:30	OC	R	2.96	814	TRIAL RECLOSURE MADE & STAY
				12:39	**OC-3, EF-5**		**25.82**	**21,626**	
JUNE	2-6-99	2004	2012	00:08	EF	Y	4.00	293	TRIAL RECLOSURE MADE & STAY

	6-6-99	2020	2118	00:58	EF	Y	3.70	1,967	TRIAL RECLOSURE MADE & STAY
	7-6-99	1940	2078	00.38	EF	Y	4.75	1,655	ODA ROAD RMU OPENED
	10-6-99	2100	2320	02:20	EF	Y	4.00	5,133	ODA ROAD RMU OPENED
	11-6-99	1330	1608	02:38	EF	Y	3.70	5,859	ALA LEG ISOLATED
	20-6-99	1426	1520	0.:54	EF	Y	4.70	2,327	TRIAL RECLOSURE MADE & STAY
	22-6-99	0545	0645	01:00	EF	Y	4.00	2,200	TRIAL RECLOSURE MADE & STAY
	23-6-99	1948	1208	16:20	EF	Y	4.80	43,120	BURNT CABLE REPLACED
	25-6-99	1943	1957	00:14	OC	Y	3.90	501	TRIAL RECLOSURE MADE & STAY
				25: 10	**OC-1, EF-9**		**37.55**	**63,055**	
JULY	8-7-99	1640	1920	02:40	EF	Y	3.80	5573	ALA LEG OPENED
	9-7-99	1943	2007	00:24	OC	R	3.80	836	TRIAL RECLOSURE MADE & STAY
	12-7-99	0655	0737	00:42	OC	B	4.00	1,540	IDANRE LEG OPENED
	19-7-99	2057	2135	00:38	OC	R	3.70	1,289	TRIAL RECLOSURE MADE & STAY
	21-7-99	1925	2018	00:53	OC	B	3.60	1,749	ODA ROAD RMU OPENED
	27-7-99	1946	2013	OO:27	OC	B	3.80	941	ODA ROAD RMU OPENED
				05: 44	**OC-5,EF-1**		**22.70**	**11,928**	
AUG.	3-8-99	1925	1947	OO:22	OC	B	3.80	766	TRIAL RECLOSURE MADE & STAY
	4-8-99	0545	0655	01:10	OC	R	3.80	2438	ODA ROAD RMU OPENED
	9-8-99	1929	2206	02:37	OC	R,B	4.00	5767	ODA ROAD RMU OPENED
				04: 09	**OC-3, EF-0**		**11.60**	**8,971**	
SEPT.	4-9-99	1910	1920	00:10	OC	R	4.10	379	TRIAL RECLOSURE MADE & STAY
	8-9-99	1655	1930	02:35	EF	Y	3.80	5,399	ODA ROAD RMU OPENED
	27-9-99	0610	0732	OO:22	EF	Y	5.30	1,069	TRIAL RECLOSURE MADE & STAY
	29-9-99	1,850	1907	OO:17	EF	Y	3.80	592	TRIAL RECLOSURE MADE & STAY
				03: 24	**OC-1,EF-3**		**17.00**	**7,439**	
OCT.	8-10-99	0620	0732	01:12	EF	Y	3.80	2,508	TRIAL RECLOSURE MADE & STAY
	24-10-99	0605	0613	00:08	OC	B	4.10	301	TRIAL RECLOSURE MADE & STAY
				01: 20	**OC-1,EF-1**		**7.90**	**2809**	
NOV.	6-11-99	1440	1614	01:34	OC	B	3.60	3,102	ALA LEG OPENED
	11-11-99	1908	2044	01:36	EF	Y	3.60	3,168	TRIAL RECLOSURE MADE & STAY
	14-11-99	1855	1914	00:19	EF	Y	3.60	627	ODA ROAD RMU OPENED
				03: 29	**OC-1,EF-2**		**10.80**	**6,897**	
DEC	6-12-99	1510	1950	04:40	OC	B	3.80	7700	LINE CUT AMENDED
	11-12-99	1920	2038	01:18	OC	B	4.10	2932	ODA ROAD RMU OPENED
	16-12-99	1920	1958	00:38	OC	B	3.80	1324	TRIAL RECLOSURE MADE & STAY
	19-12-99	1935	1955	00:20	OC	R	3.50	642	TRIAL RECLOSURE MADE & STAY
	23-12-99	1637	1658	00:21	OC	B	3.80	732	TRIAL RECLOSURE MADE & STAY
	24-12-99	1833	1923	00:50	OC	R,B	4.00	1833	TRIAL RECLOSURE MADE & STAY
	28-12-99	1355	1516	01:02	OC	R	4.00	2970	ODA ROAD RMU OPENED
				09:28	**OC-7,EF-0**		**27.00**	**18,133**	

JAN.	7-01-00	1220	1238	00:18	OC	R	2.90	479	TRIAL RECLOSURE MADE & STAY
	10-01-00	1248	1318	00::30	OC	B	3.20	880	ODA RMU OPENED
	24-01-00	1321	1336	00:15	EF	Y	1.40	193	ODA RMU OPENED
	27-01-00	1900	1947	00:47	EF	Y	1.50	646	TRIAL RECLOSURE MADE & STAY
				01:50	**OC-2.EF-2**		**9.00**	**2198**	
FEB.	20-2-00	1915	1929	00:14	EF	Y	2.70	347	ODA RMU OPENED
				00:14	**OC-0, EF-1**		**2.70**	**347**	
MARCH	1-3-00	1634	1645	00:11	EF	Y	4.30	434	TRIAL RECLOSURE MADE & STAY
	2-3-00	1740	1850	01:10	EF	Y	5.00	3208	ODA RMU OPENED
	8-3-00	1943	2030	01:47	OC	B	4.20	1810	TRIAL RECLOSURE MADE & STAY
	15-3-00	0530	0655	01:25	OC	B	3.90	3039	ALA RMU OPENED
				04:33	**OC-2,EF-2**		**17.40**	**8491**	
APRIL	8-4-00	0840	0844	00:04	EF	Y	4.20	154	TRIAL RECLOSURE MADE & STAY
	12--4-00	1414	1450	00:36	OC	R	5.17	1706	TRIAL RECLOSURE MADE & STAY
	22-4-00	1911	1916	00:05	EF	Y	5.00	229	TRIAL RECLOSURE MADE & STAY
	30-4-00	1455	1517	00:22	OC	B	5.00	1008	ALA LEG OPENED
	30-4-00	1656	1702	00:06	EF	Y	3.50	193	TRIAL RECLOSURE MADE & STAY
				01:13	**OC-3, EF-2**		**22.87**	**3290**	
MAY	1-5-00	1149	1206	00:17	EF	Y	3.67	572	ODA RMU OPENED
	7-5-00	1345	1540	01:55	EF	Y	4.20	4427	ALA S/S OPENED
	7-5-00	1713	1835	01:22	EF	Y	3.67	2759	FAULT AMENDED
	28-5-00	1459	1507	00:08	OC	R	3.00	220	TRIAL RECLOSURE MADE & STAY
				03:42	**OC-1,EF-3**		**14.54**	**7978**	
JUNE	2-6-00	1616	1801	01:45	EF	Y	4.67	4495	CUT LINE AMENDED
	2-6-00	1909	1925	00:16	EF	Y	5.12	751	TRIAL RECLOSURE MADE & STAY
	10-6-00	1040	1057	00:12	OC	R	4.50	495	TRIAL RECLOSURE MADE & STAY
	11-6-00	2120	2142	00:22	EF	Y	4.67	942	TRIAL RECLOSURE MADE & STAY
	12-6-00	1406	1426	00:20	OC	R	5.00	917	TRIAL RECLOSURE MADE & STAY
	23-6-00	1516	1524	00:08	EF	Y	5.00	367	TRIAL RECLOSURE MADE & STAY
	23-6-00	1914	1930	00:16	EF	Y	5.50	807	TRIAL RECLOSURE MADE & STAY
	29-6-00	1121	1547	04:26	EF	Y	5.00	12192	ODA RMU OPENED
				07:45	**OC-2, EF-6**		**38.96**	**20966**	
JULY	11-7-00	0651	0656	00:05	EF	Y	4.58	210	TRIAL RECLOSURE MADE & STAY
	11-7-00	0701	0710	00:09	OC	B	3.67	303	ODA RMU OPENED
	12-7-00	1455	1959	05:04	EF	Y	4.33	12.066	WIRE CUT AMENDED
	18-7-00	2144	2204	00:20	EF	Y	3.33	610	TRIAL RECLOSURE MADE & STAY
	21-7-00	1903	1907	00:04	EF	Y	3.67	135	TRIAL RECLOSURE MADE & STAY
	22-7-00	0538	0540	00:02	EF	Y	3.33	61	TRIAL RECLOSURE MADE & STAY
	31-7-00	0536	0540	00:04	EF	Y	3.50	128	TRIAL RECLOSURE MADE & STAY

				05:48	**OC – 1, EF-6**		**26.41**	**13,513**	
AUG.	28-8-00	1720	1848	01:28	EF	Y	3.67	2960	FAULTY CABLE REPLACED
	30-8-00	1939	2019	00:40	OC	R,B	1.83	671	ODA RMU OPENED
				02:08	**OC-1,EF-1**		**5.50**	**3631**	
SEPT.	1-9-00	0736	0741	00:05	EF	Y	3.92	180	TRIAL RECLOSURE MADE & STAY
	1-9-00	1933	1954	00:21	EF	Y	4.30	828	TRIAL RECLOSURE MADE & STAY
	3-9-00	1923	1931	00:08	OC	B	5.33	391	TRIAL RECLOSURE MADE & STAY
	7-9-00	2110	2135	00:25	EF	B	5.33	1221	TRIAL RECLOSURE MADE & STAY
	7-9-00	1606	1626	00:20	EF	R	5.00	917	ODA RMU OPENED
	8-9-00	1807	1900	00:53	OC	B	4.92	2390	ODA RMU OPENED
	10-9-00	1936	1938	00:02	EF	Y	5.12	94	TRIAL RECLOSURE MADE & STAY
	11-9-00	1840	1844	00:04	EF	Y	4.20	154	TRIAL RECLOSURE MADE & STAY
	18-9-00	1919	2005	00:46	OC	R,B	5.50	2319	ODA RMU & TOYIN S/S OPENED
	26-9-00	0625	0640	00:15	EF	Y	4.58	630	ODA RMU OPENED
				03:19	**OC-3,EF-7**		**48.20**	**9124**	
	12-10-00	1620	1635	00:15	OC/EF	B,Y	4.00	550	MARKET S/S OPENED
	19-10-00	1748	1810	00:22	EF	Y	2.92	589	TRIAL RECLOSURE MADE & STAY
OCT.	19-10-00	0630	0645	00:15	EF	Y	3.00	413	TRIAL RECLOSURE MADE & STAY
	23-10-00	1946	1949	00:03	OC	R	4.67	128	TRIAL RECLOSURE MADE & STAY
	25-10-00	0147	0159	00:12	OC	R,B	4.00	44	TRIAL RECLOSURE MADE & STAY
				01:07	**OC-3, EF-3**		**18.59**	**1724**	
	3-11-00	2138	2340	02:02	OC	R,B	4.50	5032	FAULTY LINE AMENDED
	10-11-00	1602	1617	00:15	EF	Y	4.00	550	TRIAL RECLOSURE MADE & STAY
NOV.	17-11-00	1710	2345	06:35	EF	Y	2.92	10,573	FAULTY CABLE REPLACED
	20-11-00	0200	0206	00:06	EF	Y	3.92	216	TRIAL RECLOSURE MADE & STAY
	28-11-00	1820	0115	06:55	EF	Y	4.58	17423	FAULT AMENDED
				15:53	**OC-1, EF-4**		**19.92**	**33794**	
	13-12-00	2320	2325	00:03	EF	Y	2.70	74	TRIAL RECLOSURE MADE & STAY
	20-12-00	1445	1447	00:02	EF	Y	3.50	64	TRIAL RECLOSURE MADE & STAY
	23-12-00	1654	1927	02:33	EF	Y	4.00	5610	FAULT AMENDED
DEC.	25-12-00	1135	1435	03:00	EF	Y	3.50	5775	BROKEN XARMS CHANGED
	26-12-00	2022	2042	00:20	EF	Y	4.30	788	TRIAL RECLOSURE MADE & STAY
	30-12-00	2103	2133	00:30	EF	Y	4.00	1100	TRIAL RECLOSURE MADE & STAY
	31-12-00	1155	1215	00:20	OC	R,B	5.50	1008	TRIAL RECLOSURE MADE & STAY
	31-12-00	1801	1915	01:05	EF	Y	4.17	2484	TRIAL RECLOSURE MADE & STAY
				07:53	**OC-1,EF-7**		**32.20**	**16,903**	
JAN	6-1-01	0824	0825	00:01	OC	B	4.67	43	TRIAL RECLOSURE MADE & STAY
	8-1-01	1935	1937	00:02	EF	Y	5.12	94	TRIAL RECLOSURE MADE & STAY
	10-1-01	0758	0825	00:27	OC	B	4.20	1040	ODA ROAD RMU OPENED

	11-1-01	1840	1844	00:04	EF	Y	4.20	154	TRIAL RECLOSURE MADE & STAY
	13-1-01	2030	2048	00:18	OC	R	5.50	908	TRIAL RECLOSURE MADE & STAY
	14-1-01	2039	2059	00:20	EF	Y	5.00	917	ODA RMU OPENED
	17-1-01	1525	1537	00:12	OC	B	5.00	550	TRIAL RECLOSURE MADE & STAY
	19-1-01	1414	1450	00:36	OC	B	5.17	1706	TRIAL RECLOSURE MADE & STAY
	21-1-01	1905	1912	00:07	OC	B	4.33	278	TRIAL RECLOSURE MADE & STAY
	23-1-01	2120	2127	00:07	EF	Y	3.92	252	TRIAL RECLOSURE MADE & STAY
	27-1-01	1919	2005	00:46	OC	R,B	5.50	2319	ODA RMU & TOYIN S/S OPENED
	29-1-01	1912	1917	00:05	OC	B	5.00	229	TRIAL RECLOSURE MADE & STAY
				03:05	**0C-8, EF-4**		**57.61**	**8490**	
	3-2-01	1236	1259	00:23	OC	R	3.83	807	ODA RMU OPENED
	4-2-01	1233	1255	00:22	OC	R,B	3.00	605	TRIAL RECLOSURE MADE & STAY
	5-2-01	1908	1923	00:15	EF	Y	3.58	492	TRIAL RECLOSURE MADE & STAY
	10-2-01	1459*	1507	00:08	OC	R	3.00	220	TRIAL RECLOSURE MADE & STAY
FEB	13-2-01	0823	0827	00:04	EF	Y	1.67	61	TRIAL RECLOSURE MADE & STAY
	14-2-01	1656	1702	00:06	EF	Y	3.50	193	TRIAL RECLOSURE MADE & STAY
	19-2-01	1455	1517	00:22	OC	B	5.00	1008	ALA LEG ISOLATED
	25-2-01	0625	0640	00:15	EF	Y	4.58	630	ODA RMU OPENED
	28-2-01	1913	1924	00:11	OC	B	4.78	482	ODA RMU OPENED
				02:06	**OC-5, EF-4**		**32.94**	**4498**	
MARCH	2-3-01	1220	1240	00:20	OC	R	4.00	733	TRIAL RECLOSURE MADE & STAY
	3-3-01	2035	2042	00:07	EF/OC	R,B,Y	4.00	257	TRIAL RECLOSURE MADE & STAY
	4-3-01	1809	1819	00:10	EF	Y	3.42	314	ODA RMU OPENED
	4-3-01	1830	0729	00:59	EF	Y	3.42	24,422	TRIAL RECLOSURE MADE & STAY
	5-3-01	0914	1310	03:56	EF	Y	3.70	8,004	ALA/ODA RMU OPENED
	6-3-01	1118	1122	00:04	EF	Y	4.20	154	TRIAL RECLOSURE MADE & STAY
	6-3-01	1150	1207	00:17	EF	Y	3.67	572	ODA LEG ISOLATED
	6-3-01	1221	1243	00:22	EF	Y	3.67	740	ALA LEG ISOLATED
	6-3-01	1345	1540	01:55	EF	Y	4.20	4427	TRIAL RECLOSURE MADE & STAY
	6-3-01	1712	1834	01:22	EF	Y	3.67	2759	FAULTY JUMPER AMENDED
	7-3-01	1007	1011	00:04	EF	Y	3.20	117	TRIAL RECLOSURE MADE & STAY
	7-3-01	1027	1255	02:28	OC	R	3.20	4341	FAULT CLEARED AT "A" DIVISION
	7-3-01	1616	1801	01:48	OC	R,B	4.67	4495	FAULT CLEARED AFTER TRACING
	8-3-01	1909	1925	00:16	OC	Y	5.12	751	TRIAL RECLOSURE MADE & STAY
	10-3-01	1840	1857	00:17	EF	Y	1.80	281	ODA LEG ISOLATED
	10-3-01	2230	2232	00:02	EF	Y	2.40	44	ODA LEG ISOLATED
	12-3-01	1040	1052	00:12	OC	R	4.50	495	ODA LEG ISOLATED
	14-3-01	2121	2143	00:22	EF	Y	4.67	942	ODA LEG ISOLATED
	16-3-01	1910	1926	00:16	OC/EF	B,Y	4.17	612	ODA LEG ISOLATED
	17-3-01	0500	0647	01:47	OC	B	4.67	4580	ODA LEG ISOLATED

	18-3-01	1406	1426	00:20	OC	R	5.00	917	ODA LEG ISOLATED
	19-3-01	1914	1930	00:16	OC	R,B	5.50	807	ODA LEG ISOLATED
	21-3-01	1516	1524	00:08	EF	Y	5.00	367	TRIAL RECLOSURE MADE & STAY
	21-3-01	1641	1525	22:44	OC	B	2.80	35,009	BROKEN XARMS CHANGED
	22-3-01	2001	0645	10:44	EF	Y	4.67	275,568	ALA LEG ISOLATED
	23-3-01	1204	1412	14:08	EF	Y	3.30	25,652	CIRCULT BREAKER CHANGED
	26-3-01	1903	2019	01:16	EF	Y	4.92	3,428	ODA RMU OPENED
	27-3-01	1707	1800	00:53	OC	Y	4.92	2,390	TRIAL RECLOSURE MADE & STAY
	28-3-01	1222	1125	00:03	EF	B	4.67	128	TRIAL RECLOSURE MADE & STAY
	29-3-01	1121	1547	04:26	EF	Y	5.00	12,192	ODA LEG ISOLATED
	29-3-01	1936	1941	00:05	EF	Y	4.67	214	TRIAL RECLOSURE MADE & STAY
	31-3-01	0555	0600	00:05	EF	Y	2.17	99	TRIAL RECLOSURE MADE & STAY
				84:09	**OC-12, EF-22**		**128.97**	**167,811**	
APRIL	1-4-01	0320	0325	00:05	EF	Y	3.00	137	TRIAL RECLOSURE MADE & STAY
	2-4-01	1624	1709	00:45	OC	R,B	5.30	2186	TRIAL RECLOSURE MADE & STAY
	4-4-01	1906	1916	00:10	OC	B	5.42	497	TRIAL RECLOSURE MADE & STAY
	9-4-01	1956	1958	00:02	OC	Y	3.50	64	TRIAL RECLOSURE MADE & STAY
	10-4-01	1342	1359	00:17	EF	B	5.50	857	TRIAL RECLOSURE MADE & STAY
	11-4-01	1027	1037	00:10	EF	B	3.50	321	TRIAL RECLOSURE MADE & STAY
	12-4-01	1945	1950	00:05	EF	Y	5.50	147	TRIAL RECLOSURE MADE & STAY
	12-4-01	0649	0651	00:02	EF	Y	3.50	72	TRIAL RECLOSURE MADE & STAY
	13-4-01	0736	0741	00:05	EF	Y	3.20	180	TRIAL RECLOSURE MADE & STAY
	14-4-01	1933	1954	00:21	EF	Y	3.92	828	TRIAL RECLOSURE MADE & STAY
	15-4-01	2030	2043	00:13	OC	Y	3.92	491	TRM&S AFTER HEAVY RAINFALL
	15-4-01	0713	0718	00:05	OC	R	4.30	183	TRIAL RECLOSURE MADE & STAY
	16-4-01	0805	1444	06:39	OC	R,B	4.00	14,630	ODA RMU OPENED
	19-4-01	1923	1931	00:08	OC	B	5.33	391	TRIAL RECLOSURE MADE & STAY
	20-4-01	0243	0249	00:06	EF	Y	5.00	275	TRIAL RECLOSURE MADE & STAY
	22-4-01	1956	22026	00:30	EF	Y	3.42	941	TRIAL RECLOSURE MADE & STAY
	22-4-01	2110	2135	00:25	OC	B	5.33	1221	TRIAL RECLOSURE MADE & STAY
	23-4-01	0906	0911	00:05	EF	Y	3.17	145	TRIAL RECLOSURE MADE & STAY
	23-4-01	1239	1242	00:03	EF	Y	4.17	115	TRIAL RECLOSURE MADE & STAY
	28-4-01	2359	0007	01:08	EF	Y	3.17	1976	TRIAL RECLOSURE MADE & STAY
				11.24	**OC-8, EF-12**		**83.27**	**25.657**	
MAY	1-5-01	1935	1941	00:06	EF	Y	4.33	238	ODA RMU OPENED
	1-5-01	2102	2107	00:05	EF		5.67	260	TRIAL RECLOSURE MADE & STAY
	2-5-01	1134	1155	00:21	OC/EF	Y	3.33	737	ODA RMU ISOLATED
	3-5-01	1658	1804	01:06	EF	R,Y	3.67	2015	ODA & ALA RMU OPENED
	3-5-01	0440	0443	00:03	EF	Y	3.83	101	TRIAL RECLOSURE MADE & STAY
	7-5-01	1123	1129	00:06	EF	Y	2.67	211	TRIAL RECLOSURE MADE & STAY

	7-5-01	0054	0103	00:07	EF	Y	4.67	220	ODA RMU OPENED
	8-5-01	1918	2013	00:05	EF	Y	4.67	2354	SIJUADE S/S JUMPERS OPENED
	8-5-01	2027	2033	00:06	EF	Y	5.33	257	TRIAL RECLOSURE MADE & STAY
	8-5-01	0453	0707	02:14	EF	Y	4.67	6547	ODA RMU OPENED
	10-5-01	0616	0620	00:04	OC	R	4.17	171	TRIAL RECLOSURE MADE & STAY
	11-5-01	1200	1204	00:04	EF	Y	4.50	153	TRIAL RECLOSURE MADE & STAY
	11-5-01	2202	2206	00:04	EF	Y	4.00	165	TRIAL RECLOSURE MADE & STAY
	12-5-01	1520	1535	00:10	OC/EF	R,Y	3.33	550	J & P FUSES AT MARKET DROPPED
	13-5-01	1213	1245	00:04	OC/EF	Y	3.67	977	TRIAL RECLOSURE MADE & STAY
	14-5-01	1602	1606	00:42	EF	Y	5.33	135	TRIAL RECLOSURE MADE & STAY
	15-5-01	1910	1952	00:05	OC	R	2.83	2052	ODA RMU ISOLATED
	15-5-01	0357	0402	00:05	EF	Y	2.83	130	TRIAL RECLOSURE MADE & STAY
	15-5-01	0449	0454	00:05	EF	Y	2.83	130	TRIAL RECLOSURE MADE & STAY
	16-5-01	1915	1950	00:35	OC	R,B	5.00	1604	TRIAL RECLOSURE MADE & STAY
	19-5-01	1335	1340	00:05	EF	Y	2.92	134	JUMPER CUT AMENDED
	19-5-01	1748	1810	00:22	EF	Y	2.92	589	TRIAL RECLOSURE MADE & STAY
	19-5-01	0630	0645	00:15	EF	Y	3.00	413	TRIAL RECLOSURE MADE & STAY
	20-5-01	0454	0504	00:10	EF	Y	3.00	275	TRIAL RECLOSURE MADE & STAY
	23-5-01	0817	0822	00:05	EF	Y	4.00	183	TRIAL RECLOSURE MADE & STAY
	24-5-01	2040	2043	00:03	EF	Y	3.33	92	TRIAL RECLOSURE MADE & STAY
	26-5-01	1344	1410	00:02	OC	R,B	4.33	1032	TRIAL RECLOSURE MADE & STAY
	27-5-01	0922	0927	00:05	EF	Y	3.33	153	TRIAL RECLOSURE MADE & STAY
	28-5-01	1922	1947	00:25	OC	R,B	4.50	1031	ODA & MARKET RMU OPENED
	30-5-01	1946	1949	00:03	OC	R	4.67	128	TRIAL RECLOSURE MADE & STAY
	31-5-01	0145	0157	00:12	OC	R,B	4.00	440	TRIAL RECLOSURE MADE & STAY
				09:52	**OC -10,EF-24**		**122.33**	**23,477**	
	1-6-01	1218	1223	00:05	OC	R	5.17	237	TRIAL RECLOSURE MADE & STAY
	4-6-01	1528	1535	00:07	OC	B	2.83	182	TRIAL RECLOSURE MADE & STAY
	7-6-01	2042	2127	00:35	EF	Y	3.50	1123	NEPA S/S OPENED
	9-6-01	1919	1945	00:26	OC	B	4.67	1113	TRIAL RECLOSURE MADE & STAY
	9-6-01	2002	2028	00:26	OC	B	5.17	1232	TRIAL RECLOSURE MADE & STAY
	10-6-01	2337	2358	00:21	EF	Y	4.67	899	TRIAL RECLOSURE MADE & STAY
JUNE	11-6-01	1925	1937	00:12	EF	Y	3.33	366	J & P FUSES DROPPED AT NEPA S/S
	14-6-01	1348	1355	00:07	OC	B	4.58	294	TRIAL RECLOSURE MADE & STAY
	18-6-01	1932	1935	00:03	EF	Y	3.83	105	TRIAL RECLOSURE MADE & STAY
	18-6-01	0410	0424	00:14	OC	R,B	2.75	353	TRIAL RECLOSURE MADE & STAY
	20-6-01	0615	0630	00:15	OC	R	5.00	688	TRIAL RECLOSURE MADE & STAY
	23-6-01	2010	2016	00:06	OC	B	5.33	294	TRIAL RECLOSURE MADE & STAY
	30-6-01	0638	0644	00:06	EF	Y	3.83	211	J &P FUSE AMENDED AT MARKET S/S

				03:03	**OC-8,EF-5**	**54.66**	**7,096**		
JULY	1-7-01	0538	0540	00:02	EF	Y	3.58	66	TRIAL RECLOSURE MADE & STAY
	2-7-01	1630	2208	05:38	EF	Y	4.17	12920	TRIAL RECLOSURE MADE & STAY
	6-7-01	2030	2219	01:49	EF	Y	4.00	3997	TRIAL RECLOSURE MADE & STAY
	8-7-01	0927	0958	00:31	OC	B	3.67	1043	ODA RMU OPENED
	9-7-01	2045	2057	00:12	EF	Y	3.65	402	ODA RMU OPENED
	13-7-01	1245	1249	00:04	OC	R	4.33	159	TRIAL RECLOSURE MADE & STAY
	16-7-01	1200	1209	00:09	EF	Y	4.33	357	TRIAL RECLOSURE MADE & STAY
	22-7-01	1652	1657	00:05	EF	Y	4.00	183	TRIAL RECLOSURE MADE & STAY
	22-7-01	0757	0801	00:04	EF	Y	3.95	145	TRIAL RECLOSURE MADE & STAY
	28-7-01	0644	0648	00:04	EF	Y	4.75	174	TRIAL RECLOSURE MADE & STAY
	31-7-01	0814	1009	01:55	OC/EF	R,B,Y	5.00	5271	FAULT AMENDED
				10:33	**OC –3, EF-9**		**45.43**	**24,717**	
AUG.	3-8-01	2138	2340	02:02	OC	R,B	4.50	5032	FAULT AMENDED AT TEXACO
	10-8-01	1345	1347	OO:02	OC	B	4.17	76	ODA RMU OPENED
	14-8-01	1402	0640	16:38	EF	Y	3.33	30,464	ODA RMU OPENED
	18-8-01	0915	1040	01:25	EF	Y	5.08	3958	POLICE RMU OPENED
	18-8-01	1953	1959	00:06	EF	Y	4.00	220	TRIAL RECLOSURE MADE & STAY
	19-8-01	1754	1819	00:25	EF	Y	4.00	917	POLICE RMU OPENED
	22-8-01	1220	1247	00:27	EF	Y	4.33	1072	ODA RMU OPENED
	24-8-01	0844	0848	00:04	OC	B	4.75	174	TRIAL RECLOSURE MADE & STAY
	25-8-01	0659	0719	00:20	OC/EF	R,Y	5.00	917	TRIAL RECLOSURE MADE & STAY
	26-8-01	0900	0912	00:12	OC	R	5.00	550	TRIAL RECLOSURE MADE & STAY
	27-8-01	1914	1918	00:04	OC	B	5.17	190-	TRIAL RECLOSURE MADE & STAY
	29-8-01	1010	1012	00:02	EF	Y	4.67	86	TRIAL RECLOSURE MADE & STAY
	31-8-01	2126	2132	00:06	EF	Y	5.00	275	TRIAL RECLOSURE MADE & STAY
				21:53	**OC-6, EF-8**		**59.00**	**43,931**	
SEPT.	1-9-01	0940	0945	00:05	OC	R,B	4.67	214	TRIAL RECLOSURE MADE & STAY
	2-9-01	1150	1258	01:03	OC	B	3.33	2076	OWENA MOTEL S/S OPENED
	4-9-01	0920	1020	01:00	OC	R	4.50	2475	SCHOOL OF NURSING S/S OPENED
	4-9-01	1816	1905	00:49	EF	Y	4.33	1945	FAULT CLEARED AT OLD GARAGE
	5-9-01	0615	0741	01:26	OC	B	3.50	2759	NEPA S/S FAULT CLEARED
	6-9-01	1218	1605	03:47	OC	R,B	4.33	9010	FAULTY CABLE AMENDED AT MARKET S/S
	7-9-01	1446	1559	01:13	OC/EF	R,B,Y	4.50	3011	CUT UPRISER AT OLUWATUYI S/S AMENDED
	8-9-01	1134	1533	03:59	EF	Y	3.83	8391	FAULTY CABLE AT ODA ROAD AMENDED

	8-9-01	1534	1659	01:25	OC	B	4.33	3374	TREE BRANCHES WERE CLEARED ALONG GOVT. HOUSE
	8-9-01	1943	1946	00:03	OC	B	4.00	110	TRIAL RECLOSURE MADE & STAY
	8-9-01	0625	0528	00:03	OC	R	3.25	89	TRIAL RECLOSURE MADE & STAY
	9-9-01	1805	1825	00:20	EF	Y	4.50	825	TRIAL RECLOSURE MADE & STAY
	10-9-01	1902	1920	00:18	OC/EF	R,Y	4.50	743	ODA RMU OPENED
	10-9-01	1957	1959	00:02	EF	Y	4.50	82	TRIAL RECLOSURE MADE & STAY
	12-9-01	1939	2079	00:40	OC	R,B	1.83	671	ODA RMU OPENED
	13-9-01	0720	0725	00:05	EF	Y	4.50	206	TRIAL RECLOSURE MADE & STAY
	16-9-01	2025	2045	00:20	EF	Y	5.00	917	TRIAL RECLOSURE MADE & STAY
	16-9-01	2145	2149	00:04	EF	Y	4.50	165	ODA RMU OPENED
	17-9-01	2140	2145	00:05	EF	Y	3.83	176	TRIAL RECLOSURE MADE & STAY
	20-9-01	1514	1538	00:24	OC	R,B	3.50	770	ODA RMU OPENED
	22-9-01	0706	0714	00:08	EF	Y	3.00	220	TRIAL RECLOSURE MADE & STAY
	23-9-01	0614	0620	00:06	EF	Y	3.67	202	TRIAL RECLOSURE MADE & STAY
	26-9-01	1910	1940	00:30	EF	Y	5.33	1466	TRIAL RECLOSURE MADE & STAY
	26-9-01	0614	0619	00:05	EF	Y	4.17	191	TRIAL RECLOSURE MADE & STAY
	27-9-01	1906	1931	00:25	EF	Y	3.83	878	ODA RMU OPENED
	30-9-01	1846	1920	00:34	OC	B	5.00	1558	ODA RMU OPENED
				19:04	**OC-13, EF-15**		**106.23**	**42,524**	
OCT.	1-10-01	0607	0610	00:03	EF	Y	4.50	124	TRIAL RECLOSURE MADE & STAY
	2-10-01	2025	2030	00:05	EF	Y	4.00	183	TRIAL RECLOSURE MADE & STAY
	4-10-01	1517	1521	00:04	EF/OC	RY	4.33	159	TRIAL RECLOSURE MADE & STAY
	4-10-01	1916	1927	00:11	EF	Y	4.50	454	ODA RMU OPENED
	6-10-01	0809	0813	00:04	EF	Y	4.50	165	TRIAL RECLOSURE MADE & STAY
	8-10-01	1024	1032	00:08	EF	Y	4.33	318	TRIAL RECLOSURE MADE & STAY
	8-10-01	2059	2105	00:06	OC	R	4.33	238	TRIAL RECLOSURE MADE & STAY
	8-10-01	0624	0628	00:04	EF	Y	3.92	144	TRIAL RECLOSURE MADE & STAY
	9-10-01	2003	2012	00:09	EF	Y	4.33	357	TRIAL RECLOSURE MADE & STAY
	11-10-01	1823	1900	00:37	EF	Y	4.58	1553	ODA RMU OPENED
	11-10-01	2257	2303	00:06	EF	Y	3.67	202	TRIAL RECLOSURE MADE & STAY
	13-10-01	1853	1945	00:52	OC	R,B	5.33	2541	ODA RMU OPENED
	13-10-01	0651	0656	00:05	EF	Y	4.58	210	TRIAL RECLOSURE MADE & STAY
	13-10-01	0702	0711	00:09	EF	Y	3.67	303	ODA RMU OPENED
	14-10-01	1815	1827	00:12	EF	Y	3.75	413	TRIAL RECLOSURE MADE & STAY
	14-10-01	2034	2041	00:07	EF	Y	4.33	278	TRIAL RECLOSURE MADE & STAY
	14-10-01	0550	0623	00:33	EF	Y	4.33	1310	POLICE RMU OPENED
	15-10-01	2011	2014	00:03	ER	Y	4.17	115	TRIAL RECLOSURE MADE & STAY
	15-10-01	0536	0540	00:04	EF	Y	3.50	128	TRIAL RECLOSURE MADE & STAY
	17-10-01	0840	0843	00:03	EF	Y	4.25	117	TRIAL RECLOSURE MADE & STAY

	18-10-01	1709	1714	00:05	EF	Y	4.33	198	TRIAL RECLOSURE MADE & STAY
	18-10-01	1942	1951	00:09	EF	Y	4.33	357	TRIAL RECLOSURE MADE & STAY
	19-10-01	1128	1130	00:02	EF	Y	3.67	67	TRIAL RECLOSURE MADE & STAY
	19-10-01	1756	1759	00:03	EF	Y	3.67	100	TRIAL RECLOSURE MADE & STAY
	20-10-01	1210	1216	00:06	EF	Y	3.33	183	TRIAL RECLOSURE MADE & STAY
	21-10-01	1841	1915	00:34	EF	Y	3.67	1144	TRIAL RECLOSURE MADE & STAY
	22-10-01	0540	0542	00:02	EF	Y	3.33	61	TRIAL RECLOSURE MADE & STAY
	24-10-01	1720	1848	01:28	EF	Y	3.67	2960	TRIAL RECLOSURE MADE & STAY
	25-10-01	1903	1907	00:04	EF	Y	3.83	135	TRIAL RECLOSURE MADE & STAY
	26-10-01	2001	2005	00:04	EF	Y	3.33	140	TRIAL RECLOSURE MADE & STAY
	26-10-01	2037	2055	00:18	EF	Y	3.33	549	TRIAL RECLOSURE MADE & STAY
	26-10-01	2144	2204	00:20	EF	Y	3.83	610	TRIAL RECLOSURE MADE & STAY
	27-10-01	1942	1946	00:04	EF	Y	3.83	140	TRIAL RECLOSURE MADE & STAY
	29-10-01	1901	1915	00:14	OC	B	5.17	663	TRIAL RECLOSURE MADE & STAY
	29-10-01	0520	0537	00:17	EF	Y	3.33	519	ODA RMU OPENED
	30-10-01	1652	1735	00:43	EF	Y	4.17	1644	JUMPER CUT AMENDED AT 'A' DIVISION
	30-10-01	0610	0654	00:44	EF	Y	4.17	1682	TRIAL RECLOSURE MADE & STAY
	31-10-01	1455	1959	05:04	OC	R,B	4.33	12066	FAULT AMENDED
	31-10-01	0540	0602	00:22	-		4.00	807	TX POWER FAILURE
				14:28	**OC-5, EF-34**		**158.06**	**33,337**	
NOV.	1-11-01	1609	1625	00:16	EF	Y	3.67	538	ODA RMU OPENED
	1-11-01	2138	2145	00:07	-	-	3.33	214	TX POWER FAILURE
	3-11-01	1932	1942	00:08	EF	Y	3.58	263	ODA RMU OPENED
	4-11-01	1908	1916	00:08	EF	Y	4.00	293	TRIAL RECLOSURE MADE & STAY
	5-11-01	1540	1545	00:05	EF	Y	3.67	168	TRIAL RECLOSURE MADE & STAY
	5-11-01	1627	1639	00:12	EF	Y	3.83	420	ODA RMU OPENED
	6-11-01	1915	1952	00:37	EF	Y	4.00	1357	TRIAL RECLOSURE MADE & STAY
	7-11-01	2233	2301	00:28	-	-	3.67	942	TX POWER FAILURE
	8-11-01	0045	0050	00:05	EF	Y	3.50	160	TRIAL RECLOSURE MADE & STAY
	8-11-01	0606	0609	00:03	EF	Y	4.08	112	TRIAL RECLOSURE MADE & STAY
	8-11-01	1211	1239	00:28	-	-	4.00	1027	TX POWER FAILURE
	8-11-01	1515	1520	00:05	EF	Y	4.33	198	TRIAL RECLOSURE MADE & STAY
	8-11-01	1840	1845	00:05	EF	Y	3.50	160	TRIAL RECLOSURE MADE & STAY
	9-11-01	1921	1940	00:19	EF	Y	3.50	667	TRIAL RECLOSURE MADE & STAY
	9-11-01	2045	2135	00:50	EF	Y	3.53	1833	TRIAL RECLOSURE MADE & STAY
	9-11-01	2150	2220	00:30	EF	Y	4.00	1009	TRIAL RECLOSURE MADE & STAY
	9-11-01	2344	2352	00:08	-	-	3.67	269	TX POWER FAILURE
	9-11-01	0610	0615	00:05	EF	Y	3.67	168	TRIAL RECLOSURE MADE & STAY
	10-11-01	1546	1553	00:07	EF	Y	4.00	257	TRIAL RECLOSURE MADE & STAY

	10-11-01	0607	0620	00:13	EF	Y	3.67	437	TRIAL RECLOSURE MADE & STAY
	12-11-01	0906	0950	00:45	EF	Y	3.67	1514	IJOKA ROAD S/S OPENED
	12-11-01	1914	1917	00:03	EF	Y	3.67	101	TRIAL RECLOSURE MADE & STAY
	12-11-01	2105	2110	00:05	EF	Y	3.67	168	TRIAL RECLOSURE MADE & STAY
	12-11-01	2215	2237	00:27	EF	Y	3.33	672	SIJUADE/OLUWATUYI JUMPER OPENED
	13-11-01	1045	1050	00:05	EF	Y	3.00	137	TRIAL RECLOSURE MADE & STAY
	13-11-01	1829	2041	02:12	EF	Y	4.33	5239	LINE CUT AMENDED
	13-11-01	0620	0625	00:05	EF	Y	4.17	191	TRIAL RECLOSURE MADE & STAY
	13-11-01	0649	0714	00:25	EF	Y	3.67	841	POLICE RMU OPENED
	14-11-01	1908	2006	00:58	EF	Y	4.50	2393	TRIAL RECLOSURE MADE & STAY
	14-11-01	0541	0545	00:04	EF	Y	4.50	165	TRIAL RECLOSURE MADE & STAY
	15-11-01	1905	1915	00:10	EF	Y	4.17	382	TRIAL RECLOSURE MADE & STAY
	15-11-01	2042	2110	00:29	EF	Y	4.33	1151	SIJUADE/OLUWATUYI S/S OPENED
	15-11-01	0603	0629	00:26	EF	Y	3.33	794	TRIAL RECLOSURE MADE & STAY
	16-11-01	2010	2015	00:05	EF	Y	4.67	214	TRIAL RECLOSURE MADE & STAY
	16-11-01	0608	0615	00:07	EF	Y	3.00	193	TRIAL RECLOSURE MADE & STAY
	17-11-01	1007	1012	00:05	EF	Y	3.42	157	TRIAL RECLOSURE MADE & STAY
	17-11-01	1120	1258	01:38	EF	Y	3.33	2991	'A' DIVISION S/S OPENED
	18-11-01	1846	0433	09:47	OC	B	5.00	26904	FAULT AMENDED
	18-11-01	0710	0715	00:05	OC	R	4.50	206	TRIAL RECLOSURE MADE & STAY
	21-11-01	1459	1514	00:15	-	-	3.67	505	TX POWER FAILURE
	25-11-01	1925	1929	00:04	EF	Y	4.33	159	TRIAL RECLOSURE MADE & STAY
	27-11-01	1000	1503	00:03	OC	R	5.00		NEPA S/S OPENED
	30-11-01	1349	1429	00:40	OC	R	4.67		TRIAL RECLOSURE MADE & STAY
				23::57	**OC-4,EF-34**		**167.60**	**57.419**	
DEC.	1-12-01	1039	1051	00:12	EF	Y	4.17	459	POLICE RMU OPENED
	1-12-01	1150	1413	02:23	OC	B	1.67	2189	J & P FUSES DROPPED AT MARKET S/S
	3-12-01	0910	0914	00:04	OC	B	5.00	182	SOME LOCAL S/S OPENED
	4-12-01	1900	1940	00:40	OC/EF	RBY	3.83	1404	TRIAL RECLOSURE MADE & STAY
	5-12-01	0621	1915	12:54	EF	Y	4.00	28,380	FAULT AMENDED
	9-12-01	0541	0545	00:04	EF	Y	4.00	147	TRIAL RECLOSURE MADE & STAY
	15-12-01	2020	2025	00:05	OC/EF	R,Y	4.83	221	TRIAL RECLOSURE MADE & STAY
	17-12-01	1253	1305	00:12	EF	Y	4.03	443	TRIAL RECLOSURE MADE & STAY
	20-12-01	0829	0845	00:16	OC	B	4.00	587	TRIAL RECLOSURE MADE & STAY
	27-12-01	0641	0700	00:19	OC	B	5.00	870	TRIAL RECLOSURE MADE & STAY
	30-12-01	0909	0915	00:16	-	-	4.03	222	TX POWER FAILURE
	30-12-01	1144	1147	00:03	EF	Y	4.17	115	TRIAL RECLOSURE MADE & STAY
				17:18	**OC-6, EF-7**		**48.73**	**35219**	

JAN.	2-1-02	2005	2022	00:17	-	-	3.20	499	TX POWER FAILURE
	4-1-02	1630	1637	00:07	-	-	4.50	289	TX POWER FAILURE:
	5-1-02	1934	1946	00:12	OC	R	5.00	550	TRIAL RECLOSURE MADE & STAY
	6-1-02	0550	0626	00:36	OC	B	5.00	1650	TRIAL RECLOSURE MADE & STAY
	6-1-02	0632	1027	03:55	OC/EF	BY	1.83	3942	XARMS AMMEMNDED
	12-1-02	1858	1920	00:22	OC	B	5.17	1043	TRIAL RECLOSURE MADE & STAY
	13-1-02	0606	0828	00:22	OC	B	3.00	605	TRIAL RECLOSURE MADE & STAY
	16-1-02	1942	2008	00:26	OC	B	5.33	1270	NEPA S/S DROPPED
	17-1-02	1955	2009	00:14	OC	B	5.00	642	TRIAL RECLOSURE MADE & STAY
	19-1-02	1918	1925	00:07	EF	Y	4.50	289	TRIAL RECLOSURE MADE & STAY
	23-1-02	1145	1150	00:05	OC/EF	BY	4.00	183	TRIAL RECLOSURE MADE & STAY
	25-1-02	1238	1645	04:07	OC	B	4.00	9057	FAULT AMENDED
	25-1-02	2240	2323	01:43	EF	Y	3.92	1545	TRIAL RECLOSURE MADE & STAY
	28-1-02	1020	1030	00:10	EF	Y	3.50	321	TRIAL RECLOSURE MADE & STAY
				11:43	**OC-9,EF-5**		**57.95**	**21.885**	
FEB.	4-2-02	1414	1430	00:16	-	-	2.83	415	TX POWER FAILURE
	5-2-02	1833	1840	00:17	-	-	3.33	214	TX POWER FAILURE
	6-2-02	1940	1943	00:03	EF	Y	4.75	131	TRIAL RECLOSURE MADE & STAY
	8-2-02	2125	2155	00:30	EF	Y	4.50	1238	TRIAL RECLOSURE MADE & STAY
	10-2-02	2115	2120	00:05	OC	R,B	5.00	229	TRIAL RECLOSURE MADE & STAY
	11-2-02	1958	2000	00:02	EF	Y	4.00	73	TRIAL RECLOSURE MADE & STAY
	13-2-02	1942	1945	00:03	OC/EF	R,Y	3.67	101	TRIAL RECLOSURE MADE & STAY
	13-2-02	1924	1928	00:04	OC	B	3.00	110	TRIAL RECLOSURE MADE & STAY
	15-2-02	1947	1951	00:04	-	-	3.00	110	TX POWER FAILURE
	15-2-02	1948	1952	00:04	EF	Y	4.33	159	TRIAL RECLOSURE MADE & STAY
	16-2-02	1045	1049	00:04	-	-	4.00	147	TX POWER FAILURE
	16-2-02	2044	2050	00:06	EF	Y	3.83	211	TRIAL RECLOSURE MADE & STAY
	16-2-02	0605	0611	00:06	OC	R	3.50	193	TRIAL RECLOSURE MADE & STAY
	17-2-02	0617	0643	00:26	-	-	3.83	913	TX POWER FAILURE:
	18-2-02	1840	1845	00:05	EF	Y	4.08	187	TRIAL RECLOSURE MADE & STAY
	19-2-02	0550	0600	00:10	OC	R,B	4.17	382	NEPA S/S OPENED
	20-2-02	0644	0648	00:04	EF	Y	3.67	135	TRIAL RECLOSURE MADE & STAY
	21-2-02	1550	1912	03:22	OC	B	4.00	7407	FAULT AMENDED
	21-2-02	2114	2119	00:05	EF	Y	4.17	191	TRIAL RECLOSURE MADE & STAY
	22-2-02	2134	2139	00:05	OC	Y	4.58	210	TRIAL RECLOSURE MADE & STAY
	23-2-02	0723	0730	00:07	EF	Y	4.83	310	TRIAL RECLOSURE MADE & STAY
	24-2-02	0835	0850	00:15	-	-	3.00	413	TX POWER FAILURE:
	25-2-02	1914	1925	00:16	OC	R,B	5.17	758	NEPA S/S OPENED
	25-2-02	2113	2230	01:17	EF	Y	4.58	3233	T R M & S AFTER HEAVY RAINFALL
	25-2-02	0621	0626	00:05	-	-	3.83	176	TX POWER FAILURE

	26-2-02	1137	1156	00:19	OC/EF	R,Y	3.00	523	TRIAL RECLOSURE MADE & STAY
	26-2-02	2028	2119	00:51	OC	R..B	4.17	1949	TX POWER FAILURE
	26-2-02	0815	1309	04:54	EF	Y	4.00	10,780	FAULT AMENDED
	27-2-02	1331	1345	00:14	-	-	3.83	492	TX POWER FAILURE:
	28-2-02	2012	2016	00:04	OC	B	4.17	153	TRIAL RECLOSURE MADE & STAY
				14:13	**OC-11, EF-13**		**118.82**	**31,543**	
MARCH	2-3-02	1804	1874	00:10	OC	R,B	3.00	275	TRIAL RECLOSURE MADE & STAY
	2-3-02	1919	1931	00:12	OC	B	3.17	389	TRJAL RECLOSURE MADE & STAY
	5-3-02	1845	1912	00:27	EF	Y	3.83	948	TRIAL RECLOSURE MADE & STAY
	5-3-02	1922	1950	00:28	-	-	3.83	983	TX POWER FAILURE:
	6-3-02	2320	2323	00:03	-	-	3.17	87	TX POWER FAILURE:
	8-3-02	1845	2075	02:30	OC	R,B	4.67	6421	FAULT AMENDED
	8-3-02	0616	0620	00:07	-	-	3.83	140	TX POWER FAILURE:
	10-3-02	1707	1714	02:01	-	-	3.00	193	TX POWER FAILURE:
	11-3-02	1509	1710	01:19	EF	Y	3.50	3,882	POLICE RMU OPENED
	12-3-02	0428	0547	07:25	-	-	3.17	2,296	TX POWER FAILURE:
	13-3-02	1256	2021	07:49	-	-	3.00	12,238	TX POWER FAILURE:
	13-3-02	2205	0554	00:12	-	-	3.00	12,898	TX POWER FAILURE:
	14-3-02	1840	1852	00:54	-	-	3.83	421	TX POWER FAILURE
	16-3-02	1748	1842	00:04	OC	R,B	4.00	1980	TRIAL RECLOSURE MADE & STAY
	17-3-02	1911	1915	00:11	-	-	4.00	147	TX POWER FAILURE:
	19-3-02	1912	1923	00:05	OC	R,B	4.50	454	TRIAL RECLOSURE MADE & STAY
	21-3-02	1931	1936	00:05	-	-	3.00	136	TX POWER FAILURE:
	21-3-02	1943	1958	00:15	-	-	3.17	436	TX POWER FAILURE
	22-3-02	0504	0507	00:03	-	-	3.83	105	TX POWER FAILURE:
	23-3-02	1134	1136	00:02	-	-	4.00	73	TX POWER FAILURE:
	23-3-02	0126	0713	05:37	-	-	4.00	12,357	TX POWER FAILURE:
	26-3-02	1245	1545	03:00	-	-	3.17	5,231	TX POWER FAILURE:
	28-3-02	2057	2103	00:06	-	-	3.00	156	TX POWER FAILURE
				31:04	**OC-5, EF-2**		**81.67**	**62,255**	
APRIL	6-4-02	1915	1917	00:02	OC	B	3.17	58	TRIAL RECLOSURE MADE & STAY
	7-4-02	1514	1703	01:49	OC/EF	R,B,Y	4.00	3997	WIRE CUT AMENDED
	12-4-02	2035	2043	00:08	OC/EF	R,Y	4.00	293	NEPA S/S OPENED
	12-4-02	0547	0800	02:13	EF	Y	3.17	3865	"A" DIVISION S/S OPENED
	17-4-02	1927	2000	00:38	OC/EF	R,B,Y	4.00	1210	TRIAL RECLOSURE MADE & STAY
	19-4-02	1435	1445	00:10	-	-	3.17	291	TX POWER FAILURE
	19-4-02	2320	2344	00:24	EF	Y	3.83	843	TRIAL RECLOSURE MADE & STAY
	23-4-02	0008	0057	00:49	EF	Y	2.83	1271	TRIAL RECLOSURE MADE & STAY
	25-4-02	1023	1049	00:26	-	-	2.83	674	TX POWER FAILURE:
	29-4-02	1910	1941	00:31	OC	B	4.00	1137	TRIAL RECLOSURE MADE & STAY

				07:05	OC-5, EF-6		35.00	13,639	
	6-5-02	1851	1859	00:08	EF	Y	3.83	281	TRIAL RECLOSURE MADE & STAY
	6-5-02	0051	0100	00:09	-	-	2.00	281	TRIAL RECLOSURE MADE & STAY
	8-5-02	1915	1928	00:13	-	-	3.50	165	TX POWER FAILURE:
	8-5-02	0045	0110	00:25	-	-	1.67	417	TX POWER FAILURE
	8-5-02	0535	0558	00:23	-	-	2.00	383	TX POWER FAILURE:
	10-5-02	0941	0950	00:09	-	-	2.00	422	TX POWER FAILURE:
	10-5-02	1342	1353	00:11	-	-	3.17	165	TX POWER FAILURE:
	10-5-02	1742	1754	00:07	-	-	3.00	320	TX POWER FAILURE:
MAY	13-5-02	1313	1354	00:41	-	-	5.00	193	TRIAL RECLOSURE MADE & STAY
	14-5-02	2020	2028	00:08		-	3.83	1879	TRIAL RECLOSURE MADE & STAY
	18-5-02	0944	2051	11:07	-	-	2.17	281	TX POWER FAILURE:
	23-5-02	1227	1506	02:39	EF	Y	3.00	13268	TX POWER FAILURE:
	26-5-02	0929	0935	00:06	-	-	2.00	4373	FAULT AMENDED
	29-5-02	1040	1108	00:28	-	-	2.83	110	TX POWER FAILURE:
	30-5-02	2128	2130	00:02	EF	Y	2.67	49	TX POWER FAILURE
	31-5-02	0306	0812	00:06	-	-	1.67	92	TRIAL RECLOSURE MADE & STAY
	31-5-02	1141	1145	00:04	-	-	2.17	80	TX POWER FAILURE
				17:06	OC-1, EF-4		46.51	23,204	
JUNE	1-6-02	1224	1228	00:04	-	-	2.17	80	TX POWER FAILURE:
	1-6-02	1913	1930	00:17	OC	R	4.50	701	TRIAL RECLOSURE MADE & STAY
	1-6-02	2330	2350	00:20	-	-	3.00	550	TX POWER FAILURE
	1-6-02	0839	0912	01:45	EF	Y	4.17	1720	TRIAL RECLOSURE MADE & STAY
	5-6-02	1945	2028	00:43	EF	Y	4.33	1707	TRIAL RECLOSURE MADE & STAY
	7-6-02	0527	0640	00:13	-	-	2.00	1338	TX POWER FAILURE:
	8-6-02	0950	0957	00:07	-	-	2.00	128	TX POWER FAILURE:
	8-6-02	1355	1420	00:25	-	-	3.17	726	TX POWER FAILURE:
	8-6-02	1810	1952	01:42	-	-	3.83	3581	TX POWER FAILURE:
	8-6-02	2332	2341	00:18	-	-	2.83	467	TX POWER FAILURE:
	8-6-02	0716	0724	00:08	-	-	2.17	159	TX POWER FAILURE:
	9-6-02	1913	1918	00:05	-	-	4.00	183	TX POWER FAILURE:
	10-6-02	2030	2040	00:10	-	-	4.00	183	TX POWER FAILURE:
	10-6-02	0545	0600	015	-	-	3.83	351	TX POWER FAILURE:
	11-6-02	1755	1825	00:15	EF	Y	2.08	872	TRIAL RECLOSURE MADE & STAY
	13-6-02	1115	1125	00:30	-	-	3.17	291	TX POWER FAILURE
	14-6-02	1912	1915	00:10	EF	-	3.17	112	TRIAL RECLOSURE MADE & STAY
	15-6-02	1500	1515	00:03	-	-	4.08	539	TX POWER FAILURE
	15-6-02	1533	1750	00:15	-	-	3.92	5023	TX POWER FAILURE
	19-6-02	0950	1105	07:17	-	-	4.00	1946	TX POWER FAILURE:
	19-6-02	1540	1545	01:15	-	-	2.83	160	TX POWER FAILURE:

	19-6-02	1613	0615	00:05	EF	Y	3.50	81	TRIAL RECLOSURE MADE & STAY
	20-6-02	1450	1501	00:02	OC	R	4.42	386	TRIAL RECLOSURE MADE & STAY
	20-6-02	1555	1614	00:19	OC/EF	R,Y	3.83	667	TRIAL RECLOSURE MADE & STAY
	22-6-02	1917	1930	00:13	OC	R	4.75	566	1ST BANK & OLD GARAGE S/S OPENED
	25-6-02	1930	1943	00:13	OC	B	4.50	536	NEPA S/S OPENED
	25-6-02	0420	0428	00:08	-	-	3.00	220	TX POWER FAILURE:
	26-6-02	1411	1850	04:39	OC	R	3.92	10,025	ODA RMU OPENED
	28-6-02	0730	0751	00:21	-	-	2.00	385	TX POWER FAILURE
	28-6-02	0830	0835	00:05	-	-	2.17	99	TX POWER FAILURE:
	29-6-02	0634	0640	00:06	-	-	2.17	119	TX POWER FAILURE
	30-6-02	0602	0610	00:08	-	-	2.00	147	TX POWER FAILURE
				17:32	**OC-6,EF-5**		**105.34**	**34.619**	
	1-7-02	2355	0650	06:55	OC	B	3.58	13,619	"A" DIVISION RMU OPENED
	4-7-02	2043	2049	00:06	OC	R	4.75	261	TRIAL RECLOSURE MADE & STAY
	7-7-02	1228	1230	00:02	-	-	3.50	64	TX POWER FAILURE
	14-7-02	1745	1829	00:44	EF	Y	4.25	1714	TRIAL RECLOSURE MADE & STAY
JULY	16-7-02	2154	2200	00:06	OC/EF	R,Y	4.33	238	TRIAL RECLOSURE MADE & STAY
	20-7-02	1910	1915	00:05	EF	Y	4.00	183	TRIAL RECLOSURE MADE & STAY
	20-7-02	0612	0658	00:46	-	-	2.17	915	TX POWER FAILURE
	21-7-02	2250	2255	00:05	-	-	3.00	138	TX POWER FAILURE:
	21-7-02	0450	0454	00:04	-	-	2.83	104	TX POWER FAILURE:
	23-7-02	0784	0738	00:34	-	-	2.83	882	TX POWER FAILURE:
				08:17	**OC-3, EF-3**		**35.24**	**18.118**	
AUG.	2-8-02	1939	1948	00:09	OC		4.58	378	TRIAL RECLOSURE MADE & STAY
	6-8-02	1913	1920	00:07	EF		4.50	289	TRIAL RECLOSURE MADE & STAY
	6-8-02	0705	1001	02:56	EF		4.25	6857	BROKEN XARMS REPLACED AT ALA
	9-8-02	1930	1940	00:10	EF		4.17	382	TRIAL RECLOSURE MADE & STAY
	17-8-02	0630	1000	03:30	OC/EF		4.17	8022	FAULT AMENDED AT "A" DIVISION
	22-8-02	1833	1905	03:32	OC/EF		4.50	8745	FAULT AMENDED
	023-8-02	1223	1228	00:05	-		4.00	183	TX POWER FAILURE
	26-8-02	2140	2145	08:00	OC		4.67	214	TRIAL RECLOSURE MADE & STAY
	26-8-02	0020	0820	08:00	OC/EF	R,Y	4.67	20,548	BROKEN XARMS CHANGED AT OLD GARAGE
	26-8-02	1442	1448	00:06	EF	Y	3.67	202	TRIAL RECLOSURE MADE & STAY
	26-8-02	1504	1745	02:41	EF	Y	3.67	5416	FAULT AMENDED
	26-8-02	1749	1817	00:28	EF	Y	4.00	1027	TRIAL RECLOSURE MADE & STAY
	27-8-02	1820	1850	00:30	-	-	3.83	1053	TX POWER FAILURE
	27-8-02	2108	2112	00:04	OC/EF	B,Y	4.42	162	TRIAL RECLOSURE MADE & STAY
	27-8-02	0600	0604	00:04	OC/EF	B,Y	3.83	140	TRIAL RECLOSURE MADE & STAY
	27-8-02	0625	0643	00:18	OC/EF	B,Y	4.17	688	TWO S/S OPENED

	28-8-02	0630	0640	00:10	OC/EF	B,Y	4.33	397	TRIAL RECLOSURE MADE & STAY
	29-8-02	0655	0701	00:06	OC/EF	B,Y	4.00	220	TRIAL RECLOSURE MADE & STAY
	29-8-02	0720	0825	01:05	OC/EF	B,Y	3.92	2336	TRIAL RECLOSURE MADE & STAY
	30-8-02	1967	1911	00:04	OC	R	3.25	119	TRIAL RECLOSURE MADE & STAY
	31-8-02	1707	1840	01:33	EF	Y	3.33	2839	ELEMULETU S/S OPENED
	31-8-02	1848	1855	00:07	-	-	3.50	1925	TX POWER FAILURE:
				25:50	**OC-12, EF-16**		**89.43**	**62,147**	
	4-9-02	1006	1008	00:02	-	-	3.00	55	TX POWER FAILURE
	4-9-02	1500	1003	00:03	-	-	3.17	87	TX POWER FAILURE
	6-9-02	1625	1635	00:10	-	-	3.17	291	TX POWER FAILURE
	6-9-02	0605	0610	00:05	-	-	2.17	99	TX POWER FAILURE
	8-9-02	1845	1907	00:22	-	-	3.83	772	TX POWER FAILURE
	12-9-02	1643	1642	00:04	-	-	4.00	147	TX POWER FAILURE
	13-9-02	0634	0638	00:04	EF	Y	4.42	162	TRIAL RECLOSURE MADE & STAY
	14-9-02	1916	1953	00:37	OC	B	5.50	1865	TRIAL RECLOSURE MADE & STAY
	15-9-02	1538	1953	01:05	-	-	4.00	2383	TX POWER FAILURE:
SEPT	16-9-02	1848	1643	00:07	-	-	3.83	246	TX POWER FAILURE
	17-9-02	0341	1855	00:46	OC	R	3.35	1370	TRIAL RECLOSURE MADE & STAY
	21-9-02	0845	0427	00:05	-	-	3.00	138	TX POWER FAILURE
	21-9-02	1740	0850	00:45	EF	Y	3.58	3446	WIRE CUT AMENDED @ "A" DIVISION
	22-9-02	1900	1925	00:25	OC	R,B	3.83	878	TRIAL RECLOSURE MADE & STAY
	27-9-02	2021	0700	00:05	EF	Y	4.58	210	TRIAL RECLOSURE MADE & STAY
	27-9-02	0445	2026	00:05	EF	Y	3.00	138	TRIAL RECLOSURE MADE & STAY
	28-9-02	1910	0450	00:07	-	-	3.17	203	TX POWER FAILURE:
	29-9-02	1650	1730	00:40	EF	Y	3.83	1404	TRIAL RECLOSURE MADE & STAY
	29-9-02	0537	0540	00:03	EF	Y	3.00	83	TRIAL RECLOSURE MADE & STAY
				06:40	**OC-3, EF-6**		**68.33**	**13,977**	
OCT	1-10-02	1934	1937	00:03	EF	Y	3.50	96	TRIAL RECLOSURE MADE & STAY
	1-10-02	0528	0720	00:52	EF	Y	3.67	3768	JUMPER CUT AMENDED
	3-10-02	1017	1020	01:03	EF	Y	3.92	108	TRIAL RECLOSURE MADE AND STAY
	3-10-02	1813	1820	00:07	EF	Y	3.33	214	JUMPER CUT AMENDED
	4-10-02	0141	2306	00:25	-	-	3.00	2338	TRIAL RECLOSURE MADE & STAY
	4-10-02	0705	0727	01:22	-	-	3.17	639	TX POWER FAILURE
	5-10-02	1924	1929	00:05	-	-	4.33	198	TX POWER FAILURE:
	7-10-02	1844	1854	00:10	EF	Y	5.00	458	TRIAL RECLOSURE MADE & STAY
	10-10-02	0600	0615	00:15	OC	B	4.50	619	TRIAL RECLOSURE MADE & STAY
	10-10-02	0949	1003	00:14	OC	B	4.00	513	TX POWER FAILURE:
	14-10-02	2044	2043	00:02	OC/EF	B,Y	4.92	90	NEPA S/S OPENED
	15-10-02	0624	0634	00:10	EF	Y	5.00	458	TRIAL RECLOSURE MADE & STAY
	16-10-02	0903	0917	00:14	EF	Y	4.08	524	TRIAL RECLOSURE MADE & STAY

	17-10-02	1250	1255	00:05	EF	Y	3.67	168	TRIAL RECLOSURE MADE & STAY
	18-10-02	1644	1740	00:54	OC	R,B	4.08	2020	TRIAL RECLOSURE MADE & STAY
	20-10-02	2000	2005	00:05	EF	Y	4.00	183	TRIAL RECLOSURE MADE & STAY
	21-10-02	1114	1145	00:31	EF	Y	3.75	1066	TRIAL RECLOSURE MADE & STAY
	22-10-02	1929	1934	00:05	OC/EF	B,Y	4.75	218	TRIAL RECLOSURE MADE & STAY
	24-10-02	1639	1739	01:00	EF	Y	3.58	1969	TRIAL RECLOSURE MADE & STAY
	25-10-02	1415	1534	01:20	OC	B	4.75	3483	NEPA S/S OPENED
	27-10-02	1652	1704	00:12	-	-	4.00	440	TX POWER FAILURE:
	29-10-02	1835	1900	00:25	-	-	4.00	917	TX POWER FAILURE:
				09:39	**OC-6,EF-12**		**90.00**	**20,487**	
NOV.	5-11-02	1726	1747	00:21	-	-	3.75	721	TX POWER FAILURE:
	7-11-02	0556	6000	00:04	-	-	4.00	147	TX POWER FAILURE:
	8-11-02	1004	1015	00:11	OC	R,B	4.08	411	TRIAL RECLOSURE MADE & STAY
	12-11-02	1310	1434	01:24	EF	Y	3.33	2564	"A" DIVISION ISOLATED
	13-11-02	0613	0818	02:05	EF	Y	4.67	5351	HT RESTING ON LT SEPARATED
	14-11-02	0604	0613	00:09	OC	R,B	5.17	427	FAULT AMENDED
	15-11-02	1012	1318	03:06	EF	Y	3.83	6530	BROKEN XARMS CHANGED AT OLUWATUYI
	15-11-02	1942	1952	00:10	OC	B	4.25	390	TRIAL RECLOSURE MADE & STAY
	17-11-02	1300	1319	00:19	-	-	4.00	697	TX POWER FAILURE
	30-11-02	1346	1345	00:08	-	-	3.83	281	TX POWER FAILURE:
				07:57	**OC-3, EF-3**		**40.91**	**17,519**	
DEC	21-12-02	1951	2139	01:48	OC/EF	R,Y	4.25	4208	FAULT AMENDED
	31-12-02	1744	1751	00:07	-	-	3.00	193	TX POWER FAILURE:
				01:55	**OC-1, EF-1**		**7.25**	**4,401**	

APPENDIX III: FAULTS LOG ENTRY ON 11KV NETWORK (JAN. 1998 – DEC. 2002)
FEEDER 3

MONTH	DATE OF FAULT	TIME OF FAULT	TIME RESTORED	DURATION OF FAULT HR: MIN.	NATURE OF FAULT	PHASE AFFECTED	LOAD LOSS (MW)	REV. LOSS (₦)	REMARK
FEB	3-2-98	1415	1520	04:05	EF	Y	1.60	3593	BAMBOO TREE CUT DOWN
	10-2-98	1759	2120	03:22	EF	Y	3.20	5555	FAULTY S/S ISOLATED
				07:27	**0C-0,EF –2**		**4.60**	**9,148**	
MAR.	1-3-98	2110	1445	17:35	EF	Y	1.70	16,440	BROKEN XARMS CHANGED
	2-3 -98	2021	2058	00:37	EF	Y	1.60	543	FAULTY AREA ISOLATED
	11-3 -98	1715	0955	16:40	OC	B	1.70	15,583	FAULTY AREA ISOLATED
	30-3 -98	1050	1105	00:15	EF	Y	1.70	234	TRIAL RECLOSURE MADE & STAY
				35:07	**OC-1,EF-3**		**6.70**	**32,800**	
APRIL	2-4-98	2026	1045	14:19	EF	Y	1.58	12,441	HT WIRE CUT AMENDED
	3-4-98	1100	1555	04:55	OC	B	2.00	5,408	BROKEN XARMS CHANGED
	9-4-98	1728	1845	01:17	EF	Y	1.58	1,115	FUTA & SHAGARI LEG ISOLATED
	22-4-98	2340	2353	00:13	OC	B	1.67	199	TRIAL RECLOSURE MADE & STAY
	24-4-98	0525	0540	00:15	EF	Y	2.25	309	TRIAL RECLOSURE MADE & STAY
				20:59	**OC-2, EF –3**		**9.08**	**19,472**	
MAY	1-5-98	0642	0652	00:10	EF	Y	2.25	206	TRIAL RECLOSURE MADE & STAY
	10-5-98	0928	1715	07:47	EF	Y	2.00	8,562	TREE CUT DOWN
	16-5-98	0900	0910	00:10	OC	Y	1.67	153	TRIAL RECLOSURE MADE & STAY
	17-5-98	1449	1710	08:21	EF	Y	1.00	4,593	FUTA LEG ISOLATED
				16:28	**OC-1,EF-3**		**6.92**	**13,514**	
JULY	24-7-98	1550	1916	05:26	EF	Y	1.80	5379	BROKEN XARMS CHANGED
				05: 26	**0C-0, EF-1**		**1.80**	**5379**	
AUG.	30-8-98	1647	1900	02:13	EF	Y	1.80	2194	SHAGARI LEG ISOLATED
	31-8-98	0436	1350	09:14	EF	Y	1.60	8125	SHAGARI LEG ISOLATED
				11:27	**OC-O, EF-2**		**3.40**	**10,319**	
SEPT.	10-9-98	1142	1235	00:53	EF	Y	1.60	777	TRIAL RECLOSURE MADE & STAY
	13-9-98	1414	1430	00:16	EF	Y	1.50	220	TRIAL RECLOSURE MADE & STAY
		1505	1710	02:05	EF	Y	1.80	2063	FUTA & SHAGARI LEGS ISOLATED
	15-9-98	1709	1814	01:05	EF	Y	1.90	1132	TRIAL RECLOSURE MADE & STAY
	15-9-98	2213	2240	00:27	EF	Y	1.70	421	TRIAL RECLOSURE MADE & STAY
				04:46	**OC-0,EF-5**		**8.50**	**4,613**	
OCT.	2-10-98	0309	0322	00:13	OC	R	1.10	131	TRIAL RECLOSURE MADE & STAY
	3-10-98	2255	2354	00:59	OC	B	1.30	703	TRIAL RECLOSURE MADE & STAY

	10-10-98	1812	1855	00:43	EF	Y	1.50	951	TRIAL RECLOSURE MADE & STAY
	12-10-98	1430	1834	04:04	EF	Y	1.60	3,579	JUMPER OPEN AT FUTA
	15-10-98	0080	0610	05:52	EF	Y	1.30	4,195	JUMPER CUT AMENDED
	17-10-98	1332	1725	03:53	EF	Y	1.50	3,203	WIRE CUT AMENDED
	18-10-98	0916	1255	03:39	EF	Y	1.80	3614	JUMPER CUT AMENDED
	21-10-98	1459	1452	00:43	EF	Y	1.60	631	TRIAL RECLOSURE MADE & STAY
	24-10-98	1142	1325	01:43	EY	Y	1.50	1,416	BAMBOO TREE CLEARED
				21:49	**OC-2,EY-7**		**13.20**	**18,423**	
NOV	9-11-98	1306	1442	01:36	EF	Y	2.00	1760	AWULE LEG OPENED
	13-11-98	1130	1440	03:18	EF	Y	1.67	2,909	LINE CUT AMENDED
	27-11-98	1755	1818	00:23	OC	B	1.58	333	FUTA LEG ISOLATED
	28-11-98	1538	1755	01:17	EF	Y	2.00	1412	CUT LINE AMENDED
				06:34	**OC-1.EF-3**		**7.25**	**6.414**	
DEC	22-12-98	1913	1125	16:12	OC	B	1.83	16,305	CUT LINE AMENDED
	27-12-98	1903	0010	05:07	EF	Y	1.42	3,996	CUT LINE AMENDED
				21:19	**OC-1.EF-1**		**3.25**	**20.301**	
JAN.	15-1-99	1343	1740	03:57	OC	B	1.50	3.259	TRIAL RECLOSURE MADE & STAY
	20-1-99	1750	1825	00:35	EF	Y	2.00	642	TRIAL RECLOSURE MADE & STAY
				04:32	**OC-1. EF-1**		**3.50**	**3,901**	
FEB	6-2-99	2115	2225	01:12	EF	Y	1.80	1155	TRIAL RECLOSURE MADE & STAY
	8-2-99	1118	1700	05:42	EF	Y	2.40	7524	FAULTY CROSSARMS CHANGED
				06:52	**OC-0,EF-2**		**4.20**	**8.679**	
MAR.	19-3-99	1135	1435	03:00	EF	Y	3.80	6270	CUT LINE AMENDED
	28-3-99	1801	1915	01:05	OC	R	4.80	2860	TRIAL RECLOSURE MADE & STAY
				04:05	**OC-1,EF-1**		**8.60**	**9,130**	
APR.	01-4-99	1633	1835	02:00	OC	B	3.80	4180	TRIAL RECLOSURE MADE & STAY
	03-4-99	1821	1854	00.33	OC	B	1.40	424	TRIAL RECLOSURE MADE & STAY
	24-4-99	1030	1133	01:03	OC	R	2.00	1,155	TRIAL RECLOSURE MADE & STAY
	28-4-99	1746	1800	00.14	OC	R,B	2.00	257	TRIAL RECLOSURE MADE & STAY
				03:50	**OC-4,EF-0**		**9.20**	**6,016**	
MAY	1-5 -99	0553	0619	00.26	EF	Y	2.25	536	TRIAL RECLOSURE MADE & STAY
	6-5 – 99	0639	1131	04:52	OC	R	2.25	6023	LINE CUT AMENDED
	14-5-99	1108	1520	04:12	EF	Y	1.50	3465	SHAGARI LEG ISOLATED
	29-5 -99	0030	0124	00:54	OC	R	2.00	990	TRIAL RECLOSURE MADE & STAY
	31-5 –99	1555	1629	00:34	OC	B	3.83	1194	TRIAL RECLOSURE MADE & STAY
				10:58	**OC-3. EF-2**		**11.83**	**12.208**	
JUNE	3-6-99	0258	1329	10:36	EF	Y	2.40	13.882	LINE CUT AMENDED
	9 -6-99	0640	1310	06:30	EF	Y	2.50	8,938	TRIAL RECLOSURE MADE & STAY
	13-6-99	825	1835	00:10	EF	Y	1.90	174	TRIAL RECLOSURE MADE & STAY

	14-6-99	1530	0750	16:20	EF	Y	2.80	25,153	BROKEN ISOLATOR CHANGED
	30 -6-99	1020	1110	00:50	OC	B	2.40	1100	TRIAL RECLOSURE MADE & STAY
				34:21	**OC-1,EF-4**		**12.00**	**49,247**	
JULY	9-7-99	1340	1345	00:05	EF	Y	2.80	128	TRIAL RECLOSURE MADE & STAY
				00:05	**OC-0,EF-1**		**2.80**	**128**	
AUG.	11-8-99	1750	1800	00:10	OC	B	3.80	348	TRIAL RECLOSURE MADE & STAY
	17-8-99	0905	1654	07:49	EF	Y	3.70	15,907	BROKEN CROSSARMS CHANGED
	22-8-99	2325	0771	07:52	EF	Y	3.60	15,57	SHAGARI S/S ISOLATED
				15:51	**OC-1,EF-2**		**11.10**	**31,831**	
SEPT.	2-9-99	1935	2000	00:25	EF	Y	3.80	870	TRIAL RECLOSURE MADE & STAY
				00:36	EF	Y	2.50	825	FUTA S/S ISOLATED
				00:04	EF	Y	3.60	132	TRIAL RECLOSURE MADE & STAY
				02:12	EF	Y	3.70	4,477	SHAGARI S/S ISOLATED
				02:02	EF	Y	3.50	3,914	FUTA S/S ISOLATED
				05:19	**OC-0, EF-5**		**17.1**	**10,218**	
NOV.	4-11-99	1155	2079	08:24	EF	Y	2.10	9,702	LINE CUT AMENDED
	6-11-99	0117	1235	04:48	OC	R	2.00	5,280	UPRISER CABLE AMENDED
	9-11-99	1902	2049	01:47	EF	Y	2.30	2260	JUMPER CUT AMENDED
	13-11-99	1816	2007	01:51	EF	Y	2.10	2137	TRIAL RECLOSURE MADE & STAY
				16:50	**OC-1,EF-3**		**8.50**	**19,379**	
JAN.	8-01-00	1840	1915	00:35	OC	B	1.50	481	TRIAL RECLOSURE MADE & STAY
	27-01-00	1805	1855	00:50	EF	Y	1.25	573	TRIAL RECLOSURE MADE & STAY
				01:25	**OC-1, EF-1**		**2.75**	**1054**	
MARCH	4-3-00	1944	1949	OO:05	OC	B	3.50	160	TRIAL RECLOSURE MADE & STAY
	8-3-00	1539	1555	00:16	OC	B	4.20	587	TRIAL RECLOSURE MADE & STAY
	31-3-00	1753	1805	00:12	EF	Y	2.00	220	TRIAL RECLOSURE MADE & STAY
				00:03	**OC-2,EF-1**		**9.70**	**967**	
APRIL	1-4-00	2238	1054	12:16	OC/EF	R,Y,B	1.60	10,795	BAMBOO TREES REMOVED FROM THE LINE
	4-4-00	1345	1625	02:40	OC	B	2.50	3667	TRIAL RECLOSURE MADE & STAY
	4-4-00	1815	1925	01:10	OC	B	4.00	2567	WIRE CUT AMENDED
	5-4-00	1925	1310	17:45	EF	Y	2.30	22454	BROKEN XARMS CHANGED
	12--4-00	1907	1920	00:13	OC	R	2.80	334	TRIAL RECLOSURE MADE & STAY
	13-4-00	2115	2121	00:06	OC	B	2.10	126	TRIAL RECLOSURE MADE & STAY
				34:10	**OC – 5, EF-2**		**15.30**	**39,943**	
MAY	5-5-00	0424	0434	00:11	OC	R	2.30	232	TRIAL RECLOSURE MADE & STAY
	5-5-00	0530	0634	01:04	OC	B	2.30	1349	TRIAL RECLOSURE MADE & STAY
	9-5-00	2105	2115	00:10	OC	B	4.50	413	TRIAL RECLOSURE MADE & STAY
	13-5-00	1552	1730	04:32	EF	Y	2.60	2193	TRIAL RECLOSURE MADE & STAY

	15-5-00	1112	1915	08:03	EF	Y	3.50	15496	BROKEN XARMS CHANGED
	16-5-00	0419	0510	00:01	EF	Y	3.50	1636	TRIAL RECLOSURE MADE & STAY
	17-5-00	0419	0510	00:01	EF	Y	1.30	608	TRIAL RECLOSURE MADE & STAY
				12:42	**OC-3,EF-4**		**20.00**	**21.927**	
JUNE	6-6-00	0033	0600	05:27	EF	Y	1.50	4496	CUTTING OF TREES ALONG HT LINES
	6-6-00	2252	2313	00:21	EF	Y	3.50	674	TRIAL RECLOSURE MADE & STAY
	7-6-00	1525	1538	00:13	OC	B	4.17	497	TRIAL RECLOSURE MADE & STAY
	9-6-00	0945	1047	01:02	OC	B	4.20	2387	TRIAL RECLOSURE MADE & STAY
	10-6-00	0707	0715	00:08	EF	Y	1.60	117	TRIAL RECLOSURE MADE & STAY
	11-6-00	0617	0645	00:28	EF	R	3.50	898	TRIAL RECLOSURE MADE & STAY
	12-6-00	1555	1606	00:11	EF	Y	4.00	403	TRIAL RECLOSURE MADE & STAY
	16-6-00	0902	1120	02:18	EF	Y	4.00	5060	FAULT AMENDED
	17- 6-00	1505	1610	01:05	EF	Y	3.00	1788	FUTA S/S OPENED
	23-6-00	1455	1645	01:50	EF	Y	2.50	2528	FUTA S/S OPENED
	27-6-00	1938	1030	14:52	EF	Y	3.33	27228	BROKEN POLES REPLACED
	28-6-00	1805	2155	03:50	EF	Y	4.83	10183	LEAKING INSULATOR CHANGED
	29-6-00	0724	0930	02:06	OC	Y	2.50	2888	LEAKING INSULATOR CHANGED
	30-6-00	1011	1327	03:16	OC	Y	4.00	7187	LEAKING INSULATOR CHANGED
	31-6-00	0750	1320	05:30	EF	Y	1.25	3781	LEAKING INSULATOR CHANGED
				42:37	**OC-5, EF-10**		**47.88**	**70,115**	
JULY	2-7-00	1205	1232	00:27	EF	Y	5.50	1361	TRIAL RECLOSURE MADE & STAY
	2-7-00	1857	1908	00:11	OC	B	1.50	151	TRIAL RECLOSURE MADE & STAY
	4-7-00	0823	0913	00:45	OC	B	1.50	619	TRIAL RECLOSURE MADE & STAY
	4-7-00	1735	0746	14:11	OC	B	2.50	11701	FAULT CLEARED
	8-7-00	1328	1418	00:50	EF	Y	2.00	917	TRIAL RECLOSURE MADE & STAY
	9-7-00	1623	1720	00:57	EF	Y	2.50	1306	TRIAL RECLOSURE MADE & STAY
	12-7-00	1935	2028	00:53	EF	Y	2.00	972	TRIAL RECLOSURE MADE & STAY
	14-7-00	1525	1548	00:23	EF	Y	1.70	358	TRIAL RECLOSURE MADE & STAY
	14-7-00	1821	1935	01:14	EF	Y	1.50	1018	FUTA S/S OPENED
	15-7-00	1320	1648	03:28	EF	Y	2.00	3813	DANDARE AND FUTA LEGS OPENED
	19-7-00	0750	0807	00:17	OC	R	2.00	312	TRIAL RECLOSURE MADE & STAY
	22-7-00	1340	1401	00:21	OC	R	1.50	289	TRIAL RECLOSURE MADE & STAY
	24-7-00	1430	1546	01:16	EF	Y	1.00	697	FAULT CLEARED
			0926	01:31	EF	Y	2.50	2085	FAULT CLEARED
			1343	08:03	EF	Y	3.50	15491	SHAGARI VILLAGE OPENED
				33:47	**OC-5, EF-10**		**33:20**	**41.090**	
AUGUST	1-8-00	1617	2137	05:20	EF	Y	2.50	7333	CUT WIRE AMENDED
	2-8-00	1805	2022	02:17	EF	Y	1.50	1884	FAULT CLEARED

	4-8-00	1849	1328	19:39	EF	Y	2.00	21615	DAMAGED POLES & XARMS CHANGED ALONG FUTA ROAD
	7-8-00	1820	1855	00:35	EF	Y	1.50	481	TRIAL RECLOSURE MADE & STAY
	11-8-00	2153	2245	00:52	EF	Y	3.50	1668	TRIAL RECLOSURE MADE & STAY
	12-8-00	1946	2146	02:00	EF	Y	1.50	1636	FAULT CLEARED ALONG DANDARE
	15-8-00	1325	1445	01:20	EF	Y	2.00	1467	WIRE CUT AMENDED
	20-8-00	0753	0945	01:55	EF	Y	1.50	1581	HEAVY RAINFALL
	21-8-00	0300	0712	04:12	EF	Y	1.00	2310	FAULT CLEARED AT FUTA S/S
	28-8-00	1742	1932	01:50	EF	Y	3.50	3529	FAULTY LINE CLEARED
				40:00	**OC-0, EF-10**		**20.50**	**43,504**	
SEPT.	1-9-00	1150	1448	02:58	EF	Y	1.50	2448	FUTA LEG OPENED
	2-9-00	1224	1315	00:51	EF	Y	2.67	1248	TRIAL RECLOSURE MADE & STAY
	5-9-00	1913	1944	00:31	OC	B	4.33	1230	TRIAL RECLOSURE MADE & STAY
	8-9-00	1540	1650	01:10	EF	Y	4.00	2567	UPRISER CUT AMENDED
	12-9-00	1750	1837	00:47	EF	Y	4.50	1939	TRIAL RECLOSURE MADE & STAY
	15-9-00	1709	1840	01:31	OC	B	4.30	3587	FAULT CLEARED
	25-9-00	1713	1855	00:42	EF	Y	3.20	1232	TRIAL RECLOSURE MADE & STAY
				08:30	**OC –2, EF-5**		**24.50**	**14251**	
OCT.	3-10-00	2258	0005	01:07	EF	Y	2.83	1738	TRIAL RECLOSURE MADE & STAY
	16-10-00	1725	1850	01:25	EF	Y	3.33	2595	TRIAL RECLOSURE MADE & STAY
	27-10-00	1520	1610	00:05	EF	Y	4.50	2063	TRIAL RECLOSURE MADE & STAY
	30-10-00	1652	1900	02:08	EF	Y	4.67	5479	FAULT CLEARED
				05:30	**OC-0,EF-4**		**15.33**	**11.875**	
NOV.	1-11-00	1827	1850	00:23	EF	Y	4.50	949	TRIAL RECLOSURE MADE & STAY
	7-11-00	1920	1935	00:15	EF	Y	4.50	619	TRIAL RECLOSURE MADE & STAY
	8-11-00	2020	2050	00:30	EF	Y	4.00	1100	TRIAL RECLOSURE MADE & STAY
	11-11-00	1410	1436	00:26	EF	Y	3.50	834	TRIAL RECLOSURE MADE & STAY
	13-11-00	0936	1000	00:24	EF	Y	3.50	770	TRIAL RECLOSURE MADE & STAY
	17-11-00	0923	1018	00:55	EF	Y	4.50	2269	TRIAL RECLOSURE MADE & STAY
	28-11-00	1841	1909	00:28	EF	Y	2.70	693	TRIAL RECLOSURE MADE & STAY
	30-11-00	1135	1149	00:14	OC	R	3.00	385	TRIAL RECLOSURE MADE & STAY
				03:35	**OC-1, EF-7**		**30.20**	**7613**	
DEC.	2-12-00	1235	1435	02:00	EF	Y	5.50	6050	TRIAL RECLOSURE MADE & STAY
	7-12-00	1245	1300	00:15	EF	Y	4.33	595	TRIAL RECLOSURE MADE & STAY
	10-12-00	1304	1330	00:26	EF	Y	1.00	238	TRIAL RECLOSURE MADE & STAY
	11-12-00	1218	1233	00:15	EF	Y	2.83	389	TRIAL RECLOSURE MADE & STAY
	23-12-00	1901	1936	00:35	EF	Y	5.17	1659	TRIAL RECLOSURE MADE & STAY
	29-12-00	0113	0541	04:28	EF	Y	4.50	11055	FAULT AMENDED
				07:59	**OC-1, EF-5**		**23.33**	**19986**	

JAN.	12-1-01	0601	0604	00:03	OC	R	2.67	73	TRIAL RECLOSURE MADE & STAY
	15-1-01	0604	0609	00:06	OC	B	3.75	172	TRIAL RECLOSURE MADE & STAY
	23-1-01	0617	0805	00:48	OC	B	4.25	4208	TRIAL RECLOSURE MADE & STAY
				01:56	**OC-3,EF-0**		**10.67**	**4,453**	
FEB.	5-2-01	0645	1205	05:20	OC	R,B	4.42	12,965	FAULT AMENDED
	28-2-01	0545	0825	02:40	OC/EF	B,Y	4.58	6,717	UPRISER CUT AMENDED
				08:00	**OC-2, EF-2**		**9.00**	**19682**	
MARCH	2-3-01	1623	1627	00:04	EF	Y	2.83	104	TRIAL RECLOSURE MADE & STAY
	15-3-01	1738	1750	00:12	EF	Y	2.00	220	TRIAL RECLOSURE MADE & STAY
	15-3-01	1755	1958	02:03	EF	Y	3.00	3383	TRIAL RECLOSURE MADE & STAY
	21-3-01	1632	1810	12:38	EF	Y	4.00	29,993	SEPARATION OF HT FROM LT LINES AT FUTA RD
	22-3-01	1820	2010	01:50	EF	Y	2.50	2520	FAULT AMENDED
	22-3-01	0635	1422	31:47	EF	Y	3.33	58,211	FUTA LEG ISOLATED
	26-3-01	1320	1331	00:11	OC	Y	2.67	269	TRIAL RECLOSURE MADE & STAY
	26-3-01	1441	2025	29:44	OC/EF	R,Y	2.67	43,663	FUTA & SHAGARI LEGS ISOLATED
				79:29	**OC-2, EF-7**		**23.00**	**138,363**	
APRIL	4-4-01	2001	1113	15:12	EF	Y	4.00	33,440	FAULT AMENDED
	10-4-01	0842	0852	00:10	EF	Y	3.50	321	TRIAL RECLOSURE MADE & STAY
	18-4-01	0839	1010	01:31	EF	Y	3.00	2503	FAULT AMENDED
	30-4-01	0924	0932	00:08	EF	Y	2.50	183	TRIAL RECLOSURE MADE & STAY
	30-4-01	1758	1523	21:25	EF	Y	2.83	33,335	FAULT AMENDED
				38:26	**OC-0, EF-5**		**15.83**	**69,782**	
MAY	2-5-01	1921	2117	01:56	EF	Y	2.83	3,009	TRIAL RECLOSURE MADE & STAY
	2-5-01	2128	1220	14:52	EF	Y	2.75	22,486	LINE CUT AMENDED ALONG FUTA ROAD
	3-5-01	2210	2616	04:06	EF	Y	2.92	6,585	FAULT AMENDED
	6-5-01	1621	2156	05:35	EF	Y	2.00	6,142	DANDARE & FUTA LEGS OPENED
	10-5-01	1623	1156	19:33	EF	Y	2.67	28,709	TREES TOUCHING 11KV LINES WERE REMOVED AT FUTA
	11-5-01	2041	2046	00:05	EF	Y	2.83	130	TRIAL RECLOSURE MADE & STAY
	13-5-01	1125	1835	07:10	EF	Y	2.83	11,155	FAULT AMENDED
	16-5-01	1203	1210	00:07	EF	Y	2.83	182	TRIAL RECLOSURE MADE & STAY
	16-5-01	1414	1423	00:09	EF	Y	2.83	227	TRIAL RECLOSURE MADE & STAY
	16-5-01	0112	0218	01:06	EF	Y	2.75	1615	TRIAL RECLOSURE MADE & STAY
	18-5-01	0656	1556	33:00	EF	Y	2.67	42290	FUTA & SHAGARI VILLAGE ISOLATED
	19-5-01	1749	1832	00:43	EF	Y	2.33	855	FAULT AMENDED
	29-5-01	1440	1811	03:31	EF	Y	2.17	5164	FAULT AMENDED
	31-5-01	1236	1236	00:10	EF	Y	2.67	199	TRIAL RECLOSURE MADE & STAY

				92:03	**OC-0, EF-14**		**36.42**	**128,748**	
JUNE	1-6-01	1815	1247	18:32	EF	Y	3.83	39,040	WOODEN XARMS CHANGED AT ORITA-OBELE/COCOA HOUSE
	2-6-01	1133	1345	02:12	EF	Y	2.00	2420	TRIAL RECLOSURE MADE & STAY
	3-6-01	1002	1641	06:39	EF	Y	2.00	7315	FUTA LEG OPENED
	8-6-01	2150	2157	00:07	EF	Y	3.83	246	TRIAL RECLOSURE MADE & STAY
	9-6-01	1057	1109	00:12	EF	Y	2.33	256	TRIAL RECLOSURE MADE & STAY
	9-6-01	1712	1725	00:13	EF	Y	2.00	238	TRIAL RECLOSURE MADE & STAY
	9-6-01	1850	1857	00:07	EF	Y	2.17	139	TRIAL RECLOSURE MADE & STAY
	10-6-01	1335	1345	00:10	EF	Y	3.33	305	TRIAL RECLOSURE MADE & STAY
	23-6-01	1601	1612	00:11	EF	Y	2.33	235	TRIAL RECLOSURE MADE & STAY
	23-6-01	2130	0939	12:09	0C/EF	R,Y	1.67	11,160	FUTA LEG ISOLATED
				40:32	**OC-1, EF-10**		**25.49**	**61,354**	
JULY	1-7-01	1918	1923	00:05	EF	Y	2.83	1130	TRIAL RECLOSURE MADE & STAY
	1-7-01	2157	0035	02:33	EF	Y	2.83	3268	TRIAL RECLOSURE MADE & STAY
	2-7-01	1621	2110	04:49	EF	Y	2.83	7497	FAULT AMENDED
	5-7-01	2315	2340	00:25	EF	Y	2.92	669	TRIAL RECLOSURE MADE & STAY
	7-7-01	1520	1530	00:10	EF	Y	2.50	229	TRIAL RECLOSURE MADE & STAY
	9-7-01	1155	1510	03:15	EF	Y	2.33	4165	SNAKE THAT BRIDGED LINES REMOVED @ DANDARE
	9-7-01	1655	1710	00:15	EF	Y	2.67	367	TRIAL RECLOSURE MADE & STAY
	9-7-01	1930	2140	02:10	EF	Y	2.67	3182	FUTA LEG OPENED
	117-01	1255	1738	04:43	EF	Y	2.83	7341	BIRD THAT BRIDGED LINES REMOVED @ DANDARE
	27-7-01	2149	0649	09:00	EF	Y	3.33	16484	T R M & S AFTER HEAVY RAINFALL
	30-7-01	1635	1640	00:05	EF	Y	2.67	122	TRIAL RECLOSURE MADE & STAY
	30-7-01	2045	2047	00:02	EF	Y	2.67	49	TRIAL RECLOSURE MADE & STAY
				27:32	**OC-0,EF-12**		**32.58**	**43,503**	
SEPT.	7-9-01	0943	1125	01:42	EF	Y	4.33	4049	FAULT AT OKUTA ELERINLA/ILESHA GARAGE S/S CLEARED
	9-901	1704	1709	00:05	EF	Y	2.17	99	TRIAL RECLOSURE MADE & STAY
	13-9-01	0835	0837	00:02	EF	Y	2.75	50	TRIAL RECLOSURE MADE & STAY
	13-9-01	1120	1125	00:05	EF	Y	2.75	126	FAULT AMENDED ALONG ONDO RD.
	13-9-01	1158	1905	07:07	EF	Y	2.75	10,764	TRIAL RECLOSURE MADE & STAY
	13-9-01	0425	0440	00:15	EF	Y	1.83	252	TRIAL RECLOSURE MADE & STAY
	14-9-01	1204	1228	00:24	EF	Y	2.00	440	TRIAL RECLOSURE MADE & STAY
	14-9-01	1458	1514	00:16	EF	Y	2.00	293	FUTA LEG OPENED
	14-9-01	1655	1802	01:07	EF	Y	2.00	1228	FUTA LEG OPENED
	15-9-01	1427	1500	00:33	EF	Y	1.75	529	FUTA LEG OPENED
	17-9-01	1614	1722	01:08	EF	Y	2.67	1664	TRIAL RECLOSURE MADE & STAY

	17-9-01	2033	2057	00:24	EF	Y	3.00	660	FUTA S/S OPENED
	17-9-01	2204	0758	09:54	EF	Y	2.33	12,687	FUTA S/S OPENED
	20-9-01	1754	1934	01:40	EF	Y	2.83	2594	FUTA S/S OPENED
				24:42	**OC-0, EF-14**		**35.16**	**35,435**	
OCT.	3/-10-01	0315	1437	11:22	EF	Y	2.17	13,566	CUT LINES AMENDED ALONG FUTA ROAD.
	11-10-01	1150	1155	00:05	EF	Y	2.92	134	TRIAL RECLOSURE MADE & STAY
	15-10-01	1630	1659	00:20	EF	Y	2.83	519	TRIAL RECLOSURE MADE & STAY
	23-10-01	1109	2312	12:03	EF	Y	3.00	19,883	FAULT AMENDED
	27-10-01	1659	1859	02:00	EF	Y	2.58	2,838	FUTA LEG OPENED
				25:50	**OC-0, EF-5**		**13.50**	**36,940**	
	1-11-01	2138	2145	00:07	-	-	2.92	187	TX POWER FAILURE
	7-11-01	1240	1324	00:44	EF	Y	2.50	1008	TRIAL RECLOSURE MADE & STAY
	7-11-01	2233	2301	00:28	-	-	2.58	662	TX POWER FAILURE
	8-11-01	1211	1239	00:28	-	-	2.17	557	TX POWER FAILURE:
	9-11-01	2344	2352	00:08	-	-	3.00	220	TX POWER FAILURE:
	11-11-01	1813	1434	20:21	EF	Y	2.67	29,884	WIRE CUT AMENDED
	12-11-01	1730	1813	00:43	EF	Y	1.83	722	TRIAL RECLOSURE MADE & STAY
	14-11-01	1240	1347	01:07	EF	Y	1.83	1124	BROKEN XARMS CHANGED
NOV.	15-11-01	0857	0903	00:06	EF	Y	2.42	133	TRIAL RECLOSURE MADE & STAY
	15-11-01	0920	0950	00:30	EF	Y	2.42	666	TRIAL RECLOSURE MADE & STAY
	16-11-01	1219	1227	00:08	EF	Y	2.67	196	Y-∅ RESTING ON THE CHANNEL IRON REMOVED
	18-11-01	0553	0558	00:05	OC	B	4.50	206	TRIAL RECLOSURE MADE & STAY
	21-11-01	1459	1514	00:15	-	-	2.67	367	TX POWER FAILURE
	24-11-01	1904	1917	00:13	OC	R	4.50	536	TRIAL RECLOSURE MADE & STAY
	28-11-01	1850	1855	00:06	EF	Y	4.12	189	TRIAL RECLOSURE MADE & STAY
	30-11-01	1909	1912	00:03	OC	R	4.12	113	TRIAL RECLOSURE MADE & STAY
				25:31	**OC-3, EF-8**		**44.25**	**36,769**	
	2-12-01	2056	2118	00:22	-	-	3.00	605	TX POWER FAILURE
	3-12-01	1847	1851	00:04	OC	R	4.12	151	TRIAL RECLOSURE MADE & STAY
	4-12-01	1842	1847	00:05	OC	R	4.12	189	TRIAL RECLOSURE MADE & STAY
	4-12-01	1958	2011	00:113	OC	R	4.67	557	TRIAL RECLOSURE MADE & STAY
DEC	5-12-01	1846	1854	00:08	OC	R	4.00	293	TRIAL RECLOSURE MADE & STAY
	5-12-01	2038	2047	00:09	-	-	4.12	340	TX POWER FAILURE
	17-12-01	1858	1907	00:09	OC	R	3.50	289	TRIAL RECLOSURE MADE & STAY
	27-12-01	0920	0923	00:03	-	-	4.67	128	TX POWER FAILURE
	27-12-01	0510	0514	00:04	-	-	3.33	122	TX POWER FAILURE
				01:17	**OC-5, EF-0**		**35.53**	**2674**	

JAN.	2-1-02	2005	2022	00:17	-	-	3.00	468	TX POWER FAILURE
	4-1-02	1630	1637	00:07	-	-	4.00	257	TX POWER FAILURE:
	12-1-02	1903	2220	03:17	OC	R	4.00	7223	FAULT AMENDED
	24-1-02	1335	1359	00:24	OC/EF	R,Y	2.67	587	TRIAL RECLOSURE MADE & STAY
	31-1-02	1457	1518	00:21	EF	Y	2.83	545	TRIAL RECLOSURE MADE & STAY
				04:26	**OC-2, EF-2**		**16.50**	**9080**	
FEB	4-2-02	1414	1430	00:16	-	-	3.92	575	TX POWER FAILURE
	5-2-02	1459	1518	00:19	EF	Y	3.92	683	TX POWER FAILURE
	5-2-02	2038	2041	00:03	OC	R	3.00	83	TRIAL RECLOSURE MADE & STAY
	6-2-02	1135	1442	03:07	OC/EF	R,Y	3.00	5143	FAULT AMENDED
	8-2-02	1420	1428	00:08	OC/EF	R,Y	3.00	220	TRIAL RECLOSURE MADE & STAY
	9-2-02	1910	1913	00:03	OC	R,B	4.00	110	TRIAL RECLOSURE MADE & STAY
	13-2-02	1947	1951	00:04	-	-	3.00	220	TX POWER FAILURE
	16-2-02	1045	1049	00:04	-	-	2.83	104	TX POWER FAILURE
	17-2-02	0617	0643	00:26	-	-	2.00	477	TX POWER FAILURE:
	24-2-02	0835	0850	00:15	-	-	2.00	275	TX POWER FAILURE:
	25-2-02	0621	0626	00:05	-	-	2.17	99	FAULT AMENDED
	27-2-02	1331	1345	00:14	-	-	4.00	513	TX POWER FAILURE:
				05:08	**OC-4,EF-3**		**36.84**	**8,502**	
MARCH	2-3-02	0420	0500	00:40	-	-	4.17	1529	TX POWER FAILURE:
	5-3-02	1922	1950	00:28	-	-	3.83	983	TX POWER FAILURE:
	6-3-02	2320	2323	00:03	EF	Y	3.00	83	TX POWER FAILURE:
	8-3-02	0616	0620	00:04	-	-	2.00	73	TX POWER FAILURE:
	10-3-02	1707	1714	00:07	-	-	4.00	257	TX POWER FAILURE:
	11-3-02	1509	1710	02:01	-	-	3.33	3363	FUTA S/S OPENED
	12-3-02	0428	0547	01:19	EF	Y	2.17	1194	TX POWER FAILURE:
	13-3-02	2205	0554	07:45	-	-	3.00	11551	TX POWER FAILURE:
	14-3-02	1840	1852	00:12	-	-	3.50	385	TX POWER FAILURE
	15-3-02	1824	2220	03:56	-	-	3.17	6858	SHAGARI VILLAGE OPENED
	16-3-02	1848	2320	04:32	EF	Y	4.00	8801	SHAGARI VILLAGE OPENED
	17-3-02	1911	1915	00:04	EF	Y	3.83	140	TX POWER FAILURE:
	21-3-02	1931	1936	00:05	-	-	3.33	153	TX POWER FAILURE:
	21-3-02	1943	1958	00:15	-	-	3.50	481	TX POWER FAILURE
	22-3-02	1547	2208	06:21	EF	Y	4.00	13200	DANDARE S/S OPENED
	22-3-02	0504	0507	00:03	-	-	2.33	64	TX POWER FAILURE:
	23-3-02	1134	1136	00:02	-	-	3.00	55	TX POWER FAILURE:
	23-3-02	0126	0703	05:37	-	-	2.83	7783	TX POWER FAILURE:
	26-3-02	1245	1545	03.00	-	-	4.00	6600	TX POWER FAILURE:
	27-3-02	2255	2314	00:19	-	-	3.17	552	TX POWER FAILURE
	28-3-02	1414	1936	05:22	EF	Y	2.00	5903	SHAGARI & ORITA-OBELE OPENED

				42:15	**OC-0,EF-5**		**68.16**	**67,978**	
APRIL	7-4-02	1522	1707	01:45	OC/EF	R,Y	3.00	2888	FAULT CLEARED
	7-4-02	1937	1942	00:05	EF	Y	3.17	145	TRIAL RECLOSURE MADE & STAY
	7-4-02	0240	1424	11:44	OC	R,B	1.83	11810	BROKEN XARMS CHANGED
	9-4-02	2027	2044	00:17	-	-	2.00	312	TX POWER FAILURE:
	10-4-02	0039	0335	02:56	-	-	1.83	2952	TX POWER FAILURE
	12-4-02	0455	0556	01:01	EF	Y	2.17	1194	TRIAL RECLOSURE MADE & STAY
	19-4-02	1435	1445	00:10	-	-	3.83	351	TX. POWER FAILURE
	20-4-02	0209	1248	10:39	EF	Y	2.33	13648	FAULT AMENDED
	25-4-02	1023	1049	00:26	-	-	3.00	715	TX POWER FAILURE:
	25-4-02	1205	1210	00:05	EF	Y	3.17	145	TRIAL RECLOSURE MADE & STAY
				29:09	**OC-2,EF-5**		**26.99**	**30,791**	
MAY	6-5-02	0051	0100	00:09	-	-	2.00	165	TX POWER FAILURE:
	8-5-02	1915	1928	00:13	-	-	3.83	456	TX POWER FAILURE
	8-5-02	0045	0110	00:25	-	-	1.83	419	TX POWER FAILURE:
	8-5-02	0535	0558	00:33	-	-	2.17	458	TX POWER FAILURE:
	10-5-02	0941	0950	00:09	-	-	2.50	206	TX POWER FAILURE:
	10-5-02	1342	1353	00:11	EF	Y	3.17	320	TX POWER FAILURE:
	10-5-02	1721	1800	00:39	EF	Y	4.00	1430	TRIAL RECLOSURE MADE & STAY
	13-5-02	1322	1417	00:55	-	-	3.83	1931	TRIAL RECLOSURE MADE & STAY
	14-5-02	2020	2028	00:08	-	-	3.00	220	TX POWER FAILURE:
	18-5-02	0944	2051	11:07	EF	Y	3.17	19,382	TX POWER FAILURE:
	20-5-02	2245	0215	03:30	EF	Y	2.67	5,140	FAULT CLEARED
	21-5-02	0610	0650	00:40	EF	Y	2.50	917	TRIAL RECLOSURE MADE & STAY
	23-5-02	1129	1350	02:21	-	-	3.00	3878	JUMPER CUT AMENDED
	26-5-02	0929	0935	00:06	-	-	3.00	165	TX POWER FAILURE:
	29-5-02	1040	1108	00:28	-	-	3.17	814	TX POWER FAILURE
	30-5-02	2140	2146	00:06	-	-	3.00	165	TX POWER FAILURE
	31-5-02	0806	0812	00:06	-	-	3.00	165	TX POWER FAILURE
	31-5-02	1141	1145	00:04	-	-	3.17	116	TX POWER FAILURE
				21:40	**OC-0, EF-5**		**53.01**	**36,347**	
JUNE	1-6-02	1224	1228	00:04	-	-	3.08	113	TX POWER FAILURE:
	1-6-02	2330	2350	00:20	-	-	3.00	550	TX POWER FAILURE
	1-6-02	0531	0545	00:14	EF	Y	2.67	343	TRIAL RECLOSURE MADE & STAY
	1-6-02	0825	0918	00:53	EF	Y	3.33	1618	TRIAL RECLOSURE MADE & STAY
	5-6-02	0445	0610	01:25	-	-	3.17	2470	NO RELAY INDICATION
	7-6-02	0527	0640	01:13	-	-	2.83	1984	TX POWER FAILURE:
	8-6-02	0950	0957	00:07	-	-	2.89	250	TX POWER FAILURE:
	8-6-02	1136	1140	00:04	EF	Y	4.00	147	TRIAL RECLOSURE MADE & STAY
	8-6-02	1355	1420	00:25	-	-	3.83	878	TX POWER FAILURE:

	8-6-02	1810	1952	01:42	-	-	4.00	3740	TX POWER FAILURE:
	8-6-02	2332	2341	00:18	-	-	4.00	660	TX POWER FAILURE:
	8-6-02	0716	0724	00:08	-	-	2.50	183	TX POWER FAILURE:
	9-6-02	1913	1918	00:05	-	-	3.00	138	TX POWER FAILURE:
	10-6-02	2030	2040	00:10	-	-	3.17	291	TX POWER FAILURE:
	10-6-02	0545	0600	00:15	-	-	2.83	389	TX POWER FAILURE:
	11-6-02	1745	1058	17:13	EF	Y	2.83	26,798	HT WIRE CUT AMENDED
	12-6-02	1931	2000	00:29	EF	Y	2.92	776	TRIAL RECLOSURE MADE & STAY
	13-6-02	1115	1125	00:10	-	-	3.00	275	TX POWER FAILURE
	13-6-02	1933	1941	00:08	EF	Y	3.33	244	TRIAL RECLOSURE MADE & STAY
	13-6-02	0510	1010	06:00	EF	Y	3.83	12,639	BIRD GROUNDING Y-Ø TO POLE REMOVED
	17-6-02	0728	0851	00:23	EF	Y	3.83	685	TRIAL RECLOSURE MADE & STAY
	18-6-02	1500	1575	00:15	-	-	3.25	413	TX POWER FAILURE
	18-6-02	1533	1750	02:17	-	-	3.00	3981	TX POWER FAILURE
	19-6-02	0950	1105	01:15	-	-	3.17	2063	TX POWER FAILURE:
	19-6-02	1540	1545	00:05	-	-	3.00	183	TX POWER FAILURE:
	20-6-02	1454	2045	05:51	EF	Y	4.00	7783	FUTA & SHAGARI LEGS ISOLATED
	24-6-02	1450	1935	04:45	EF	Y	2.83	5875	SHAGARI LEG ISOLATED
	25-6-02	0420	0428	00:08	-	-	2.67	208	TX POWER FAILURE:
	26-6-02	1405	2012	06:07	EF	Y	2.83	7689	TX POWER FAILURE:
	28-6-02	0730	0751	00:21	-	-	2.33	385	TRIAL RECLOSURE MADE & STAY
	28-6-02	0830	0835	00:05	-	-	2.00	115	TX POWER FAILURE
	29-6-02	1310	1320	00:10	EF	Y	2.50	229	TRIAL RECLOSURE MADE & STAY
	29-6-02	0634	0640	00:06	-	-	2.00	110	TX POWER FAILURE
	30-6-02	1445	1455	00:10	EF	Y	2.42	222	TRIAL RECLOSURE MADE & STAY
	30-6-02	0602	0610	00:08	-	-	2.83	208	TX POWER FAILURE
				53:29	**OC-10,EF-13**		**106. 54**	**84,545**	
JULY	4-7-02	0617	1910	12:53	EF	Y	2.42	15973	FAULT AMENDED
	7-7-02	1228	1230	00:02	-	-	3.00	55	TX POWER FAILURE
	13-7-02	1752	1906	01:14	EF	Y	2.58	1419	FAULT AMENDED
	15-7-03	2059	2104	00:05	-	-	3.00	138	NO RELAY INDICATION
	15-7-02	2304	2309	00:05	EF	Y	2.50	115	TRIAL RECLOSURE MADE & STAY
	17-7-2	0620	0625	00:05	EF	Y	3.50	160	TRIAL RECLOSURE MADE & STAY
	20-7-02	0612	0658	00:46	-	-	3.00	1265	TX POWER FAILURE
	21-7-02	0825	0830	00:05	EF	Y	3.75	172	TRIAL RECLOSURE MADE & STAY
	21-7-02	1830	1850	00:20	EF	Y	3.17	581	TRIAL RECLOSURE MADE & STAY
	21-7-02	2250	2255	00:05	-	-	3.50	160	TX POWER FAILURE:
	21-7-02	0450	0454	00:04	-	-	2.83	104	TX POWER FAILURE:
	23-7-02	0704	0738	00:34	-	-	3.00	935	TX POWER FAILURE:

	28-7-02	1501	1525	00:24	-	-	2.83	623	TX POWER FAILURE
				16:42	**OC-0, EF-6**		**39.08**	**21,700**	
AUG.	5-8-02	1103	1405	03:02	EF	Y	3.33	5495	BROKEN XARMS CHANGED
	5-8-02	2050	2057	00:07	EF	Y	4.25	273	TRIAL RECLOSURE MADE & STAY
	8-8-02	1713	1720	00:07	EF	Y	3.17	203	TRIAL RECLOSURE MADE & STAY
	9-8-02	1941	1945	00:04	-	-	3.83	140	TX POWER FAILURE
	10-8-02	2135	2140	00:05	-	-	3.00	138	TX POWER FAILURE
	18-8-02	0832	0839	00:07	EF	Y	3.75	241	TRIAL RECLOSURE MADE & STAY
	22-8-02	1920	1926	00:06	EF	Y	4.17	229	TRIAL RECLOSURE MADE & STAY
	27-8-02	1525	1530	00:05	EF	Y	3.08	141	TRIAL RECLOSURE MADE & STAY
	27-8-02	1548	1935	03:47	EF	Y	2.50	4126	FAULT AMENDED
	28-8-02	1410	1415	00:05	EF	Y	2.83	130	TRIAL RECLOSURE MADE & STAY
	28-8-02	1421	1630	02:09	EF	Y	3.33	3663	DANDAI'E S/S OPENED
	30-8-02	1250	1300	00:10	EF	Y	3.08	282	TRIAL RECLOSURE MADE & STAY
	31-8-02	1848	1555	00:07	-	-	3.00	193	TX POWER FAILURE:
				10:01	**OC-0,EF-10**		**43.32**	**15,254**	
SEPT	3-9-02	1330	1335	00:05	EF	Y	3.00	138	TRIAL RECLOSURE MADE & STAY
	4-9-02	1006	1008	00:02	-	-	3.00	55	TX POWER FAILURE
	4-9-02	1500	1503	00:03	-	-	3.83	105	TX POWER FAILURE
	6-9-02	1625	1635	00:10	-	-	4.00	367	TX POWER FAILURE
	6-9-02	0605	0610	00:05	-	-	3.17	145	TX POWER FAILURE
	8-9-02	0943	0950	00:07	OC/EF	R,Y	2.92	187	TRIAL RECLOSURE MADE & STAY
	8-9-02	1543	1620	00:37	EF	Y	2.50	848	TRIAL RECLOSURE MADE & STAY
	8-9-02	1845	1907	00:22	-	-	3.00	605	TX POWER FAILURE
	11-9-02	0350	0540	01:50	EF	Y	2.67	1469	FAULT AMENDED
	12-9-02	1634	1647	00:04	-	-	3.00	110	TX POWER FAILURE
	15-9-02	1538	1643	01:05	-	-	3.83	2107	TX POWER FAILURE:
	16-9-02	1848	1855	00:07	-	-	3.83	246	TX POWER FAILURE
	17-9-02	2347	2357	00:10	EF	Y	2.83	259	TRIAL RECLOSURE MADE & STAY
	17-9-02	0335	0433	01:58	EF	Y	2.50	1376	FAULT AMENDED
	21-9-02	0845	0850	00:05	-	-	2.83	130	TX POWER FAILURE
	21-9-02	1739	1859	01:20	EF	Y	2.50	1375	TV ANTENAE THAT FELL ON HT LINE WAS REMOVED AT AULE RD
	22-9-02	0200	0230	00:30	-	-	3.83	1053	NO RELAY INDICATION TRM&S
	24-9-02	1219	1550	03:31	OC/EF	B,Y	3.00	4951	FUTA LEG ISOLATED
	26-9-02	1920	1930	00:10	EF	Y	3.25	298	TRIAL RECLOSURE MADE & STAY
	26-9-02	0145	0650	05:05	OC/E	B,Y	2.67	7343	FAULT AMENDED
	27-9-02	2247	2258	00:11	EF	Y	2.83	285	TRIAL RECLOSURE MADE & STAY
	28-9-02	1910	1917	00:07	-	-	4.00	257	TX POWER FAILURE:
	28-9-02	2043	0710	10:27	EF	Y	3.58	19.690	WIRE CUT AMENDED

	30-9-02	1247	1714	04:27	EF	Y	2.50	5500	FUTA LEG ISOLATED
				32:38	**OC-3,EF-13**		**75.07**	**48,899**	
OCT	3-10-02	1613	2145	05:32	EF	Y	3.33	9163	DANDARE S/S OPENED
	3-10-02	1813	1820	00:07	-	-	3.50	225	TX POWER FAILURE
	4-10-02	0141	0300	01::25	-	-	2.33	1282	TX POWER FAILURE:
	4-10-02	0705	0727	00:22	-	-	1.67	470	TX POWER FAILURE:
	9-10-02	1340	1345	00:05	EF	Y	2.83	77	TRIAL RECLOSURE MADE & STAY
	10-10-02	0945	1003	00:14	-	-	2.83	363	TX POWER FAILURE:
	16-10-02	0750	0800	00:10	EF	Y	4.17	382	TRIAL RECLOSURE MADE & STAY
	18-10-02	1240	1451	02:111	EF	Y	2.25	2475	ILESHA GARAGE S/S OPENED
	20-10-02	1810	0645	12:35	EF	Y	3.33	21,979	FAULT AMENDED
	21-10-02	1659	1733	00:34	EF	Y	3.75	1169	TRIAL RECLOOSURE MADE & STAY
	24-10-02	1635	1742	01:07	EF	Y	3.00	1650	TRIAL RECLOSURE MADE & STAY
	27-10-02	1652	1704	00:12	-	-	3.17	389	TX POWER FAILURE:
	29-10-02	1835	1900	00:25	-	-	3.33	763	TX POWER FAILURE:
	30-10-02	1243	1305	00:22	EF	Y	2.83	571	TRIAL RECLOSURE MADE & STAY
				25:21	**OC-0, EF-8**		**41.82**	**40,958**	
NOV	1-11-02	0710	0805	00:55	EF	Y	3.00	1513	TRIAL RECLOSURE MADE & STAY
	4-11-02	1510	1820	03:00	EF	Y	2.83	4670	FAULT AMENDED
	5-11-02	1528	1524	23:56	EF	Y	2.58	32,638	FAULT AMENDED
	5-11-02	1726	1747	00:21	-	-	4.00	770	TX POWER FAILURE:
	10-11-02	1944	1954	00:10	EF	Y	3.03	351	TRIAL RECLOSURE MADE & STAY
	10-11-02	0000	0210	02:10	EF	Y	3.00	3300	FAULT AMENDED
	12-11-02	2242	1925	20:43	OC/EF	B,R,Y	4.00	44,001	FAULT AMENDED
	17-11-02	1147	1200	00:13	EF	Y	4.00	477	TRIAL RECLOSURE MADE & STAY
	17-11-02	1300	1319	00:19	-	-	4.17	726	TX POWER FAILURE
	20-11-02	1534	1539	00:05	EF	Y	3.33	153	TRIAL RECLOSURE MADE & STAY
	30-11-02	0948	0952	00:04	-	-	2.75	101	TX POWER FAILURE
	30-11-02	1346	1354	00:08	-	-	3.50	257	TX POWER FAILURE:
				52:04	**OC-1,EF-8**		**40.49**	**88,957**	
DEC.	14-12-02	1324	1330	00:06	EF	Y	2.83	156	TRIAL RECLOSURE MADE & STAY
	24-12-02	1017	1334	03:17	EF	Y	2.67	4406	HT WIRE CUT AMENDED ALONG FUTA ROAD
	31-12-02	1744	1751	00:07	-	-	3.17	203	TX POWER FAILURE:
				03:30	**OC-0,EF-2**		**8.67**	**4765**	

APPENDIX IV: FAULTS LOG ENTRY ON 11KV NETWORK (JAN. 1998 – DEC. 2002)
FEEDER 4

MONTH	DATE OF FAULT	TIME OF FAULT	TIME RESTORED	DURATION OF FAULT HR: MIN.	NATURE OF FAULT	PHASE AFFECTED	LOAD LOSS (MW)	REV. LOSS (₦)	REMARK
FEB	8-2-98	0555	0610	00:15	OC	B	2..50	344	TRIAL RECLOSURE MADE & STAY
	10-2-98	1758	2040	02:42	OC	R.B	2.80	4,158	FAULT AMMENED
				02:57	**0C-2.EF-0**		**5.30**	**4.502**	
MAR.	6-3--98	1249	1300	00:11	EF	Y	3.00	303	TRIAL RECLOSURE MADE & STAY
	29-3 --98	2050	2110	00:20	OC	B	4.50	825	TRIAL RECLOSURE MADE & STAY
				00:31	**OC-1, EF-1**		**7.50**	**1128**	
APR.	2-4-98	2100	2147	00:47	OC	B	1.50	646	TRIAL RECLOSURE MADE & STAY
	9-4-98	1810	1824	00:14	EF	Y	1.50	193	TRIAL RECLOSURE MADE & STAY
	21-4-98	1212	1527	03:15	OC	R	3.00	5363	BROKEN XARMS CHANGED
				04:16	**0C-2.EF-1**		**6.00**	**6,202**	
MAY	1-5-98	2058	2158	01:00	OC	R	5.00	2750	CUTLINE AMENDED
	7-5 --98	0228	1325	10:57	EF	Y	1.50	9,034	BROKEN XARMS CHANGED
		2100	2324	02:24	OC	B	5.00	6,600	FAULT AMENDED
	13-5-98	1504	1740	02:36	EF	Y	5.00	6,692	JUMPER CUT AMENDED
				16:57	**OC-2.EF-2**		**16.50**	**25,976**	
JULY	11-7-98	0216	0232	00:16	OC	R	4.17	612	TRIAL RECLOSURE MADE & STAY
				00:16	**OC-1.EF-0**		**4.17**	**612**	
AUG.	10-8-98	1155	1209	00:14	EF	Y	4.17	533	TRIAL RECLOSURE MADE & STAY
				00:14	**OC-0.EF-1**		**4.17**	**533**	
SEPT.	10-9-98	1115	1152	00:37	EF	Y	4.00	1357	TRIAL RECLOSURE MADE & STAY
	10-9-98	2455	0826	09:31	EF	Y	4.20	21,983	CUT LINE AMENDED
	19-9-98	1450	1720	02:30	EF	Y	4.20	575	FAULT AT IBI PRESS AMENDED
	23-9-98	0134	0144	00:10	EF	Y	3.00	2.75	TRIAL RECLOSURE MADE & STAY
	26-9-98	0835	0925	00:05	EF	Y	4.00	1833	TRIAL RECLOSURE MADE & STAY
	30-9-98	0925	1750	08:25	OC	B	4.16	19,257	LINE CUT AMENDED AT ADEGBOLA
				22:03	**OC-1, EF-5**		**23.56**	**49,880**	
OCT.	2-10-98	1855	2215	03:20	OC	R	5.00	9,167	JUMPER CUT AMENDED
	4-10-98	0606	0636	00:30	OC	B	5.30	1,458	TRIAL RECLOSURE MADE & STAY
	5-10-98	0623	0645	00:22	OC	R.B	5.00	1,008	TRIAL RECLOSURE MADE & STAY
	6-10-98	1900	1955	00:55	**OC**	R	5.30	2,672	TRIAL RECLOSURE MADE & STAY
	10-10-98	1925	2041	01:21	EF	Y	5.30	3,935	FAULT AMENDED

				06:28	**0C-4.EF-1**		**25.90**	**18.240**	
NOV.	1-11-98	0625	0635	00:10	0C	B	5.30	485	TRIAL RECLOSURE MADE & STAY
	2-11-98	1230	1244	00:14	EF	Y	3.50	449	TRIAL RECLOSURE MADE & STAY
	12-11-98	1517	1858	03:41	OC	B	5.00	10.129	UPRISER AMENDED
	18-11-98	2010	2255	02:45	OC	R	5.00	7563	LINE CUT AMENDED
	19-11-98	0610	0621	00:11	OC	B	4.80	484	TRIAL RECLOSURE MADE & STAY
	23-11-98	1755	1755	00:10	OC	B	4.80	440	TRIAL RECLOSURE MADE & STAY
	24-11-98	2010	2010	01:30	OC	B	3.50	2.888	JUMPER CUT AMENDED
	27-11-98	0635	0645	00:10	EF	Y	4.50	413	TRIAL RECLOSURE MADE & STAY
				08:51	**OC-6.EF-2**		**36.40**	**22.851**	
DEC.	11-12-98	2150	0730	09:40	EF	Y	4.50	23.925	JUMPER CUT AMENDED
	17-12-98	1424	1503	00:39	OC	R	3.83	1.369	TRIAL RECLOSURE MADE & STAY
	22-12-98	2055	2115	00:20	OC	B	5.25	968	TRIAL RECLOSURE MADE & STAY
	28-12-98	1904	2050	01:46	EF	Y	4.91	4.771	FAULT AMENDED
	29-12-98	1943	2315	02:32	EF	Y	4.80	6.270	FUALT AMENDED
				14:57	**OC- 2.EF – 3**		**23.29**	**37.298**	
JAN.	2-1-99	1948	2138	01:50	OC	B	4.80	4.840	TRIAL RECLOSURE MADE & STAY
	4-1-99	0628	0752	01:24	OC	B	5.30	4.081	TRIAL RECLOSURE MADE & STAY
	13-1-99	1853	2000	01:07	OC	R.B	5.10	3.132	TRIAL RECLOSURE MADE & STAY
	20-1-99	0534	0635	01:01	OC	B	5.00	2.769	TRIAL RECLOSURE MADE & STAY
	21-1-99	0643	0724	00:41	OC	R	4.50	1.691	LAO S/S ISOLATED
	24-1-99	1715	1730	00:15	OC	R	5.10	**701**	TRIAL RECLOSURE MADE & STAY
	27-1-99	1545	2225	06:40	OC	B	4.80	17.600	LINE CUT. AMENDED
				12:58	**OC-7. EF-0**		**34.60**	**34.841**	
FEB.	2-2-99	0620	0925	03:05	EF	Y	4.10	6.953	JUMPER CUT AMENDED
	4-2- 99	1425	1710	02:45	OC	B	3.90	5.899	TRIAL RECLOSURE MADE & STAY
	12-2-99	2248	1220	13:32	OC	B	4.00	29,773	LINE CUT AMENDED
	16-2-99	1330	1435	01:05	OC	B.R	3.80	2.264	TRIAL RECLOSURE MADE & STAY
				24:27	**OC-3. EF-1**		**15.80**	**44.889**	
MAR.	7-3-99	0120	0750	6:30	EF	Y	4.10	14..658	LINE CUT AMENDED
	12-3-99	1815	1115	12:00	EF	Y	3.60	33.660	HT LINE AMENDED
	28-3-99	2022	2042	00:20	EF	Y	4.30	788	TRIAL RECLOSURE MADE & STAY
	29-3-99	2103	2153	00:30	EF	Y	4.00	1100	TRIAL RECLOSURE MADE & STAY
				24: 20	**OC-0. EF-4**		**16.00**	**50.206**	
APR.	3-4-99	1828	1855	00.27	EF	Y	4.10	1.015	TRIAL RECLOSURE MADE & STAY
	6-4-99	0600	0879	02:09	OC	R	3.60	4.587	WIRE CUT AMENDED
	8-4-99	2205	2246	00:41	OC	B	4.00	1.503	TRIAL RECLOSURE MADE & STAY
	17-4-99	0949	1600	07:11	EF	Y	3.80	15.013	LAO LEG ISOLATED
				10:38	**OC-2. EF-2**		**15.50**	**22.118**	

MAY	1-5-99	1036	1305	02:29	EF	Y	3.25	4,439	TRIAL RECLOSURE MADE & STAY
	9-5-99	1935	1943	00:08	OC	B	4.66	342	TRIAL RECLOSURE MADE & STAY
	28-5-99	1820	1835	00:15	OC	B	4.08	561	TRIAL RECLOSURE MADE & STAY
				02:52	**OC-2,EF-1**		**11.99**	**5,342**	
JUNE	18-6-99	1605	1854	02:49	EF	Y	3.60	5,577	BROKEN CROSSARMS CHANGED
				02:49	**OC-0, EF-1**		**3.60**	**5,577**	
JULY	13-7-99	0619	0632	00:13	EF	Y	3.70	441	TRIAL RECLOSURE MADE & STAY
				00:13	**OC-0,EF-1**		**3.70**	**441**	
AUG.	1-8-99	0610	0720	01:30	OC	R	5.30	3,401	TRIAL RECLOSURE MADE & STAY
	10-8-99	1940	1950	00:10	OC	B	5.60	513	TRIAL RECLOSURE MADE & STAY
	11-8-99	2018	2220	02:02	EF	B	5.10	5,704	BROKEN ARM AMENDED
	17-8-99	1750	2000	02:10	EF	Y	5.30	6,316	JUMPER CUT AMENDED
	26-8-99	0647	0754	01:07	EF	Y	4.00	2,457	TRIAL RECLOSURE MADE & STAY
	27-8-99	1638	1925	02:47	EF	Y	4.00	6,123	TRIAL RECLOSURE MADE & STAY
	28-8-99	0842	1913	10:31	EF	Y	5.30	30,656	LINE CUT AMENDED
	31-8-99	1106	1938	08:32	EF	Y	5.30	24,375	LINE CUT AMENDED
				28: 49	**OC-3,EF-5**		**39.90**	**80,045**	
OCT.	4-10-99	2250	2350	01:40	OC	R	4.00	3,667	TRIAL RECLOSURE MADE & STAY
	5-10-99	0615	0655	00:40	OC	R	5.00	1,833	TRIAL RECLOSURE MADE & STAY
	6-10-99	0550	0630	00:40	OC	B	5.00	1,833	TRIAL RECLOSURE MADE & STAY
	19-10-99	0905	0910	OO:05	OC	B	3.30	151	TRIAL RECLOSURE MADE & STAY
				03:25	**OC –4,EF-0**		**17.30**	**7,484**	
NOV.	1-11-99	1500	1526	00:26	OC	B	3.60	858	LAO S/S ISOLATED
	3-11-99	1919	1938	00:19	OC	B	5.10	888	TRIAL RECLOSURE MADE & STAY
	12-11-99	1859	1939	00:36	EF	Y	5.30	1,749	TRIAL RECLOSURE MADE & STAY
	15-11-99	2108	1506	17:58	EF	Y	3.00	29,645	HT LINE CUT AMENDED
				19:19	**OC-2, EF-2**		**17.00**	**33,140**	
DEC.	21-2-99	2037	2230	01:53	OC	R	3.70	3,833	TRIAL RECLOSURE MADE & STAY
				01:53	**OC-1,EF-0**		**3.70**	**3,833**	
FEB.	13-2-00	2150	0743	09:53	EF	Y	1.80	9785	FAULT AMENDED AT AGUNLOYE S/S
	23-2-00	0723	1345	06:22	EF	Y	2.70	9455	FAULT AMENDED AT AGUNLOYE S/S
				16:15	**OC-0, EF-2**		**4.50**	**19240**	
MARCH	4-3-00	1716	0028	04:50	EF	Y	4.00	10633	FAULT AMENDED
	9-3-00	1317	1339	00:22	EF	Y	5.30	1069	TRIAL RECLOSURE MADE & STAY
	15-5-00	0945	1010	00:25	EF	Y	4.70	1077	TRIAL RECLOSURE MADE & STAY
	15-3-00	1925	1945	00:20	OC	Y	5.50	1008	TRIAL RECLOSURE MADE & STAY
	30-3-00	1216	1316	01:00	EF	Y	4.67	2569	TREES TOUCHING LINE REMOVED
				06:57	**OC-1, EF-4**		**24.17**	**15348**	
APRIL	1-4-00	1542	1612	00:30	EF	Y	4.33	1191	TRIAL RECLOSURE MADE & STAY

	7-4-00	0640	0648	00:08	OC	R	5.50	403	TRIAL RECLOSURE MADE & STAY
	19-4-00	1840	1950	01:10	EF	Y	3.50	2246	FAULT AMENDED
	20-4-00	0258	1343	10:45	EF	Y	4.25	25,128	BROKEN POLES CHANGED
	20-4-00	1926	1944	00:18	OC	B	4.67	771	TRIAL RECLOSURE MADE & STAY
				12:51	**OC-2,EF-3**		**22.25**	**29,739**	
MAY	4-5-00	2116	2130	00:14	OC	R	5.00	642	TRIAL RECLOSURE MADE & STAY
				00:14	**OC-1, EF-0**		**5.00**	**642**	
	10-6-00	1220	1227	00:07	OC	B	5.33	342	FAULT AMENDED
	19-6-00	1800	2046	02:46	EF	Y	4.67	7106	WIRE CUT AMENDED
JUNE	28-6-00	1914	1922	00:11	EF	Y	4.00	403	TRIAL RECLOSURE MADE & STAY
	29-6-00	0732	0737	00:05	OC	B	5.00	229	TRIAL RECLOSURE MADE & STAY
	29-6-00	1321	1328	00:07	OC	B	5.50	353	TRIAL RECLOSURE MADE & STAY
	30-6-00	2003	1303	17:00	EF	Y	3.00	28050	REINFORCEMENT OF FALLING POLES
				20:16	**OC-3, EF-3**		**27.50**	**36,483**	
	5-8-00	1423	2052	06:29	OC/EF	R,Y	4.00	14363	FAULT AMENDED
	7-8-00	0047	0920	08:33	EF	Y	4.17	19609	WIRE CUT AMENDED
	7-8-00	1920	1930	00:10	OC	B	5.33	489	TRIAL RECLOSURE MADE & STAY
	26-8-00	01102	0109	00:07	EF	Y	3.33	214	TRIAL RECLOSURE MADE & STAY
AUG.	26-8-00	1213	1232	00:19	EF	Y	2.58	449	TRIAL RECLOSURE MADE & STAY
	26-8-00	1705	1740	00:35	OC	R	3.67	1177	TRIAL RECLOSURE MADE & STAY
	28-8-00	1645	1658	00:13	EF	Y	3.83	456	TRIAL RECLOSURE MADE & STAY
	31-8-00	0127	0137	00:10	EF	Y	3.33	305	TRIAL RECLOSURE MADE & STAY
	31-8-00	2054	2114	00:16	EF	Y	4.83	708	TRIAL RECLOSURE MADE & STAY
				16:52	**OC-3, EF-7**		**35.02**	**37,670**	
	1-9-00	0630	0750	01:20	OC	R	4.17	3058	BRIDGED LINES SEPARATED
	2-9-00	1030	1130	01:00	EF	Y	2.75	1513	TRIAL RECLOSURE MADE & STAY
	5-9-00	1825	1835	0010	OC	B	5.08	4,666	TRIAL RECLOSURE MADE & STAY
SEPT.	8-9-00	1220	1230	00:10	EF	Y	3.00	275	TRIAL RECLOSURE MADE & STAY
	22-9-00	0342	1443	11:01	EF	Y	3.33	20,177	CUT WIRE AMENDED
	22-9-00	1921	1933	00:12	EF	Y	3.33	366	TRIAL RECLOSURE MADE & STAY
	23-9-00	1740	1745	00:05	EF	Y	2.17	99	TRIAL RECLOSURE MADE & STAY
	27-9-00	1413	1433	00:20	EF	Y	3.58	656	TRIAL RECLOSURE MADE & STAY
				14:18	**OC-2,EF-6**		**27.41**	**26,610**	
	26-10-00	0054	0142	00:49	EF	Y	3.58	1608	TRIAL RECLOSURE MADE & STAY
OCT.	27-10-00	1838	2115	03:37	OC/EF	R,Y	5.00	9946	FAULTY LINE AMENDED
	29-10-00	2050	2139	00:49	EF	Y	4.33	1945	TRIAL RECLOSURE MADE & STAY
	31-10-00	1854	1730	22:36	EF	Y	4.00	49,720	FAULT AMENDED
				27:51	**OC-1, EF-4**		**16.91**	**63,219**	
NOV.	1-11-00	1342	1355	00:13	EF	B	5.00	596	TRIAL RECLOSURE MADE & STAY
	4-11-00	2315	2343	00:39	EF	Y	3.00	1073	TRIAL RECLOSURE MADE & STAY

	15-11-00	1909	1928	00:19	EF	Y	4.83	841	TRIAL RECLOSURE MADE & STAY
	15-11-00	0835	0929	00:54	EF	Y	4.67	2312	TRIAL RECLOSURE MADE & STAY
	19-11-00	1527	1553	00:26	EF	Y	4.67	1113	TRIAL RECLOSURE MADE & STAY
	26-11-00	0358	0550	01:52	EF	Y	4.00	4102	TRIAL RECLOSURE MADE & STAY
	27-11-00	0210	0650	04:40	EF	Y	2.83	7264	BROKEN XARMS CHANGED
	27-11-00	1203	1240	00:37	EF	Y	3.42	1200	TRIAL RECLOSURE MADE & STAY
	27-11-00	1328	1345	00:17	EF	Y	4.33	675	TRIAL RECLOSURE MADE & STAY
	30-11-00	0920	0945	00:25	EF	Y	3.33	763	TRIAL RECLOSURE MADE & STAY
	30-11-00	1315	1341	00:26	OC	B	5.00	1192	TRIAL RECLOSURE MADE & STAY
				10:48	**OC-3, EF-8**		**45.08**	**21,136**	
	3-12-00	0540	0555	00:15	OC	B	3.33	458	TRIAL RECLOSURE MADE & STAY
	5-12-00	1532	1818	02:46	EF	Y	4.00	6087	J&P FUSES AMENDED AT LAO S/S
	6-12-00	1454	1510	00:16	EF	Y	4.67	685	TRIAL RECLOSURE MADE & STAY
	7-12-00	0128	0553	04:25	EF	Y	4.33	10518	FAULT AMENDED
	8-12-00	1415	1450	00:35	OC	B,R	4.00	1283	LAO S/S OPENED
DEC	11-12-00	1459	1530	00:31	OC	B	5.10	1421	TRIAL RECLOSURE MADE & STAY
	11-12-00	1838	1923	00:45	EF	Y	4.08	1683	TRIAL RECLOSURE MADE & STAY
	13-12-00	1607	1720	01:13	EF	Y	4.33	2897	TRIAL RECLOSURE MADE & STAY
	18-12-00	2307	2318	00:11	OC	R	5.08	512	LAO S/S OPENED
	20-12-00	0732	1025	02:53	OC/EF	Y	4.00	6343	TRIAL RECLOSURE MADE & STAY
	22-12-00	1425	1440	00:15	OC	R	4.00	550	TRIAL RECLOSURE MADE & STAY
				14:05	**0C-5, EF-6**		**46.82**	**32437**	
	4-1-01	2130	2153	00:23	EF	Y	4.70	991	TRIAL RECLOSURE MADE & STAY
	6-1-01	0720	0934	00:14	OC	B	5.30	6510	FAULT AMENDED
	7-1-01	1417	1514	00:57	OC	B	5.17	2701	AGUNLOYE ISOLATOR OPENED
	13-1-01	0522	0812	02:50	OC	R	5.00	7792	LAO ISOLATOR OPENED
	19-1-01	0648	0656	00:08	EF	Y	4.70	345	TRIAL RECLOSURE MADE & STAY
JAN	20-1-01	1227	1237	00:10	OC	R	4.33	397	TRIAL RECLOSURE MADE & STAY
	22-1-01	0538	0545	00:07	EF	Y	4.70	302	TRIAL RECLOSURE MADE & STAY
	25-1-01	0526	0532	00:06	EF	Y	4.50	248	TRIAL RECLOSURE MADE & STAY
	31-1-01	1659	1735	00:36	EF	Y	4.67	1541	TRIAL RECLOSURE MADE & STAY
	31-1-01	0627	1041	04:14	OC	R	5.00	11641	FAULT AMENDED
				11:45	**OC-5,EF-5**		**48.07**	**32,469**	
FEB	4-2-01	2013	2025	00:12	OC	R	4.17	459	TRIAL RECLOSURE MADE & STAY
	8-2-01	2040	2135	00:55	OC	R,B	5.33	2687	TRIAL RECLOSURE MADE & STAY
	9-2-01	0445	0450	00:05	EF	Y	2.83	130	TRIAL RECLOSURE MADE & STAY
	14-2-01	2135	2140	00:05	OC	B	4.83	221	TRIAL RECLOSURE MADE & STAY
	19-2-01	0520	0851	03:31	OC	B	5.00	9670	FAULT AMENDED
	24-2-01	1108	1116	00:08	OC	B	2.75	202	TRIAL RECLOSURE MADE & STAY

	25-2-01	1912	2225	03:13	OC	B	2.75	4865	TRIAL RECLOSURE MADE & STAY
				08:09	**OC-6, EF-1**		**27.66**	**18,234**	
MARCH	7-3-01	11314	1319	00:05	OC	R,B	3.33	153	AGUNLOYE ISOLATOR OPENED
	10-3-01	1559	0526	11:27	OC	B	4.00	25,190	FAULT AMENDED
	10-3-01	0540	0757	02:17	OC	B	5.33	6694	AGUNLOYE ISOLATOR OPENED
	11-3-01	1746	2319	05:33	EF	Y	2.33	7112	AGUNLOYE ISOLATOR OPENED
	11-3-01	0545	0605	00:20	OC	B	4.50	825	TRIAL RECLOSURE MADE & STAY
	11-3-01	0110	0735	01:25	OC	B	4.50	3506	TRIAL RECLOSURE MADE & STAY
	12-3-01	2025	2030	00:05	OC	B	4.50	206	TRIAL RECLOSURE MADE & STAY
	13-3-01	1740	1751	00:11	EF	Y	3.33	336	TRIAL RECLOSURE MADE & STAY
	13-3-01	1912	2210	01:58	OC	B	5.33	5765	FAULT AMENDED
	15-3-01	1742	1753	00:11	EF	Y	4.67	471	TRIAL RECLOSURE MADE & STAY
	15-3-01	1805	1815	00:1-	OC	B	4.67	428	TRIAL RECLOSURE MADE & STAY
	17-3-01	1715	2336	06:21	EF	Y	4.42	15,437	FAULT AMENDED
	17-3-01	0551	0851	15:00	EF	Y	4.33	35,723	FAULT AMENDED
	19-3-01	0550	1250	07:00	OC	B	5.33	20521	JUMPER OPENED AT "B" DIVISION
	20-3-01	1406	1436	00:30	EF	Y	4.67	1306	TRIAL RECLOSURE MADE & STAY
	20-3-01	1648	1703	00:15	EF	Y	4.42	596	TRIAL RECLOSURE MADE & STAY
	20-3-01	0519	1152	06:33	OC	B	4.33	18013	OSHIKITA S/S OPENED
	21-3-01	1213	1221	00:08	OC	B	5.33	367	TRIAL RECLOSURE MADE & STAY
	21-3-01	1615	1637	24:22	EF	Y	4.75	67,008	WIRE CUT AMENDED
	27-3-01	0614	0640	00:26	EF	Y	4.33	1113	TRIAL RECLOSURE MADE & STAY
	29-3-01	2207	2305	00:58	OC	B	5.00	2658	AGUNLOYE S/S/ OPENED
	30-3-01	2218	2358	01:40	OC	B	5.33	4886	LAO S/S OPENED
				86:55	**OC-12, EF-10**		**99.65**	**218,313**	
APRIL	2-4-01	1850	0050	06:00	OC	B	4.33	14289	FAULT AMENDED
	4-4-01	2317	2324	00:07	OC	B	5.50	353	ISOLATOR REPOSITIONED
	4-4-01	0004	0018	00:14	EF	Y	3.50	449	LAO S/S OPENED
	5-4-01	0540	1603	10:23	OC	R,B	4.67	26670	CUT LINES AMENDED ALONG AGUNLOYE
	7-4-01	1815	1904	00:49	EF	Y	4.25	1909	TRIAL RECLOSURE MADE & STAY
	8-4-01	2112	2156	00:44	OC	B	5.50	2218	SOME LOCAL S/S OPENED
	14-4-01	1854	1730	22:36	-	-	5.33	66,252	ISOLATION OF HT WIRE AT AJEBAMIDELE S/S.
	16-4-01	2319	1719	18:00	EF	Y	4.67	46233	ODIOLOWO S/S OPENED
	19-4-01	1915	1949	00:34	OC/EF	B,Y	4.92	1533	FAULT AMENDED
		2020	1826	22:06	OC/EF		3.83	46,554	CIRCUIT BREAKER SERVICED
				81:33	**OC - 6,EF-4**		**46.50**	**206,460**	
MAY	1-5-01	1308	1315	00:17	EF	Y	3.50	225	TRIAL RECLOSURE MADE & STAY
	2-5-01	2153	2226	00:33	OC/EF	R,Y	4.17	1261	TRIAL RECLOSURE MADE & STAY

	9-5-01	0558	0710	01:12	EF	Y	4.17	2752	TRIAL RECLOSURE MADE & STAY
	12-5-01	2030	2040	00:10	-	-	4.17	382	TRIAL RECLOSURE MADE & STAY
	12-5-01	0520	0527	00:07	-	-	4.67	300	TX POWER FAILURE
	13-5-01	2313	2217	23:04	-	-	4.67	59.247	FAULT AMENDED
	14-5-01	2237	2247	00:10	-	-	5.00	458	TRIAL RECLOSURE MADE & STAY
	15-5-01	1206	2121	09:15	EF	Y	4.67	23,759	LAO & "B" DIVISION S/S OPENED
	18-5-01	2000	1016	00:16	EF	Y	4.00	587	TRIAL RECLOSURE MADE & STAY
	19-5-01	0845	0859	00:14	-	-	4.67	599	TRIAL RECLOSURE MADE & STAY
	19-5-01	1540	1551	00:11	EF	Y	2.33	235	TRIAL RECLOSURE MADE & STAY
	21-5-01	1531	1534	00:03	EF	Y	3.00	83	TRIAL RECLOSURE MADE & STAY
	21-5-01	2020	1219	15:59	EF	Y	3.00	26.373	ELEYE S/S OPENED
	22-5-01	1947	1957	00:20	-	-	4.17	765	TRIAL RECLOSURE MADE & STAY
	22-5-01	2116	2210	00:54	OC	B	5.33	2638	TRIAL RECLOSURE MADE & STAY
				52:35	**OC-2, EF-8**		**61.52**	**119,664**	
JUNE	1-6-01	1945	2003	00:18	EF	Y	3.33	549	TRIAL RECLOSURE MADE & STAY
	2-6-01	0911	1345	04:34	EF	Y	2.58	6480	BAD WOODEN XARMS CHANGED AT OKEARO
	4-6-01	1943	2215	02:32	OC	R	3.67	5114	J&P FUSES AMENDED AT ELEYE S/S
	9-6-01	1943	0626	10:52	OC	B	5.17	30.899	FAULTY LINE AMENDED
	10-6-01	1913	1728	22:15	EF	Y	4.58	56.048	WIRE CUT AMENDED AT ISIKAN
	16-6-01	1710	1716	00:06	-	-	3.33	183	TRIAL RECLOSURE MADE & STAY
	18-6-01	0930	1630	07:00	EF	Y	3.67	14,230	FAULT AMENDED
				47:37	**OC-2, EF-4**		**26.33**	**113,503**	
JULY	6-7-01	1949	2210	02:21	OC	R	5.17	6682	BROKEN XARMS CHANGED
	7-7-01	0630	0730	01:00	OC	R,B	5.00	2750	TRIAL RECLOSURE MADE & STAY
	8-7-01	2345	0723	07:38	OC	R	5.17	21,705	NEUTRAL LINE RESTING ON LIFE WIRE SEPARATED AT JEJE S/S
	10-7-01	1935	2255	03:20	OC	R,B	5.00	9167	FAULT AMENDED
	15-7-01	1255	0702	06:07	OC	R	3.83	12.885	"B" DIVISION OPENED
	19-7-01	1940	0005	04:25	OC	R	4.67	11,344	TRIAL RECLOSURE MADE & STAY
	23-7-01	1942	2155	02:13	OC	R	4.67	5694	TRIAL RECLOSURE MADE & STAY
	25-7-01	1943	2158	02:15	OC	B	4.67	5779	TRIAL RECLOSURE MADE & STAY
				29:19	**OC-8, EF-0**		**38.18**	**76,006**	
AUG.	5-8-01	0049	1110	35:39	OC	R,B	3.33	65293	LEAKING LIGHTNING ARRESTER CHANGED AT ALPHA S/S
	7-8-01	1905	0001	05:04	OC	B	3.67	10227	FAULT AMENDED
	11-8-01	0655	0915	02:20	EF	Y	3.83	4915	"B" DIVISION OPENED
	14-8-01	0401	0405	00:04	EF	Y	3.00	110	TRIAL RECLOSURE MADE & STAY
	18-8-01	1759	1821	00:02	-	-	4.17	76	TRIAL RECLOSURE MADE & STAY
	18-8-01	1805	2210	04:05	-	-	4.17	9365	FAULT AMENDED

	20-8-01	0609	0834	02:25	OC	R	5.00	6646	TRIAL RECLOSURE MADE & STAY
	21-8-01	1911	1940	00:29	OC	R,B	5.42	1441	LAO S/S OPENED
	24-8-01	2157	1436	17:21	-	-	3.67	35021	JUMPER RESTING ON CHANNEL AT AJEBAMIDELE AMENDED.
	27-8-01	2328	2341	00:13	OC	R,B	5.00	596	"B" DIVISION S/S OPENED
	30-8-01	2040	2234	01:54	OC	B	4.83	5047	TRIAL RECLOSURE MADE & STAY
				69:36	**OC-6.EF-2**		**46.09**	**138,737**	
	2-9-01	1934	1937	00:03	-	-	3.50	96	TRIAL RECLOSURE MADE & STAY
	3-9-01	0958	1057	00:53	OC	R,B	4.17	2026	"B" DIVISION S/S OPENED
	5-9-01	1436	1654	02:18	EF	Y	2.75	3479	GREEN PARK & IROWO S/S OPENED
	5-9-01	1903	2009	01:06	OC	B	5.08	3073	TRIAL RECLOSURE MADE & STAY
	6-9-01	1913	1917	00:04	EF	Y	4.00	147	TRIAL RECLOSURE MADE & STAY
SEPT.	8-9-01	2110	2156	00:46	OC	B	3.00	1265	TRIAL RECLOSURE MADE & STAY
	9-9-01	1816	1950	01:34	OC	B	3.33	2869	TRIAL RECLOSURE MADE & STAY
	11-9-01	1947	1953	00:06	-	-	3.33	183	TRIAL RECLOSURE MADE & STAY
	12-9-01	1433	1450	00:17	EF	Y	2.17	338	TRIAL RECLOSURE MADE & STAY
	20-9-01	1250	1635	03:47	EF	Y	3.50	7283	FD 4 UPRISER CUT AMENDED
	20-9-01	1825	2212	03:47	OC	R	3.58	7449	"B" DIVISION S/S OPENED
	30-9-01	1845	2213	03:28	OC	B	5.00	9533	FAULT AMENDED
				18:09	**OC-6. EF-4**		**40.08**	**37,741**	
	6-10-01	0729	0734	00:05	OC	R	3.58	164	TX POWER FAILURE
	11-10-01	0601	0615	00:14	-	-	4.33	556	TRIAL RECLOSURE MADE & STAY
	13-10-01	0552	0600	00:08	EF	Y	4.00	293	TRIAL RECLOSURE MADE & STAY
	14-10-01	1855	1916	00:21	-	-	4.67	899	TRIAL RECLOSURE MADE & STAY
	14-10-01	1932	1936	00:04	-	-	4.00	147	TX POWER FAILURE
	16-10-01	0940	0943	00:03	-	-	2.83	78	TRIAL RECLOSURE MADE & STAY
OCT.	16-10-01	1028	1040	00:12	OC/EF	R,Y	1.33	146	TRIAL RECLOSURE MADE & STAY
	16-10-01	0624	0740	01:16	OC	B	5.00	3483	TRIAL RECLOSURE MADE & STAY
	17-10-01	2022	2039	00:17	EF	Y	4.33	675	"B" DIVISION ISOLATED
	20-10-01	0609	0624	00:15	EF	Y	3.83	527	TRIAL RECLOSURE MADE & STAY
	25-10-01	0601	0743	01:42	OC	R,B	5.00	4675	"B" DIVISION OPENED
	26-10-01	1020	1342	03:22	OC	R,B	4.33	8018	LAO S/S OPENED
	29-10-01	1840	2221	03:41	OC	R	4.67	9461	TRIAL RECLOSURE MADE & STAY
	30-10-01	0546	0920	03:34	EF	Y	4.33	8494	HT LINE CUT AMENDED
				15:14	**OC-6.EF-5**		**56.23**	**37,616**	
NOV.	1-11-01	2138	2145	00:02	-	-	4.67	300	TX POWER FAILURE
	1-11-01	2200	2205	00:05	EF	Y	4.67	214	TRIAL RECLOSURE MADE & STAY
	4-11-01	1904	1909	00:05	-	-	4.00	183	TRIAL RECLOSURE MADE & STAY
	7-11-01	2233	2301	00:28	-	-	5.00	1283	TX POWER FAILURE
	8-11-01	1211	1239	00:28	-	-	4.67	1199	TX POWER FAILURE.

	9-11-01	0757	0802	00:05	OC	B	3.33	152	TRIAL RECLOSURE MADE & STAY
	9-11-01	2344	2354	00:08	-	-	4.33	318	TX POWER FAILURE:
	12-11-01	1728	1813	00:45	EF	Y	3.42	1411	TRIAL RECLOSURE MADE & STAY
	13-11-01	1908	1920	00:12	EF	Y	4.67	514	TRIAL RECLOSURE MADE & STAY
	15-11-01	1835	1850	00:15	OC	R	5.00	688	LAO ISOLATOR OPENED
	21-11-01	1459	1514	00:15	-	-	3.67	505	TX POWER FAILURE
	24-11-01	1654	1716	00:22	EF	Y	3.33	672	LAO S/S OPENED
	24-11-01	1904	1917	00:13	OC	R	4.33	516	TX POWER FAILURE
	26-11-01	2320	0720	08:00	OC	R	5.08	22352	BROKEN XARMS AMENDED AT OKEPADI
				11:28	**OC-4,EF-4**		**59.84**	**30,307**	
	2-12-01	1823	1940	01:17	OC	B	5.00	3529	"B" DIVISION S/S OPENED
	2-12-01	2056	2118	00:22	-	-	5.00	1008	TX POWER FAILURE
	4-12-01	2110	2130	00:20	OC/EF	R,Y	4.08	748	TRIAL RECLOSURE MADE & STAY
	5-12-01	2038	2047	00:09	-	-	4.33	357	TX POWER FAILURE
	9-12-01	0933	0940	00:07	EF	Y	4.00	257	TRIAL RECLOSURE MADE & STAY
	15-12-01	0558	0640	00:42	EF	Y	3.33	1282	INTERTRIPPED XF2
	18-12-01	2010	2032	00:22	OC	B	5.00	1008	YOUTH CENTRE S/S OPENED
DEC.	18-12-01	0748	0756	00:08	EF	Y	4.67	342	TX POWER FAILURE
	19-12-01	1845	1850	00:05	EF	Y	4.67	214	TRIAL RECLOSURE MADE & STAY
	26-12-01	1844	1910	00:26	EF	Y	4.33	1032	TRIAL RECLOSURE MADE & STAY
	27-12-01	0920	0923	00:03	-	-	4.00	110	TX POWER FAILURE
	27-12-01	0510	0514	00:04	-	-	3.33	122	TX POWER FAILURE
	28-12-01	0928	0935	00:07	OC/EF	R,Y	4.08	262	TRIAL RECLOSURE MADE & STAY
	28-12-01	1855	1926	00:31	EF	Y	4.33	1230	TRIAL RECLOSURE MADE & STAY
	30-12-01	2053	2110	00:17	OC/EF	B,Y	4.00	623	TRIAL RECLOSURE MADE & STAY
				05:00	**OC-5,EF-9**		**64.15**	**12,124**	
	2-1-02	2005	2025	00:17	-	--	3.18	494	TX POWER FAILURE
	2-1-02	0625	0722	00:57	OC/EF	B,Y	5.00	2613	TRIAL RECLOSURE MADE & STAY
	3-1-02	2115	2127	00:05	EF	Y	3.83	176	TRIAL RECLOSURE MADE & STAY
	4-1-02	1630	1637	00:07	-	-	4.00	257	TX POWER FAILURE:
	5-1-02	2015	2215	02:00	OC/EF	R,Y	4.00	4400	FAULT AMENDED
JAN	9-1-02	0345	1145	08:00	OC	R,B	5.50	24200	"B" DIVISION S/S OPENED
	17-1-02	1043	1155	01:12	EF	Y	3.83	2528	"B" DIVISION S/S OPENED
	17-1-02	1844	1854	00:10	OC	B	4.67	428	TRIAL RECLOSURE MADE & STAY
	17-1-02	2020	2137	01:17	OC	R,B	4.42	3120	JUMPER CUT AMENDED
	23-1-02	2050	2129	00:39	OC	B	5.00	1788	TRIAL RECLOSURE MADE & STAY
	31-1-02	1842	2200	03:18	OC/EF	R,Y	4.17	7569	FAULT AMENDED
				18:02	**OC-7, EF-5**		**47.59**	**47,573**	

FEB.	1-2-02	2130	2145	00:15	EF	Y	3.92	539	TRIAL RECLOSURE MADE & STAY
	4-2-02	1414	1430	00:16	-	-	3.00	440	TX POWER FAILURE
	5-2-02	1749	1752	00:03	EF	Y	4.00	110	INTERTRIPPED XF. 2
	5-2-02	1833	1840	00:07	-	-	3.17	203	TX. POWER FAILURE
	7-2-02	2101	0733	10:32	OC/EF	B.Y	4.33	25085	FAULT AMENDED
	8-2-02	2145	2213	00:28	OC	B	4.00	1027	TRIAL RECLOSURE MADE & STAY
	11-2-02	2048	2057	00:09	EF	Y	4.00	330	TX POWER FAILURE
	12-2-02	0536	1716	11:40	EF	Y	3.17	1162	TX POWER FAILURE
	13-2-02	1947	1951	00:04	-	-	3.00	110	TX. POWER FAILURE
	16-2-02	1045	1049	00:04	-	-	3.83	140	TX. POWER FAILURE
	17-2-02	0617	0643	00:26	-	-	4.00	953	TX POWER FAILURE:
	23-2-02	1314	1328	00:14	OC	B	3.50	449	TRIAL RECLOSURE MADE & STAY
	25-2-02	0621	0626	00:05	-	-	3.00	138	TX POWER FAILURE
	27-2-02	1331	1345	00:14	-	-	3.83	492	TX POWER FAILURE:
				24:37	**OC-3, EF-5**		**50.75**	**31,178**	
MARCH	5-3-02	1922	1950	00:28	-	-	4.00	1027	TX POWER FAILURE:
	6-3-02	2320	2323	00:03	-	-	3.00	83	TX POWER FAILURE:
	7-3-02	1719	1910	00:51	OC/EF	B.Y	4.17	4243	LEO S/S OPENED
	8-3-02	0616	0620	00:04	-	-	3.83	140	TX POWER FAILURE:
	9-3-02	1846	1450	20:04	EF		4.00	44,147	FAULTY XARMS AMENDED
	10-3-02	1707	1714	00:07	-	-	4.00	257	TX POWER FAILURE:
	12-3-02	0428	0547	01:19	-	-	2.83	2049	TX POWER FAILURE:
	13-3-02	2205	0554	07:49	-	-	3.17	13628	TX POWER FAILURE:
	14-3-02	1840	1852	00:12	-	-	3.00	330	TX POWER FAILURE
	16-3-02	1713	2004	02:51	EF	Y	4.50	7054	LAO S/S OPENED
	16-3-02	2009	0800	11:51	EF	Y	3.50	22811	JUMPER RESTING ON STAYWIRE ISOLATED AT BYEPASS S/S
	17-3-02	1444	1720	02:36	EF	Y	3.00	4290	FAULTY XARMS CHANGED AT ODOLE
	17-3-02	1911	1915	00:04	-	-	3.00	110	TX POWER FAILURE:
	21-3-02	1931	1936	00:05	-		3.83	176	TX POWER FAILURE:
	21-3-02	1943	1958	00:15		-	3.83	527	TX POWER FAILURE
	22-3-02	1504	0507	00:03	-	-	4.00	110	TX POWER FAILURE:
	23-3-02	1134	1136	00:02	-	-	3.00	55	TX POWER FAILURE:
	23-3-02	0126	0703	05:37	-	-	2.00	6178	TX POWER FAILURE:
	26-3-02	1245	1545	03:00	-	-	3.83	6320	TX POWER FAILURE:
	27-3-02	1621	1625	00:04	EF	Y	4.00	147	TRIAL RECLOSURE MADE & STAY
	27-3-02	2255	2314	00:19	-	-	2.83	493	TX POWER FAILURE
	29-3-02	1724	2040	03:16	OC	R	2.17	3899	BAD WOODEN XARMS CHANGED
				55:00	**OC –2, EF-6**		**75.49**	**118,074**	

APRIL	7-4-02	1518	1616	00:58	EF	Y	2.92	1552	TRM&S AFTER RAIN STOPPED
	9-4-02	2027	2044	00:17	-	-	3.00	468	TX POWER FAILURE:
	10-4-02	0039	0335	02:56	-	-	2.83	4566	TX POWER FAILURE:
	14-4-02	1006	1913	00:07	EF	-	3.50	225	TRIAL RECLOSURE MADE & STAY
	15-4-02	1913	2242	03:29	OC/EF	B.Y	3.00	5748	FAULT AMENDED
	18-4-02	2213	2305	00:52	EF	Y	3.17	1511	TRIAL RECLOSURE MADE & STAY
	19-4-02	1435	1445	00:10	-	-	4.00	367	TX POWER FAILURE
	20-4-02	0205	1129	09:24	EF	Y	2.83	14,631	ORITA OBELE S/S OPENED
	23-4-02	0010	0057	00:47	EF	Y	3.17	1366	TRIAL RECLOSURE MADE & STAY
	25-4-02	1023	1049	00:26	-	-	3.00	715	TX POWER FAILURE:
	29-4-02	1040	1045	00:05	EF	Y	4.00	183	TRIAL RECLOSURE MADE & STAY
	29-4-02	1908	1242	17:34	EF	Y	4.17	40289	FAULT CLEARED
				37:05	**OC-1,EF-8**		**39.59**	**71,621**	
MAY	6-5-02	0051	0100	00:09	-	-	3.50	289	TX POWER FAILURE:
	7-5-02	2030	0713	10:43	OC	B	4.50	26524	LAO S/S OPENED
	8-5-02	1915	1928	00:13	-	-	4.00	477	TX POWER FAILURE
	8-5-02	2045	01110	00:25	-	-	2.00	458	TX POWER FAILURE:
	8-5-02	0535	0558	00:09	-	-	2.17	158	TX POWER FAILURE:
	10-5-02	0941	0950	00:11	-	-	2.17	179	TX POWER FAILURE:
	10-5-02	1342	1353	00:22	EF	Y	3.50	353	TX POWER FAILURE:
	10-5-02	1738	1800	01:01	EF	Y	4.00	807	TRIAL RECLOSURE MADE & STAY
	13-5-02	1312	1413	00:08	-	-	3.17	1773	TRIAL RECLOSURE MADE & STAY
	14-5-02	2020	2028	11:07	-	-	3.50	257	TX POWER FAILURE:
	18-5-02	0944	2051	00:06	-	-	4.00	24,457	TX POWER FAILURE:
	26-5-02	0929	0935	00:28	-	-	3.00	165	TX POWER FAILURE:
	29-5-02	1040	1108	00:06	-	-	3.83	983	TX POWER FAILURE
	30-5-02	2140	2146	00:06	-	-	3.00	165	TX POWER FAILURE
	31-5-02	0806	0812	00:04	-	-	2.83	156	TX POWER FAILURE
	31-5-02	1141	1145	00:04	-	-	3.83	140	TX POWER FAILURE
				25:41			**53.00**	**57,641**	
JUNE	1-6-02	1224	1228	00:04	-	-	3.92	144	TX POWER FAILURE:
	1-6-02	2330	2350	00:20	-	-	4.00	733	TX POWER FAILURE
	1-6-02	0655	0659	00:04	-	-	3.50	128	TX POWER FAILURE:
	4-6-02	1722	1755	00:33	EF	Y	3.50	1059	TX POWER FAILURE
	4-6-02	1927	1956	00:29	EF	Y	3.75	2063	NO RELAY INDICATION
	5-6-02	0140	0248	01:08	EF	Y	3.00	1870	TRIAL RECLOSURE MADE & STAY
	5-6-02	0445	0610	01:25	-	-	3.17	726	FAULT AMENDED
	7-6-02	0527	0640	01:13	-	-	2.83	1894	TX POWER FAILURE
	8-6-02	0950	0957	00:07	-		3.00	193	TX POWER FAILURE:
	8-6-02	1355	1420	00:25	-	-	3.50	802	TX POWER FAILURE:

	8-6-02	1810	1952	01:42	-	-	3.50	3273	TX POWER FAILURE:
	8-6-02	2332	2341	00:18	-	-	3.50	523	TX POWER FAILURE:
	8-6-02	0716	0724	00:08	-	-	3.17	220	TX POWER FAILURE:
	9-6-02	1913	1918	00:05	-	-	3.00	191	TX POWER FAILURE:
	10-6-02	2030	2040	00:10	-	-	4.17	367	TX POWER FAILURE:
	10-6-02	0545	0600	00:15	-	-	4.00	389	TX POWER FAILURE:
	11-6-02	1750	2128	03:38	OC	R	2.83	7154	TX POWER FAILURE:
	13-6-02	1115	1125	00:10	-	-	3.58	321	FAULT AMENDED
	17-6-02	0720	0820	01:00	EF	Y	3.50	1925	TX POWER FAILURE
	18-6-02	1500	1515	00:15	-	-	3.50	481	TRIAL RECLOSURE MADE & STAY
	19-6-02	1533	1750	02:17	-	-	3.50	5023	TX POWER FAILURE
	19-6-02	0950	105	01:15	-	-	3.50	1946	TX POWER FAILURE:
	20-6-02	1540	1545	00:05	-	-	4.00	176	TX POWER FAILURE:
	20-6-02	1945	1950	00:05	EF	Y	2.83	183	TRIAL RECLOSURE MADE & STAY
	25-6-02	0420	0428	00:05	-	-	2.33	171	TX POWER FAILURE:
	26-6-02	1410	1513	01:03	-	-	3.17	1831	TX POWER FAILURE:
	28-6-02	0730	0751	00:21	-	-	2.50	481	NO RELAY INDICATION
	28-6-02	0830	0835	00:05	-	-	2.83	130	TX POWER FAILURE
	29-6-02	0634	0640	00:06	-	-	2.50	138	TX POWER FAILURE:
	30-6-02	0602	0610	00:08	-	-	2.33	171	TX POWER FAILURE
				19:02	**OC-1,EF-5**		**96.93**	**34,706**	
JULY	6-7-02	1916	2040	01:24	EF	Y	3.33	2564	FAULT AMENDED
	7-7-02	1228	1230	00:02	-	-	3.50	64	TX POWER FAILURE
	7-7-02	2020	2031	00:11	-	-	3.83	386	NO RELAY INDICATION.
	10-7-02	1922	1930	00:08	OC/EF	R,Y	3.83	281	TRIAL RECLOSURE MADE & STAY
	15-7-02	2059	2104	00:05	-	-	3.00	138	TX POWER FAILURE
	20-7-02	0612	0658	00:46	-	-	2.83	1193	TX POWER FAILURE
	21-7-02	2250	2255	00:05	-	-	4.00	183	TX POWER FAILURE:
	21-7-02	0450	0454	00:04	-	-	2.00	73	TX POWER FAILURE:
	23-7-02	0704	0738	00:34	-	-	2.15	670	NO RELAY INDICATION
	28-7-02	1501	1525	00:24	-	-	2.83	623	TRIAL RECLOSURE MADE & STAY
	30-7-02	2120	2127	00:07	EF	Y	4.25	273	TRIAL RECLOSURE MADE & STAY
				03:50	**OC-1,EF-3**		**35.55**	**6448**	
AUG	9-8-02	1941	1945	00:04	-	-	3.67	135	TX POWER FAILURE
	10-8-02	2125	1100	13:35	EF	Y	4.00	29.883	FAULT AMMMENDED
	10-8-02	2135	2140	00:05	-	-	4.00	183	TX POWER FAILURE
	26-8-02	2052	2057	00:05	OC/EF	R,Y	4.00	183	TRIAL RECLOOSURE MADE & STAY
	27-8-02	1820	1850	00:30	-	-	3.00	825	TX POWER FAILURE
	28-8-02	1923	1941	00:18	OC/EF	B,Y	3.33	549	LAO S/S OPENED
	31-8-02	1848	1855	00:07	-	-	3.83	246	TX POWER FAILURE:

				14:44	**OC-2, EF-3**		**25.83**	**32004**	
	4-9-02	1006	1008	00:02	-	-	3.00	55	TX POWER FAILURE
	4-9-02	1500	1503	00:03	-	-	3.15	87	TX POWER FAILURE
	6-9-02	1240	1958	07:48	EF	Y	3.00	12870	FAULT AMENDED
	6-9-02	1625	1635	00:10	-	-	3.17	291	TX POWER FAILURE
	6-9-02	0605	0610	00:05	-	-	2.00	92	TX POWER FAILURE
	8-9-02	1845	1907	00:22	-	-	3.83	772	TX POWER FAILURE
	12-9-02	1643	1647	00:04	-	-	3.83	140	TX POWER FAILURE
	15-9-02	1538	1643	01:05	-	-	4.33	2580	TX POWER FAILURE;
	15-9-02	1915	1412	18:57	-	-	4.33	45129	WIRE CUT AMENDED AT LAO
SEPT	16-9-02	1848	1855	00:07	EF	Y	2.83	182	TX POWER FAILURE
	17-9-02	0333	0820	04:47	-	-	3.08	8103	WIRE RESTING ON A BUILDING WAS REMOVED AT AJEBAMIDELE
	19-9-02	1915	1955	00:40	EF	Y	4.42	1621	TRIAL RECLOSURE MADE & STAY
	21-9-02	0845	0850	00:05	-	-	3.00	138	TX POWER FAILURE
	22-9-02	1414	1530	01:16	OC	R	3.83	2668	LAO & IRO S/S OPENED
	22-9-02	0641	1610	09:25	OC	R,B	3.58	18 673	LAO ISOLATED
	25-9-02	1938	1944	00:06	OC/EF	B,Y	4.25	234	TRIAL RECLOSURE MADE & STAY
	28-9-02	1317	1646	03:29	EF	Y	3.17	6,073	FAULT AMENDED
	28-9-02	1910	1917	00:07	-	-	4.00	257	TX POWER FAILURE
				43:40	**OC-3,EF-6**		**5,877**	**99,965**	
	2-10-02	2015	1220	16:05	OC/EF	R,Y	4.33	38302	WIRE CUT AMENDED AT AJEBAMIDELE
	3-10-02	1813	1820	00:07	-	-	3.00	193	TX POWER FAILURE
	4-10-02	0141	0306	01:25	-	-	2.00	1558	TX POWER FAILURE;
	4-10-02	0705	0727	00:22	-	-	2.83	571	TX POWER FAILURE;
	10-10-02	0949	1003	00:14	-	-	2.83	363	TX POWER FAILURE;
OCT	10-10-02	1850	1950	01:00	EF	Y	3.50	1925	TRIAL RECLOSURE MADE & STAY
	27-10-02	1652	1704	00:12	-	-	3.50	385	TX POWER FAILURE
	28-10-02	1932	1952	00:20	OC/EF	R,Y	4.67	856	AJEBAMIDELE S/S OPENED
	29-10-02	1835	1900	00:25	-	-	3.00	688	TX POWER FAILURE;
	29-10-02	062-	0912	02:52	OC/EF	R,B,Y	2.83	1349	J &P FUSES AMENDED AT LAO
	31-10-02	1730	1740	00:10	OC	R,B	2.83	259	TRIAL RECLOSURE MADE & STAY
	31-10-02	1805	1838	00:33	EF	Y	2.00	605	TRIAL RECLOSURE MADE & STAY
				23:45	**OC-4, EF-5**		**37.32**	**47,054**	
NOV.	5-11-02	1726	1747	00:21	-	-	2.58	497	TX POWER FAILURE;
	15-11-02	1948	1953	00:05	EF	Y	4.50	206	TRIAL RECLOSURE MADE & STAY
	17-11-02	1300	1319	00:19	-	-	3.33	580	TX POWER FAILURE
	17-11-02	1327	1515	01:48	-	-	3.67	3633	NO RELAY INDICATION;
	19-11-02	1847	2211	03:24	OC/EF	R,Y	5.17	9668	FAULT AMENDED

	20-11-02	1844	1946	01:02	OC/EF	R,Y	3.15	1790	FAULT AMENDED
	21-11-02	1908	1939	23:31	EF	Y	4.83	62472	FAULT AMENDED
	25-11-02	2330	2400	00:30	EF	Y	4.92	1353	TRIAL RECLOSURE MADE & STAY
	30-11-02	0948	0952	00:04	-	-	3.00	110	TX POWER FAILURE
	30-11-02	1346	1354	00:08	-	-	4.00	293	TX POWER FAILURE.
				31:12	**OC-2, EF-5**		**39.15**	**80,602**	
DEC.	3-12-02	0525	0545	00:22	OC/EF	R,Y	4.75	958	TRIAL RECLOSURE MADE & STAY
	25-12-02	2012	2036	00:24	OC/EF	R,Y	4.83	1063	TRIAL RECLOSURE MADE & STAY
	31-12-02	1744	1751	00:07	-	-	3.85	247	TX POWER FAILURE.
				0:51	**OC-2,EF-2**		**13.43**	**2268**	

APPENDIX V: FAULTS LOG ENTRY ON 11KV NETWORK (JAN. 1998 – DEC. 2002)
FEEDER 5

MONTH	DATE OF FAULT	TIME OF FAULT	TIME RESTORED	DURATION OF FAULT HR: MIN.	NATURE OF FAULT	PHASE AFFECTED	LOAD LOSS (MW)	REV. LOSS (₦)	REMARK
APRIL	16-4-01	1929	1940	00:11	EF	Y	1.17	118	TRIAL RECLOSURE MADE & STAY
	29-4-01	1907	1913	00:06	EF	Y	1.67	919	TRIAL RECLOSURE MADE & STAY
				00:17	**OC-0.EF –2**		**2.84**	**1037**	
MAY	9-5-01	0538	1458	09:20	EF	Y	3.00	15.400	ISOLATION OF FALLING POLES AT REMAND HOMES ONDO ROAD
				09:20	**OC-0. EF-1**		**3.00**	**15,400**	
JUNE	4-6-01	0902	0911	00:09	EF	Y	**2.42**	200	TRIAL RECLOSURE MADE & STAY
	9-6-01	1759	1545	22:14	EF	Y	3.00	36,685	BROKEN XARMS CHANGED
	15-6-01	1810	1820	00:10	EF	Y	1.67	153	TRIAL RECLOSURE MADE & STAY
	29-6-01	2221	2243	00:2	EF	Y	1.67	337	TRIAL RECLOSURE MADE & STAY
				22:55	**OC-O. EF-4**		**8.76**	**37,375**	
JULY	21-7-01	1314	1354	00:40	EF	Y	1.67	612	TRIAL RECLOSURE MADE & STAY
				00:40	**OC-0. EF-1**		**1.67**	**612**	
SEPT.	5-9-01	0700	1739	10:39	EF	Y	2.50	14644	FELL DOWN HT POLES ALONG ONDO ROAD. ISOLATED
	8-9-01	1149	1700	05:11	EF	Y	1.67	4761	HEAVY RAINFALL
	16-9-01	0604	0640	00:36	EF	Y	2.17	716	TRIAL RECLOSURE MADE & STAY
	19-9-01	1924	1931	00:07	-	-	1.67	107	TX POWER FAILURE
	20-9-01	1809	1855	00:46	EF	Y	2.50	1054	TRIAL RECLOSURE MADE & STAY
	24-9-01	1715	1740	00:25	-	-	3.00	688	TX POWER FAILURE
	26-9-01	0948	0954	00:06	-	-	2.42	133	TX POWER FAILURE
				17:50	**OC-0. EF-4**		**8.84**	**22,103**	
OCT.	10-10-01	1727	1830	01:03	-	-	3.00	1733	TX POWER FAILURE
	11-10-01	0624	0820	01:56	EF	Y	2.00	2127	AKAD S/S AT ONDO ROAD OPENED
	14-10-01	1932	1936	00:04	-	-	1.67	919	TX POWER FAILURE
	18-10-01	1946	1953	00:07	OC/EF	B,Y	3.00	193	TRIAL RECLOSURE MADE & STAY
	20-10-01	0542	0556	00:14	-	-	2.50	321	TX POWER FAILURE
	22-10-01	0906	1540	06:34	-	-	2.17	7837	TX POWER FAILURE
	23-10-01	0440	0450	00:10	EF	Y	2.50	229	FD. 5 INTETRIPPED XF.2
	24-10-01	1827	1846	00:19	-	-	2.50	435	TX POWER FAILURE
				10::27	**OC-1. EF-3**		**7.50**	**13,794**	
NOV	1-11-01	2138	2145	00:07	-	-	1.67	107	TX POWER FAILURE

	4-11-01	1555	1609	00:14	EF	Y	1.17	150	TRIAL RECLOSURE MADE & STAY
	7-11-01	2233	2301	00:28	-	-	2.00	513	TX POWER FAILURE
	8-11-01	1211	1239	00:28	-	-	3.00	770	TX POWER FAILURE
	9-11-01	2344	2352	00:08	-	-	2.42	177	TX POWER FAILURE
	11-11-01	1813	1815	00:02	EF	Y	2.17	40	TRIAL RECLOSURE MADE & STAY
	21-11-01	1459	1514	00:15	-	-	2.50	344	TX POWER FAILURE
	24-11-01	1904	1917	00:13	OC	R	1.67	199	TX POWER FAILURE
				01:55	**OC-1, EF-2**		**16.60**	**2300**	
DEC	2-12-01	2056	2118	00:22	-	-	2.17	438	TX POWER FAILURE
	5-12-01	2038	2047	00:09	-	-	3.00	248	TX POWER FAILURE
	27-12-01	0920	0923	00:03	-	-	1.67	46	TX POWER FAILURE
	27-12-01	0510	0514	00:04	-	-	1.17	43	TX POWER FAILURE
	28-12-01	1043	1129	00:46	EF	Y	2.50	1054	TRIAL RECLOSURE MADE & STAY
				01:24	**OC-0, EF-1**		**10.51**	**1829**	
JAN	2-1-02	2005	2022	00:17	-	-	3.00	468	TX POWER FAILURE
	4-1-02	1630	1637	00:07	-	-	3.50	115	TX POWER FAILURE:
	9-1-02	1542	1558	00:16	-	-	2.00	293	TRIAL RECLOSURE MADE & STAY
	11-1-02	1450	1255	22:05	OC/EF	R,Y	2.08	25,263	WIRE CUT AMENDED
	14-1-02	1933	1937	00:04	-	-	2.33	85	TRIAL RECLOSURE MADE & STAY
	17-1-02	0953	1457	05:04	-	-	1.83	5100	BANJO S/S OPENED
	19-1-02	1917	2040	01:23	EF	Y	4.00	3043	INTERTRIPPED XF 2
	26-1-02	1035	1045	00:10	OC	B	3.92	359	TRIAL RECLOSURE MADE & STAY
	26-1-02	1035	1230	00:40	EF	Y	2.17	796	TRIAL RECLOSURE MADE & STAY
				30:06			**24.83**	**35.632**	
FEB.	3-2-02	1420	1426	00:06	EF	Y	4.00	220	INTER TRIPPED XF 2
	4-2-02	1414	1430	00:16	-	-	3.00	440	TX POWER FAILURE
	4-2-02	1833	1840	00:07	-	-	3.17	203	TX POWER FAILURE
	10-2-02	1635	1640	00:05	EF	Y	1.33	61	TRIAL RECLOSURE MADE & STAY
	13-2-02	1947	1951	00:04	-	-	2.83	104	TX POWER FAILURE
	16-2-02	1045	1049	00:04	-	-	3.00	110	TX POWER FAILURE
	16-2-02	2215	2218	00:03	EF	Y	2.08	57	INTERTRIPPED XF 2
	17-2-02	0612	0643	00:26	-	-	3.17	756	TX POWER FAILURE:
	19-2-02	0831	0853	00:22	EF	Y	3.00	605	INTERTRIPPED XF. 2
	20-2-02	2003	1507	19:04	OC/EF	R,Y	4.00	41.947	JUMPER CUT AMENDED
	22-2-02	2121	2216	00:55	-	-	4.50	2269	FAULT AMENDED
	23-2-02	1228	1250	00:22	OC	B	3.33	672	TRIAL RECLOSURE MADE & STAY
	25-2-02	1238	1750	05:12	EF	Y	3.17	9066	JUMPER AMENDED AT OWE- AKALA S/S
	26-2-02	0555	0615	00:20	EF	Y	2.00	367	TRIAL RECLOSURE MADE & STAY

	27-2-02	1331	1345	00:14	-	-	3.00	385	TX POWER FAILURE:
	27-2-02	1555	1619	00:24	EF	Y	2.83	623	INTERTRIPPED XF 2
	28-2-02	1139	1145	00:06	EF	Y	2.92	161	TRIAL RECLOSURE MADE & STAY
	28-2-02	1614	1835	02:21	EF	Y	3.00	3878	SHATTERED INSULATOR REPLACED
				30:31	**OC-2,EF-10**		**54.33**	**61,924**	
	3-3-02	1912	1930	00:18	EF	Y	4.00	660	INTERTRIPPED XF 2
	5-3-02	1922	1950	00:28	-	-	4.00	770	TX POWER FAILURE:
	6-3-02	1952	2000	00:08	EF	Y	3.00	275	TRIAL RECLOSURE MADE & STAY
	6-3-02	2320	2323	00:03	-	-	3.75	78	TX POWER FAILURE:
	8-3-03	0616	0620	00:04	-	-	2.83	104	TX POWER FAILURE:
	9-3-02	1908	2128	02:20	OC	R	4.00	5133	INTERTRIPPED XF 2
	9-3-02	0631	1450	08:19	EF	Y	4.00	18.297	FAULTY XARMS CHANGED
	10-3-02	1707	1714	00:07	-	-	3.00	193	TX POWER FAILURE:
	10-3-02	2105	2110	00:45	OC	B	4.00	183	TRIAL RECLOSURE MADE & STAY
	11-3-02	1510	1559	00:49	EF	Y	3.83	1720	TRIAL RECLOSURE MADE & STAY
	12-3-02	0428	0548	01:20	-	-	2.83	2075	TX POWER FAILURE:
	13-3-02	2205	0554	07:49	-	-	3.00	12898	TX POWER FAILURE
	14-3-02	1840	1852	00:12	-	-	4.17	459	TX POWER FAILURE
	16-3-02	1911	1915	00:04	-	-	3.50	128	TX POWER FAILURE:
MARCH	19-3-02	1350	1619	02:29	EF	Y	3.00	4098	FAULT AMENDED
	20-3-02	2617	2022	00:05	EF	Y	3.33	153	TRIAL RECLOSURE MADE & STAY
	21-3-02	1931	1936	00:05	-	-	3.00	138	TX POWER FAILURE:
	21-3-02	1943	1958	00:15	-	-	4.00	550	TX POWER FAILURE
	22-3-02	0504	0507	00:03	-	-	2.83	78	TX POWER FAILURE
	23-3-02	1134	1136	00:02	-	-	3.83	70	TX POWER FAILURE
	23-3-02	0126	0703	05:37	-	-	3.00	9268	TX POWER FAILURE:
	24-3-02	0706	1346	06:40	-	-	2.00	7333	FAULT AMENDED
	26-3-02	1245	1545	03:00	EF	Y	4.00	6600	TX POWER FAILURE:
	26-3-02	2220	2325	01:05	-	-	4.00	2383	TRIAL RECLOSURE MADE & STAY
	27-3-02	2255	2314	00:19	EF	Y	3.00	523	TX POWER FAILURE
	28-3-02	2057	2103	00:06	-	-	3.17	174	TX POWER FAILURE
	29-3-02	1936	2041	01:05	-	-	4.00	2383	TX POWER FAILURE
	30-3-02	0839	0843	00:04	EF	Y	2.83	85	TRIAL RECLOSURE MADE & STAY
	30-3-02	2252	2302	00:10	EF	Y	4.00	367	TRIAL RECLOSURE MADE & STAY
				43:11	**OC-3, EF-10**		**98.23**	**77.176**	
APRIL	7-4-02	1517	1728	02:11	EF	Y	3.33	3.999	AGUNLOYE S/S OPENED
	9-4-02	2027	2044	00:17	-	-	2.83	441	TX POWER FAILURE
	10-4-02	0039	0335	02:56	-	-	2.00	3.227	TX POWER FAILURE:
	12-4-02	0458	0748	02:50	EF	Y	3.17	4.940	FAULT AMENDED
	14-4-02	0502	0722	02:20	EF	Y	3.67	4.710	AGUNLOYE S/S OPENED

	17-4-02	1930	1059	00:29	OC/EF	B.Y	4.50	1,196	INTERTRIPPED XF. 2
	18-4-02	1709	1738	00:29	EF	Y	4.00	1,063	TRIAL RECLOSURE MADE & STAY
	18-4-02	2207	0223	04:16	EF	Y	3.83	8.988	TRIAL RECLOSURE MADE & STAY
	19-4-02	1435	1445	00:10	-	-	3.00	275	TX POWER FAILURE:
	19-4-02	2025	2049	00:24	EF	Y	3.17	697	TRIAL RECLOSURE MADE & STAY
	20-4-02	1104	1110	00:06	EF	Y	2.83	156	AGUNLOYE S/S OPENED
	20-4-02	0215	0336	01:21	EF	Y	3.00	2228	TRIAL RECLOSURE MADE & STAY
	20-4-02	0451	0800	03:09	EF	Y	3.00	5198	TX POWER FAILURE:
	21-4-02	2009	2021	00:12	EF	Y	3.83	421	AGUNLOYE S/S OPENED
	21-4-02	0245	0650	04:05	EF	Y	2.33	5233	TRIAL RECLOSURE MADE & STAY
	24-4-02	1858	1910	00:12	EF	Y	3.00	330	TRIAL RECLOSURE MADE & STAY
	25-4-02	1023	1049	00:26	-	-	2.83	674	TX POWER FAILURE:
	26-4-02	1805	1857	00:52	EF	Y	3.33	1587	AGUNLOYE S/S OPENED
	29-4-02	0539	0546	00:07	EF	Y	3.08	198	TRIAL RECLOSURE MADE & STAY
	29-4-02	1845	1942	00:57	EF	Y	3.00	1568	TRIAL RECLOSUE MADE & STAY
				27:49	**OC-1,EF-16**		**63.73**	**47,129**	
MAY	1-5-02	1541	1545	00:04	EF	Y	3.00	110	TRIAL RECLOSURE MADE & STAY
	5-5-02	1128	1140	00:12	EF	Y	3.00	330	TRIAL RECLOSURE MADE & STAY
	5-5-02	025-	0635	03:45	EF	Y	4.00	8250	AGUNLOYE S/S OPENED
	6-5-02	1556	1643	00:49	EF	Y	4.17	1873	TRIAL RECLOSURE MADE & STAY
	6-5-02	1918	1155	16:37	-	-	4.17	38.110	NO RELAY INDICATION
	6-5-02	0051	0100	00:09	-	-	2.00	165	TX POWER FAILURE:
	7-5-02	1905	1915	00:10	EF	Y	4.42	405	TRIAL RECLOSURE MADE & STAY
	8-5-02	1915	1928	00:13	-	-	3.92	467	TX POWER FAILURE
	8-5-02	0045	0110	00:25	-	-	2.00	458	TX POWER FAILURE:
	8-5-02	0535	0558	00:23	-	-	2.17	458	TX POWER FAILURE:
	9-5-02	1910	2235	03:25	-	-	4.08	7667	NO RELAY INDICATION
	10-5-02	0941	0950	00:09	-	-	3.00	248	TX POWER FAILURE:
	10-5-02	1342	1353	00:11	-	-	4.00	403	TX POWER FAILURE:
	10-5-02	1837	1844	00:07	EF	Y	4.00	257	TRIAL RECLOSURE MADE & STAY
	10-5-02	1923	2000	00:37	EF	Y	4.00	1526	TRIAL RECLOSURE MADE & STAY
	11-5-02	1924	1939	00:15	EF	Y	4.00	550	TRIAL RECLOSURE MADE & STAY
	12-5-02	1709	1718	00:19	EF	Y	3.08	536	TRIAL RECLOSURE MADE & STAY
	13-5-02	1316	1410	00:54	EF	Y	4.00	1980	TRIAL RECLOSURE MADE & STAY
	14-5-02	1020	1055	00:35	EF	Y	2.33	748	TRIAL RECLOSURE MADE & STAY
	14-5-02	1059	1229	01:30	EF	Y	3.00	2475	FAULT AMENDED
	14-5-02	1510	1847	03:37	EF	Y	3.33	6624	FAULT AMENDED
	14-5-02	2020	2028	00:08	-	-	3.83	281	TX POWER FAILURE:
	18-5-02	0944	2051	11:07	-	-	2.67	18.832	TX POWER FAILURE:
	18-5-02	2121	2311	01:50	EF	Y	3.17	2692	FAULT AMENDED

	20-5-02	2249	0215	03:26	EF	Y	3.00	5986	TRIAL RECLOSURE MADE & STAY
	23-5-02	1930	1935	00:05	EF	Y	2.83	138	TRIAL RECLOSURE MADE & STAY
	26-05-02	0929	0935	00:06	-	-	3.67	156	TX POWER FAILURE:
	27-05-02	1929	2103	01:34	-	-	3.00	3162	AGUNLOYE S/S OPENED
	29-5-02	1040	1108	00:28	-	-	3.00	770	TX POWER FAILURE
	30-5-02	2140	2146	00:06	-	-	3.00	165	TX POWER FAILURE
	31-5-02	0806	0812	00:06	-	-	2.17	119	TX POWER FAILURE
	31-5-02	1141	1145	00:04	-	-	3.00	110	TX POWER FAILURE
				53:26	**OC-0, EF-16**		**105.59**	**106.051**	
JUNE	1-6-02	1224	1228	00:04	-	-	3.83	140	TX POWER FAILURE:
	1-6-02	2330	2350	00:20	-	-	3.00	140	TX POWER FAILURE
	1-6-02	0546	0557	00:11	EF	Y	3.50	550	TRIAL RECLOSURE MADE & STAY
	1-6-02	0835	0920	00:35	EF	Y	2.75	353	TRIAL RECLOSUE MADE & STAY
	4-6-02	1930	2052	01:22	-	-	4.00	882	AGUNLOYE S/S OPENED
	4-6-02	2130	2142	00:12	-	-	4.00	3097	NO RELAY INDICATION
	5-6-02	1946	2008	00:22	-	-	3.50	440	AGUNLOYE S/S OPENED
	5-6-02	0445	0610	01:25	-	-	3.17	706	TX POWER FAILURE
	7-6-02	0527	0640	01:13	-	-	2.00	2470	TX POWER FAILURE:
	8-6-02	0950	0957	00:07	-	-	2.17	1338	TX POWER FAILURE:
	8-6-02	1355	1420	00:25	-	-	3.83	139	TX POWER FAILURE:
	8-6-02	1810	1952	01:42	EF	Y	4.00	878	TX POWER FAILURE:
	8-6-02	2332	2341	00:18	-	-	4.00	3740	TX POWER FAILURE:
	8-6-02	0716	0724	00:08	-	-	3.00	660	TX POWER FAILURE:
	9-6-02	1320	1350	00:30	-	-	2.75	220	TRIAL RECLOSURE MADE & STAY
	9-6-02	1913	1918	00:05	-	-	3.83	176	TX POWER FAILURE:
	10-6-02	2030	2040	00:10	-	-	3.50	321	TX POWER FAILURE:
	10-6-02	0545	0600	00:15	EF	Y	3.00	413	TX POWER FAILURE:
	13-6-02	1115	1125	00:10	-	-	4.00	367	TX POWER FAILURE
	14-6-02	1420	1425	00:05	-	-	4.08	187	TRIAL RECLOSURE MADE & STAY
	18-6-02	1500	1515	00:08	-	-	4.83	664	TX POWER FAILURE
	18-6-02	1533	1750	01:02	-	-	4.83	6066	TX POWER FAILURE
	19-6-02	095-	1105	00:21	-	-	3.00	2063	TX POWER FAILURE:
	19-6-02	1540	1545	00:05	EF	Y	4.00	183	TX POWER FAILURE:
	25-6-02	042-	0428	00:08	-	-	2.83	208	TX POWER FAILURE:
	26-6-02	1412	1514	01:02	-	-	3.00	1705	AGUNLOYE S/S OPENED
	28-6-02	0730	0751	00:21	-	-	2.00	385	TX POWER FAILURE
	28-6-02	0830	0835	00:05	-	-	2.17	99	TX POWER FAILURE:
	29-6-02	0634	0640	00:06	-	-	2.17	119	TX POWER FAILURE
	30-6-02	0602	0610	00:08	-	-	2.08	153	TX POWER FAILURE
				15:11	**OC-0, EF-7**		**98.82**	**29,388**	

JULY	4-7-02	0528	0630	01:02	EF	Y	2.67	1517	FAULT AMMNDED
	7-7-02	1223	1230	00:02	-	-	3.00	55	TX POWER FAILURE
	15-7-02	2059	2104	00:05	-	-	3.17	145	TX POWER FAILURE
	16-7-02	1523	1640	01:17	EF	Y	3.42	2414	FAULT AMENDED
	17-7-02	1356	1406	00:10	EF	Y	3.00	275	TRIAL RECLOSURE MADE & STAY
	18-7-02	1815	1904	00:49	EF	Y	3.33	1496	TRIAL RECLOSURE MADE & STAY
	20-7-02	0612	0658	00:46	-	-	2.83	1193	TX POWER FAILURE
	21-7-02	2250	255	00:05	-	-	2.83	130	TX POWER FAILURE:
	21-7-02	0450	0454	00:04	-	-	2.00	73	TX POWER FAILURE:
	23-7-02	0704	0738	00:34	-	-	2.17	676	TX POWER FAILURE:
	28-7-02	1501	1525	00:24	-	-	2.83	623	TX POWER FAILURE
				05:18	**OC-0, EF-3**		**31.25**	**8.597**	
AUG	1-8-02	1903	1909	00:06	EF	Y	3.17	174	TRIAL RECLOSURE MADE & STAY
	5-8-02	2109	2115	00:08	EF	Y	3.42	251	TRIAL RECLOSURE MADE & STAY
	7-8-02	1844	1955	01:11	EF	Y	3.25	2115	TRIAL RECLOSURE MADE & STAY
	9-8-02	1941	1945	00:04	-	-	3.00	110	TX POWER FAILURE
	10-8-02	2043	2106	00:23	EF	Y	3.67	774	TRIAL RECLOSURE MADE & STAY
	10-8-02	2135	2140	00:05	-	-	3.50	160	TX POWER FAILURE
	13-8-02	2035	2044	00:09	EF	Y	3.50	289	TRIAL RECLOSURE MADE & STAY
	14-8-02	2113	2117	00:04	EF	Y	3.08	113	HEAVY RAINFALL
	16-8-02	1325	1517	03:52	EF	Y	4.17	8868	TRIAL RECLOSURE MADE & STAY
	18-8-02	2007	2017	00:05	EF	Y	3.83	176	TRIAL RECLOSURE MADE & STAY
	22-8-02	0855	0907	00:12	EF	Y	3.50	385	TRIAL RECLOSURE MADE & STAY
	22-8-02	0915	1031	01:16	EF	Y	3.50	2438	AGUNLOYE S/S OPENED
	27-8-02	1820	1850	00:30	-	-	4.00	1100	TX POWER FAILURE
	31-8-02	1848	1855	00:07	-	-	3.83	246	TX POWER FAILURE:
				08:12	**OC-0, EF-10**		**49.42**	**17.199**	
SEPT	4-9-02	1006	1008	00:02	-	-	2.83	52	TX POWER FAILURE
	4-9-02	1500	1503	00:03	-	-	3.50	96	TX POWER FAILURE
	5-9-02	1318	1324	00:06	EF	Y	2.25	124	TRIAL RECLOSURE MADE & STAY
	5-9-02	1553	1710	01:17	EF	Y	2.62	1885	AGUNLOYE E/S OPENED
	6-9-02	1625	1635	00:10	-	-	2.00	199	TX POWER FAILURE
	6-9-02	0625	0610	00:05	-	-	3.85	92	TX POWER FAILURE
	8-9-02	1845	1907	00:22	-	-	4.00	776	TX POWER FAILURE
	8-9-02	1915	1920	00:05	OC/EF	R,Y	3.00	183	DROPPED D&P FUSES REPLACED
	12-9-02	1025	1030	00:05	EF	Y	2.17	138	TRIAL RECLOSURE MADE & STAY
	12-9-02	1643	1647	00:04	-	-	3.33	80	TRIAL RECLOSURE MADE & STAY
	14-9-02	1858	0834	13:36	EF	Y	3.50	24908	TX POWER FAILURE
	15-9-02	1538	1643	01:05	-	-	3.83	2085	AGUNLOYE S/S OPENED
	16-9-02	1848	1855	00:07	-	-	2.83	246	TX POWER FAILURE:

	21-9-02	0845	0850	00:05	-	-	3.33	230	TX POWER FAILURE
	21-9-02	0653	0704	00:11	EF	Y	3.33	336	TX POWER FAILURE
	23-9-02	1547	1605	00:18	EE	Y	2.58	426	TRIAL RECLOSURE MADE & STAY
	26-9-02	1511	1520	00:09	EF	Y	2.83	233	TRIAL RECLOSURE MADE & STAY
	28-9-02	1910	1917	00:07	-	-	3.00	193	TX POWER FAILURE:
	30-9-02	1340	1610	02:30	EF	Y	2.58	3548	FAULT AMENDED
				20:27	**OC-1, EF-9**		**56.25**	**35,830**	
OCT	1-10-02	1220	1528	03:08	EF	Y	3.08	5308	AGUNLOYE S/S OPENED
	2-10-02	1940	1945	00:05	OC/EF	R,Y	3.92	130	TRIAL RECLOOSURE MADE & STAY
	2-10-02	0633	0650	00:17	EF	Y	4.33	6748	AGUNLOYE S/S OPENED
	3-10-02	1813	1820	00:07	OC	B	3.00	193	TX POWER FAILURE
	4-10-02	2040	0345	07:05	-	-	3.83	14921	FAULT AMENDED
	4-10-02	0141	0306	01:25	-	-	4.00	1558	TX POWER FAILURE:
	4-10-02	0603	1045	04:42	OC	'B	3.67	9487	BROKEN XARMS CHANGED
	5-10-02	1442	1450	00:08	-	-	3.00	220	'B' DIVISION TRM &S
	10-10-02	0949	1003	00:14	EF	Y	3.00	385	TX POWER FAILURE:
	10-10-02	1845	1855	00:10	EF	Y	3.33	305	TRIAL RECLOSURE MADE & STAY
	16-10-02	0815	0823	00:08	-	-	3.25	238	TX POWER FAILURE:
	18-10-02	1340	1350	00:10	EF	Y	2.92	268	TRIAL RECLOSURE MADE & STAY
	18-10-02	1649	0850	16:01	EF	Y	4.08	35,237	TRIAL RECLOSURE MADE & STAY
	24-10-02	1831	1409	19:38	EF	Y	3.58	38,658	TRIAL RECLOSURE MADE & STAY
	25-10-02	1933	1940	00:07	EF	Y	4.75	305	WIRE CUT AMENDED
	27-10-02	1652	1704	00:12	-	-	3.50	385	WIRE CUT AMENDED ALONG AGUNLOYE AREA
	29-10-02	1835	1900	00:25	-	-	4.00	917	TX POWER FAILURE:
				54:02	**OC-3, EF-10**		**59.24**	**115,313**	
NOV	4-11-02	2100	2100	18:05	EF	Y	4.00	39,783	BROKEN XARMS CHANGED AT FANIBI
	5-11-02	1726	1726	00:21	-	-	4.00	770	TX POWER FAILURE
	12-11-02	1835	1835	01:18	-	-	4.00	2860	NO RELAY INDICATION
	16-11-02	1114	1114	01:20	EF	Y	4.50	3300	FAULT AMENDED
	17-11-02	1300	1300	00:19	-	-	4.25	740	TX POWER FAILURE
	19-11-02	1840	1840	12:50	-	-	3.85	27.175	AGUNLOYE S/S OPENED, NO RELAY INDICATION
	25-11-02	1848	1848	02:37	-	-	3.33	4792	NO RELAY INDICATION
	26-11-02	2042	2042	02:00	EF	Y	3.67	4037	AGUNLOYE ISOLATED
	28-11-02	1914	1914	01:50	-	-	5.17	5213	FAULT AMENDED
	28-11-02	0607	0607	02:50	-	-	4.92	7667	FAULT AMENDED
	29-11-02	1836	2021	01:45	-	-	3.00	2888	TRIAL RECLOSURE MADE & STAY
	30-11-02	0948	0952	00:04	-	-	2.83	104	TX POWER FAILURE

	30-11-02	1346	1354	00:08	-	-	3.50	257	TX POWER FAILURE:
				43:27	**OC-0, EF-3**		**51.02**	**99,586**	
DEC	1-12-02	1655	1700	00:05	EF	Y	3.17	145	TRIAL RECLOSURE MADE & STAY
	4-12-02	1852	1920	00:28	-	-	5.00	1283	NO RELAY INDICATION
	8-12-02	1852	2107	02:15	-	-	4.75	5878	AGUNLOYE S/S OPENED
	8-12-02	0602	0745	01:45	-	-	4.42	4173	NO RELAY INDICATION
	9-12-02	1854	2024	01:30	-	-	3.67	3028	NO RELAY INDICATION
	14-12-02	1850	1900	00:10	-	-	3.33	305	NO RELAY INDICATION
	17-12-02	1922	0655	11:33	-	-	5.00	31,763	AGUNLOYE S/S OPENED
	19-12-02	1911	1935	00:24	-	-	5.17	1137	AGUNLOYE S/S OPENED
	21-12-02	1910	1930	00:20	-	-	5.00	917	AGUNLOYE S/S OPENED
	22-12-02	1856	1948	00:52	-	-	3.83	1826	AGUNLOYE S/S OPENED
	27-12-02	0652	0810	01:18	-	-	4.83	3453	NO RELAY INDICATION
	29-12-02	1910	1951	00:41	-	-	4.83	1815	NO RELAY INDICATION
	31-12-02	1744	1751	00:07	-	-	3.50	225	TX POWER FAILURE:
				21:26	**OC-0,EF-1**		**56.50**	**55,948**	