



WHS-51 Fatigue Management Procedure

Table of Contents

Table of Contents	1
1 Purpose	3
2 Scope	3
3 Roles and Responsibilities	3
4 Definitions	4
5 References	5
6 Records	5
7 Attachments	5
8 General information	5
9 Managing the risks of fatigue	6
10 Work arrangements	6
11 Managing Fatigue-related Impairment	8
12 Fatigue risk control measure options	9
13 Reporting fatigue related impairment	11
14 Information, training and instruction	11
15 Attachment 1: Fatigue Identification and Assessment Checklist	12
16 Attachment 2: Fatigue Risk Assessment Form	13

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1 Purpose

The purpose of this procedure is to provide practical guidelines on the management of fatigue risks in the workplace in order to eliminate or minimise such risks.

Fatigue may reduce physical and/or mental performance, potentially culminating in error and/or incident which can create a risk to the health and safety of not only the individual worker, but the whole team involved. For this reason, the management of fatigue is a shared responsibility.

2 Scope

This procedure applies to all Territory Generation employees and contractors.

Note: It is acknowledged that there may be different expectations on the working arrangements for contractors. However it is Territory Generation's expectation that the fatigue risks for contractors will be managed in accordance with this procedure.

3 Roles and Responsibilities

Role / Title	Responsibility
Chief Executive Officer	Shall ensure that : <ul style="list-style-type: none"> • All personnel are aware of requirements of this procedure and its management in sites under Territory Generation control. • Initiates procedure review as required.
All Managers/Site Coordinators	Shall ensure that: <ul style="list-style-type: none"> • This procedure is put in place at all Territory Generation controlled power stations sites. • Personnel are advised and trained as necessary in the procedure to be followed. • Contractors are informed of and follow the procedure, where applicable. • Contribute to procedure reviews
Project Officers/Contract Managers	Shall ensure that: <ul style="list-style-type: none"> • Contractors under their control are informed of and follow the procedure, where applicable. • Contribute to procedure reviews
All Personnel	Shall ensure that: <ul style="list-style-type: none"> • This procedure is followed personally and by contractors/visitors under their control, where applicable • Contribute to procedure reviews
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4 Definitions

Adequate sleep	Means the amount of recuperative sleep required by a person to reduce the effects of fatigue to a level that allows them to function safely. This varies from person to person.
Contingency plan	Means a course of action to be followed if a preferred plan fails or an existing situation changes.
Worker	Means employees, Contractors, Sub-contractors, Volunteers, and Students.
Fatigue	Means extreme tiredness that leads to mental or physical exhaustion.
Fatigue-related impairment	Means a state of impairment caused by fatigue that is associated with lowered alertness or reduced performance.
Fit for work	Means a worker is in a state (physical, mental and emotional), which enables them to perform assigned tasks competently and in a manner which does not compromise or threaten the health, safety or well-being of themselves or others.
Meal break	Means a break for the purpose of having a meal during which no work should be undertaken. Workers are not required to work more than five continuous hours without a meal break.
Rest break	Means a rest period of less than 10 hours (exact length to be agreed between the worker and the Supervisor) designed to negate fatigue in circumstances not clearly defined in the Enterprise Agreement.
Shift worker	Means a worker who is designated by Territory Generation to participate in a rotating shift roster cycle.
Line Manager/Supervisor	Means the person the worker directly reports to.
Ten (10) hour break	Means a break of 10 consecutive hours (including travelling time) between work on successive days designed to provide the worker with an opportunity to recover and to

	be able to safely undertake the work at hand.
Work	Means any activity or task performed for or on behalf of Territory Generation.
Working hours limit	Means the agreed maximum hour limit workers are not permitted to work beyond. This is based on hours worked and is a maximum of 16 hours.
Workplace	Means a place, whether or not in a building or structure, where workers work.
As far as reasonable practicable	Means that which is reasonably able to be done to ensure health and safety
Shall	Means a mandatory requirement
Should	Means an advisory requirement

5 References

- NT Work Health and Safety (National Uniform Legislation) Act Jan 2012
- NT Work Health and Safety (National Uniform Legislation) Regulations June 2013
- SafeWork Australia Guide for Managing the Risk of Fatigue at Work Nov 2013
- Power and Water Enterprise Agreement 2010 - 2015

6 Records

- Fatigue related impairment incidents shall be recorded and investigated in the GRACE system.
- All other related records including completed assessment checklists shall be saved in TRIM and stored for a period of 5 years.

7 Attachments

- Fatigue Identification and Assessment Checklist (Attachment 1)
- Fatigue Risk Assessment Form (Attachment 2)
- Fatigue Management Flow Chart (Attachment 3)

8 General information

- 8.1 Fatigue can be defined as extreme tiredness that leads to mental or physical exhaustion. This can result in a state of impairment that is associated with lowered alertness or reduced performance.
- 8.2 There are a number of factors that contribute to fatigue:
- a) Work-related contributing factors including but not limited to:

- The length of time spent at work and in work-related duties
- The time of day work is performed
- The type of work performed
- Shift structures and roster arrangements, including recovery time between shifts
- The environment in which a work task is performed (e.g. high humidity, high or low temperature extremes).

b) Non-work-related contributing factors including but not limited to:

- Commuting timeframes (excluding call out and call back)
- Family commitments
- Other employment
- Health and fitness level
- Lifestyle choices of the worker.

9 **Managing the risks of fatigue**

9.1 The risks of fatigue shall be managed proactively in order to minimise the potential for fatigue-related impairment caused by work-related contributing factors.

9.2 Line Managers/Supervisors shall:

- a) Be responsible for identifying roles under their control for which fatigue is considered an ongoing or regular risk
- b) Conduct risk assessments in consultation with affected worker/s, where appropriate
- c) Record assessments using the *Fatigue Identification and Assessment Checklist* (see Attachment 1) and/or *Fatigue Risk Assessment Form* (see Attachment 2)
- d) Determine appropriate risk control measures in consultation with affected worker to address the risks identified. (See Section 12: Examples of fatigue risk control measure options).
- e) Ensure that all relevant risk control measures are implemented, as far as reasonably practicable.

10 **Work arrangements**

In order to limit the risk of fatigue-related impairment, the following work arrangements shall apply:

10.1 On Call Arrangements

- a) The maximum allowable time to be on call is 2 consecutive weeks, after which a worker must take 1 week off call.
- b) After being on call 2 weeks on 1 week off continuously for 3 months, a worker must take 2 consecutive weeks off call, after which the pattern of 2 weeks on call 1 week off call may resume.

10.2 Hours of Work

WHS-51 Fatigue Management Procedure

- a) The maximum allowable hours of work per day is 16 hours, after which a 10 hour break must be taken.
- b) A maximum of 2 x 16 hours of work may be worked consecutively, after which a 16 hour break must be taken.
- c) A maximum of 3 x 16 hours of work may be worked in any 7 day period.
- d) For shift workers routinely working shifts of less than 12 hours, a maximum of 8 shifts may be worked in any 9 consecutive days (NOTE: training is considered a shift).
- e) For shift workers routinely working shifts of 12 hours, a maximum of 5 shifts may be worked in any 9 consecutive days (NOTE: training is considered a shift).

10.3 Rest Breaks

In addition to the work arrangements mentioned above, the following arrangements shall also apply:

- a) Except in circumstances described in Clause 10.1.2 (b), workers should have a rest break of at least 10 consecutive hours (including travelling time) between completing work on one day and commencing work on the next day.
- b) When overtime is required to be performed at night, adequate notice should be provided to workers and where practicable, arrangements should be made so that workers have an adequate break prior to commencing overtime.
- c) The relevant Line Manager/Supervisor may stand down a worker or crew for a rest break in the following circumstances:
 - Particularly adverse weather;
 - Arduous work;
 - Repeated telephone calls or alarms of more than 4 hours in total; or
 - Repeated callouts of more than 4 hours in total (regardless of the time of day).
- d) When the actual hours worked during any single call out or multiple call outs (cumulative) between 8pm and 1.5 hours before normal start time is 3 hours or more, the worker shall be entitled to a 10 hour break, without loss of pay, commencing on completion of the last job (that is, when the worker has advised their relevant Line Manager/Supervisor that they have completed the allocated work and returned home).

10.4 Driving Arrangements

Workers should:

- a) Before a long journey, ensure adequate sleep and avoid driving after being awake for a continuous period of 16 hours;
- b) When driving, take a rest break every 2 hours or more frequently if feeling tired;
- c) If possible, share driving;
- d) If possible, avoid driving at night;
- e) Avoid driving more than 12 hours in a 24 hour period; and
- f) Provide timely notice to their relevant Line Manager/Supervisor where alternative arrangements are required.

11 Managing Fatigue-related Impairment

11.1 Identification and notification of potential fatigue-related impairment is a shared responsibility of workers and Line Managers/Supervisors.

a) Workers

- i) Workers are required to identify when they are suffering the effects of fatigue (this may be done by self-assessment using the *Fatigue Identification and Assessment Checklist* see attachment 1) OR the potential risk if the planned work could potentially exceed maximum allowable working hours limit.
- ii) When a worker identifies they are at moderate or high risk of fatigue-related impairment or when a worker anticipates the work will extend beyond the allowable working hours limit or when a work limit of 14 hours has been reached, the worker shall notify their relevant Line Manager/Supervisor. This will allow the Line Manager/Supervisor to assess the situation and determine the appropriate course of action.

b) Line Managers/Supervisors

- i) Line Managers/Supervisors are responsible for assessing fatigue levels of workers under their control to determine fitness for work if they have a reasonable suspicion that a worker is impaired by fatigue. This may be done using the *Fatigue Identification and Assessment Checklist* (see Attachment 1) and/or *Fatigue Risk Assessment Form* (see Attachment 2)
- ii) When an assessment is conducted by a Line Manager/Supervisor, it should be completed through observation and a conversation with the worker(s).

11.2 Levels of risk and actions required

a) Low risk of fatigue-related impairment

- i) When a worker has conducted a self-assessment and has determined that the risk of fatigue-related impairment is low, the worker shall continue to monitor their level of fatigue.
- ii) When a Line Manager/Supervisor has conducted an assessment and has determined that the risk of fatigue-related impairment is low, they shall conduct a reassessment within 2 hours.

b) Moderate risk of fatigue-related impairment

- i) When a worker has conducted a self-assessment and has determined that the risk of fatigue-related impairment is moderate, the worker shall report to their relevant Line Manager/Supervisor (in person or via phone) to discuss their fitness for work.
- ii) When a Line Manager/Supervisor has conducted an assessment and has determined that the risk of fatigue-related impairment is moderate, they shall determine the appropriate course of action in consultation with the affected worker and conduct a reassessment within one hour.

- iii) Examples of options for action include allowing the worker to have a break or providing alternative tasks for the worker that do not pose a risk to health and safety.

c) High risk of fatigue-related impairment

- i) When a worker has conducted a self-assessment and has determined that the risk of fatigue-related impairment is high, the worker shall cease work immediately and report to their relevant Line Manager/ Supervisor (in person or via phone) to discuss their fitness for work.
- ii) When a Line Manager/Supervisor has conducted an assessment and has determined that the risk of fatigue-related impairment is high and the worker is considered unfit for duty, they shall take prompt action including:
 - Ensuring the worker ceases work immediately and removing the worker from the workplace or any potential hazards (including under no circumstances allowing the worker to drive a vehicle or operate any plant or equipment);
 - Ensuring the worker's safe return to their place of residence or other suitable accommodation, including arranging transport;
 - Only permitting the worker to return to work when a rest break (as agreed between the Line Manager/Supervisor and the worker) has been provided.

12 **Fatigue risk control measure options**

Below are examples of control measure options which may be selected and implemented in order to minimise the risk of fatigue-related impairment in the workplace. One or a combination of options may be selected to reduce the risk to an acceptable level.

The following options examples include but are not limited to:

12.1 **Mental and Physical Demands of Work**

Control options may include:

- Redesign the job to limit periods of excessive mental or physical demands.
- Introduce job rotation to limit a build-up of mental and physical fatigue.
- Use plant, machinery and equipment to perform tasks where possible.
- Develop contingency plans for situations that could arise where employees have to unexpectedly work longer hours, more shifts or a longer sequence of shifts.

12.2 **Work Scheduling and Planning**

Control options may include:

- Design shifts and rosters to allow for good quality sleep and enough recovery time between work days or shifts for travelling, eating and sleeping.
- Ensure rosters reflect an appropriate mix of employees with different skills.
- Ensure that employees have adequate and regular breaks during working hours so they can rest, eat and rehydrate.
- Arrange work demands to increase towards the middle of the shift and decrease towards the end of the shift.
- Schedule safety critical work outside low body clock periods (for instance, not between midnight and 6am).
- Avoid morning shifts with early starts before 6am.
- Avoiding split shifts that involve early morning work and late night work as they can affect the amount of night sleep.

WHS-51 Fatigue Management Procedure

- Eliminate or reduce the need to work extended hours or overtime where possible.
- Avoid working arrangements that provide incentives to work excessive hours.
- Provide on-site accommodation, meals and other facilities (where appropriate) so employees do not have to drive after extended hours of work.
- Monitor actual time worked against the allocated roster and identify when there are differences between the rostered hours and the hours actually worked.
- Put in place processes to manage accrued leave balances and requests for leave. Consider future rosters and schedules when approving requests for leave or shift swaps and ensure rosters reflect approved leave.

12.3 Night work (excluding shift work)

Control options may include:

- Consider if night work is necessary and rearrange schedules so non-essential work is not carried out at night.
- Limit the number of nights worked in a row to no more than 4.
- Except for emergencies, give at least 24 hours' notice before night work. Consider providing a longer period of notice so that employees have time to adjust their activities.

12.4 Shift work

Control options may include:

- Minimise the number of consecutive night shifts.
- Avoid overtime allocation after afternoon or night shifts (particularly after 10 or 12 hour night shifts).
- Allocate shift workers consecutive days off, including some weekends.
- Control overtime, shift swapping and on-call duties.
- Provide alternative transport at end of overtime/extended shifts.
- Use a forward shift rotation system - this means the direction of the roster is day to afternoon/evening to night whereas a backward rotation shift is from night to afternoon/evening to day.
- Set shift rosters ahead of time and avoid sudden changes to allow employees to plan leisure time.
- Provide information to shift workers that contains tips for them to prevent and manage fatigue.

12.5 Environmental Conditions

Control options may include:

- Avoid working during periods of extreme temperature and schedule work for times of day when temperatures are moderate.
- Install cooling devices and/or provide access to cooled areas in hot work environments (for example: air conditioned vehicles)
- Provide shelter in hot work environments (for example: shade structures).
- Install ventilation and mechanical cooling devices in hot, confined spaces.

WHS-51 Fatigue Management Procedure

- Rotate employees' tasks to minimise exposure to extreme temperatures, vibration hazards, noise hazards and chemical hazards.
- Provide adequate facilities for rest, meal breaks, sleep and onsite accommodation (if appropriate) and other essential requirements.
- Install adjustable, vibration-free seats in appropriate machinery and vehicles.
- Ensure the workplace and surroundings are well lit, safe and secure.

13 **Reporting fatigue related impairment**

13.1 Workers shall report any situations in which they are unable to comply with the requirements in this procedure to their relevant Line Manager/Supervisor.

13.2 Line Manager/Supervisors shall:

- a) Document in GRACE each instance where it is determined that the risk of fatigue-related impairment is high and the worker is considered unfit for duty.
- b) Record and investigate through GRACE all instances where this Procedure has not been complied with.

14 **Information, training and instruction**

14.1 Relevant information, training and instruction shall be provided on the identification and management of fatigue related impairment to all relevant personnel.

15 Attachment 1: Fatigue Identification and Assessment Checklist

This checklist is designed to assist with the identification and assessment of fatigue by worker self-assessment and/or Line Manager/Supervisor assessment.

Circle the appropriate responses:

PHYSICAL SIGNS		MENTAL SIGNS		EMOTIONAL SIGNS	
Repeated yawning	Yes / No	Difficulty concentrating on a task	Yes / No	More quiet than usual	Yes / No
Heavy eyelids	Yes / No	Lapses in attention	Yes / No	Lacking energy	Yes / No
Eye-rubbing	Yes / No	Slowed reaction time	Yes / No	Mood changes and/or decreased tolerance	Yes / No
Increased rate of blinking	Yes / No	Accidentally doing the wrong thing (error)	Yes / No	Emotional outburst and/or aggressive	Yes / No
Head drooping	Yes / No	Accidentally not doing the right thing (omission)	Yes / No		
Short periods of involuntary sleep (micro sleeps)	Yes / No				

Add up the number of 'Yes' responses and apply the table below:

SCORE	RISK	CONTROL MEASURES	
		Self-assessment conducted by worker	Assessment conducted by Line Manager/Supervisor
1 to 4	LOW	Continue to monitor own fatigue level.	Reassess worker within 2 hours.
5 to 8	MODERATE	Report to Line manager/Supervisor to discuss fitness for work.	Determine appropriate option for action in conjunction with worker. Reassess worker within 1 hour.
9+	HIGH	Cease work immediately. Report to supervisor. Do not perform tasks (including driving home) until fit to do so.	Ensure worker ceases work immediately. Ensure worker's safe return to place of residence or accommodation.

16 Attachment 2: Fatigue Risk Assessment Form

PART A:

This form is designed to assist with identifying roles for which fatigue may be an ongoing or regular risk and assessing which aspects of the role present the greatest risk in terms of fatigue.

FATIGUE RISKS	
Mental and Physical Work Demands	
Does the role require the employee to undertake work that is physically demanding for long periods? (For example: tasks that are especially tiring and/or repetitive work such as outdoor work for extended periods of time, driving long distances etc.).	YES/NO
Does the role require the employee to undertake work that is mentally demanding for long periods? (For example: work that requires vigilance, continuous concentration and minimal stimulation, work performed under pressure or to tight deadlines, emergency call outs etc.)	YES/NO
Work Scheduling and Planning	
Does the role require the employee to regularly work between midnight and 6am?	YES/ NO
Does the role require the employee to regularly work in excess of 12 hours? (including overtime)	YES/ NO
Does the role require the employee to have less than a 10 hour break between periods of work?	YES/ NO
Does the role require the employee to do on call work or call backs?	YES/ NO
Does the planned work schedule regularly differ from the hours actually worked?	YES/ NO
Does the work schedule regularly prevent full-time employees having at least one day off per week?	YES/ NO
Does the work schedule make it difficult for the employee to consistently have at least two consecutive <u>nights</u> sleep per week?	YES/ NO
Does the role require the employee to work rotating shifts?	YES/ NO
Does the role require the employee to travel more than one hour to get to the job?	YES/ NO
Environmental Conditions	
Does the role require work to be carried out in harsh or uncomfortable conditions? (For example: hot, humid, cold)	YES/NO
Does the role require exposure to vibrating plant or machinery?	YES/NO
Does the role require exposure to hazardous chemicals?	YES/NO
Does the role require consistent exposure to loud noise?	YES/NO

