

**Impact Statement for the draft Variation to the  
National Environment Protection  
(National Pollutant Inventory) Measure  
December 1999**

**NEPC**



# IMPACT STATEMENT

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## 1. BACKGROUND

### 1.1 NATIONAL ENVIRONMENT PROTECTION COUNCIL

The National Environment Protection Council (NEPC) is a body established by each State and Territory and the Commonwealth Government to work cooperatively at a national level to ensure that all Australians enjoy the benefits of equivalent protection from air, water, soil and noise pollution and that business decisions are not distorted nor markets fragmented by variations in major environment protection measures between member Governments. The NEPC stems from the *Inter-Governmental Agreement on the Environment (IGAE) 1992*, which agreed to establish a national body with responsibility for making National Environment Protection Measures (NEPMs). The operation of NEPC is covered by the *National Environment Protection Council Act 1994*.

NEPMs are broad framework-setting statutory instruments, which, through a process of inter-government and community/industry consultation, reflect agreed national objectives for protecting particular aspects of the environment. NEPMs may consist of any combination of goals, standards, protocols, and guidelines.

A two-thirds majority is required for NEPC to make a NEPM. Implementation of NEPMs is the responsibility of each participating jurisdiction. A NEPM will take effect in each participating jurisdiction once it is notified in the Commonwealth of Australia Gazette, but is subject to disallowance by either House of the Commonwealth Parliament.

It should be noted that any supporting regulatory or legislative mechanisms which jurisdictions may choose to develop to assist in implementation of the proposed NEPM will need to go through appropriate processes in those jurisdictions.

### 1.2 THE NATIONAL POLLUTANT INVENTORY NEPM

The National Pollutant Inventory (NPI) is an Internet database designed to provide the community, industry and government with information on the types and amounts of certain chemicals being emitted to the air, land and water.

Larger Australian facilities are required to estimate and report annually their emissions for the NPI from July 1 1998. Estimates of emissions from smaller industry, household and everyday activities will also be included on the database and will be estimated by governments. This approach looks at the 'total' emissions picture, giving context to emissions information.

The first national NPI database will be loaded onto the Internet for public access in early 2000.

The main objectives of the NPI are to:

- provide information to industry and government to assist in environmental planning and management;

- satisfy community demand for accessible information on emissions to the environment; and
- promote waste minimisation, cleaner production, and energy and resource savings.

These objectives were selected as information on emissions of pollutants to air, land and water in Australia is currently limited, inaccessible or unavailable. In particular, the NPI will address the lack of publicly available information on emissions which is required to assist in environmental planning and assess the effectiveness of existing licensing and waste reduction programs. Governments will be able to formulate and assess cost-effective environmental management and pollution reduction policies with a basis of good, consistent information. Individuals will also be able to make informed and efficient decisions about issues affecting them and their surroundings.

The NPI will make companies and the community publicly accountable for their emissions of pollutants. Businesses often have insufficient information on their own processes and emissions, leading to unnecessary wastage of raw materials and inefficiencies in business operations. Communities are often unaware of the impacts that their everyday activities like driving a car, mowing a lawn or using solvents has on their surrounding environment.

The NPI is being implemented as a NEPM, made by NEPC on 27 February 1998. Implementation of this and other NEPMs is the responsibility of each participating jurisdiction.

### **1.3 PURPOSE OF THE IMPACT STATEMENT**

In making NEPMs, NEPC must have regard to a number of considerations. These are detailed in section 15 of the NEPC Act and include:

- consistency with the IGAE;
- environmental, economic, and social impacts;
- relevant international agreements; and
- any regional environmental differences.

Prior to making a NEPM, a draft of the NEPM and an Impact Statement must be prepared. The Impact Statement must include the following (section 17 of the NEPC Act):

- a) the desired environmental outcomes;
- b) the reason for the proposed measure and the environmental impact of not making the measure;
- c) a statement of the alternative methods of achieving the desired environmental outcomes and the reasons why those alternatives have not been adopted;
- d) an identification and assessment of the economic and social impact on the community (including industry) of making the proposed measure;

- e) a statement of the manner in which any regional environmental differences in Australia have been addressed in the development of the proposed measure;
- f) the intended date for making the proposed measure; and
- g) the timetable (if any) in relation to the proposed measure.

The NEPC Act requires that both the draft NEPM and the Impact Statement be made available for public consultation for a period of at least two months. NEPC must have regard to the Impact Statement and submissions received during public consultation in deciding whether to adopt a proposed NEPM.

An Impact Statement relating to a proposed NEPM or NEPM variation should address the impacts of the proposed action or program and demonstrate that a proposed NEPM or variation is justified, and provide a reasonable basis for informed comment by stakeholders and the community in relation to the proposed NEPM.

The proposal under consideration in this Impact Statement is a variation to the existing NPI NEPM. Section 20 of the NEPC Act, which governs the variation of a NEPM, requires any variation to a NEPM to be effected in a similar manner to the making of a new NEPM. However, under section 20 a variation is not a NEPM in its own right and, therefore, the variation is not itself a new NEPM. Consequently, the approach taken to the development of this Impact Statement takes into account the original goals and impacts of the NPI NEPM as a whole and examines the potential impact of the proposed variation to the NEPM on the anticipated costs and benefits of the NPI program.

## **2. DESIRED ENVIRONMENTAL OUTCOMES**

The desired environmental outcomes (which relate to Section 14(1) of the NEPC Acts) of providing information through the NPI NEPM are to:

- maintain and improve ambient air quality and ambient water quality;
- reduce the release of hazardous wastes that impact or potentially impact on the environment; and
- expand the re-use and recycling of used materials.

The core elements contained in the NPI NEPM to achieve these desired environmental outcomes include:

- a list of substances or pollutants and a process for amending that list;
- a method for determining when a facility will report directly (a reporting threshold) and, where appropriate, emissions will be estimated by government;
- methods for collecting the data from both facilities and estimating diffuse sources (such as motor vehicles);
- processes to ensure reporting and to identify commercial-in-confidence issues;
- community access to the information;

- enforcement provisions for non-reporters; and
- annual reporting to parliament by governments.

### 3. THE NEED TO VARY THE NPI NEPM

#### 3.1 PROBLEM STATEMENT

Under the current NEPM, jurisdictions are required to establish the following arrangements for industry reporting:

- an industry is not required to estimate and report emissions until a relevant industry handbook is released;
- for the first two reporting years, industries are only required to report on substances listed in Table 1 of the NEPM. After this, industries are required to report on substances in Table 2 (which is inclusive of Table 1);
- no penalties are envisaged during first two reporting periods; and
- for the third reporting year, no penalties are envisaged in relation to the substances in Table 2 that are not in Table 1.

When the NEPM was made, the expectation was that most industry sectors would have had approved and published industry handbooks available and would be able to report in the first year (1998/99). Additionally, provisions were made for a 2 year phase in period “to allow industry and governments to establish reporting infrastructures and understand their obligations” (*Summary of Submissions and Responses document to the NPI NEPM, 27 February 1998, p35*) before the commencement of reporting on all 90 substances. It was also intended that the review envisaged in the NEPM to commence in October 1999 would occur in the light of the first year’s experience.

Reporting for facilities in the various industry sectors is contingent on the availability of a handbook for each industry sector. Production of industry handbooks has been hampered by their technical complexity and the consultation required for their development. Twenty-three industry sectors (of a total of approximately 76) are required to report data on a partial year basis for 1998/99, a substantial reduction in first year industry participation from that initially envisaged.

The problems arising from this delay can be summarised into 3 three key areas:

1. ramifications of the subsequent delay of the Review envisaged by Clause 33 of the NEPM;
2. erosion of the 2 year phase-in period for reporting by industry; and (to a lesser extent)
3. erosion of the envisaged trialling period for jurisdictional administrative systems.

### ***1. Ramifications of the subsequent delay of the Review envisaged by Clause 33 of the NEPM***

A comprehensive review (as envisaged by Clause 33 of the NEPM) cannot be carried out in October 1999 due to the lack of available industry data and the consequent lack of industry and jurisdictional reporting experience, at this time. It was envisaged that such a review would be completed prior to the program's expansion, as evidenced by the Summary of Submissions and Responses document to the NPI NEPM, 27 February 1998, p11 which states:

"Reporting on the full list will only commence after the October 1999 review."

This intention was reinforced by NEPC Committee at its meeting of 8 May 1999, wherein it concluded:

1. the National Pollutant Inventory NEPM will, without amendment, require State parties to require industry to report on emissions of the full range of 90 substances for which handbooks have been gazetted from 1 July 2000;
2. there was an expectation at the time of the making of the NEPM that the review required under section 33 of the NEPM would be completed prior to reporting being required on the full range of substances; and
3. while a review can be commenced at the time envisaged by the NEPM, its completion to satisfy the intent of section 33 will require analysis of information flowing from experience in the administration of the first 36 substances to be reported on, and trials conducted in Queensland and Western Australia.

Review of the smaller program was intended to allow an opportunity for demonstration of the program's operational effectiveness before its complexity was increased.

Since the current NEPM requires that reporting on Table 2 substances shall commence on 1 July 2000, this intention can no longer be met. It should be noted that the NEPM does not have any formal requirement for the Review to be completed prior to the introduction of reporting requirements for Table 2 substances.

### ***2. Erosion of the 2 year phase-in period for reporting by industry***

During the NEPM's drafting and up until the NEPM was made (in February 1998), it was intended that the majority of industry handbooks would be completed for the beginning of the first reporting year (July 1998). Minutes from the 5<sup>th</sup> Meeting of the NPI NGO Advisory Group (16 October 1997) indicate the expectation of the NPI Project team at that time in regard to the availability of handbooks:

"... the work being undertaken in the Queensland and NSW trials should ensure that as many handbooks as possible are produced by 1 July 1998."

On this basis there was an expectation that both the first and second years would be full-year reporting periods for the majority of industries, with those outstanding handbooks to be finalised as the first reporting year progressed. This allowed for a two year phase in period for the majority of reporting facilities.



The current position is:

Reporting Year	No. of industries required to report		
	Full Year Basis	Partial Year Basis	Partial Periods that Apply
1. (1998/99)	-	23	8 for 8 months
			7 for 2 months
			8 for 1 month
2. (1999/00)	36	~ 40	11 for 9 months
			3 for 7 months
			26 (6 months or less)
3. (2000/01)	~76	-	-
4. (2001/02)			
5. (2002/03)			

Furthermore, virtually all handbooks are expected to be completed by the end of calendar year 1999, which constitutes a delay of approximately 18 months on the estimates made prior to the making of the NEPM. With the current NEPM provisions, a little over half of the industries will not report as originally intended until the third reporting year, after the phase in period has elapsed and the extended list is introduced.

Thus the trialling period on Table 1 substances intended for industry to establish its reporting systems cannot be fully met for the majority of reporting facilities.

Note: To understand the implication of partial reporting, it is worth noting that reporting thresholds are directly related to reporting periods. To illustrate, an industry sector with a one month reporting requirement in year 1 and the full (12 month) requirement in year 2 can make the following Category 1 threshold assessments:

Year 1 : Do we consume more than 10 tonnes of substances "x" in one month ?

Year 2 : Do we consume more than 10 tonnes of substances "x" in 12 months ?

This means that a threshold exceedance (and subsequent obligation to report) may occur in the full period but potentially not in the partial period, depending on the actual quantities involved. So a facility will not be required to report in a partial period if it does not trip the threshold in that period.

Notwithstanding the above explanation, experience to date has shown that many reporting facilities have chosen to report in their first year, despite the fact that they would not have tripped a partial year usage threshold.

### ***3. Erosion of the envisaged trialing period for jurisdictional administrative systems.***

The phase in period for industry was also anticipated to allow jurisdictions time to test their systems for report receipt, validation and transfer to Environment Australia. The fact that the program has begun in 1998/1999 for a small number of industry sectors has allowed this to occur on a reduced scale - a phase in similar to that envisaged.

However, for larger jurisdictions where more sophisticated data capture systems are likely to be established to deal with industry submissions expected to number in the order of 500 to 1,500 reports, this delay in handbook production has a significant negative effect.

To illustrate, the expectation was that jurisdictional data handling systems would have the benefit of two years of reporting on 36 substances by a significant majority of reporting industries. This would have allowed time to test and modify systems under load, prior to the volume of data increasing when reporting is required on the full 90 substances (due to the increase in the average number of substances reported per facility).

Currently, the first reporting year has produced only a fraction of that expected, with a significant increase in participation expected for the second year when more industries will be required to report. While the trialling period remains in tact in terms of time, the operational experience gained has not been in the high data volume environment that would best trial an IT system's capability. This is especially true in the case of systems designed for electronic collection and validation of facility reports.

Since the impact is restricted to jurisdictions receiving returns from large numbers of reporting facilities, it ranks behind the preceding two problem areas in terms of significance.

### **3.2 NATIONAL ENVIRONMENT PROTECTION COUNCIL PROPOSAL**

At its meeting on 2 July 1999, NEPC resolved to vary the NPI NEPM, in order to amend the commencement date for reporting on those substances specified in Table 2 of the NEPM (that are not in Table 1) to 1 July 2002, and to give notice of its intention to vary the NEPM.

A Notice of Intention to vary the NPI NEPM was advertised in newspapers in all capital cities on 21 July 1999 and 24 July 1999. It was also advertised in the Commonwealth Government Gazette on 21 July 1999.

## **4. CONSIDERATION OF OPTIONS FOR ADDRESSING THE DELAYS IN THE NPI PROGRAM.**

### **4.1 ALTERNATIVE OPTIONS FOR MANAGING NEPM REPORTING REQUIREMENTS.**

A number of options were considered by NEPC in the process of addressing the issue of the delay in publication of handbooks and its ramifications for the extension of the program. These are included below. A submission signed by a number of environment groups was received after the NEPC meeting on 2 July 1999. An analysis of this option is also provided below.

#### **THE NEPC PREFERRED OPTION**

##### **4.1.1 Amend the NEPM to extend the commencement date for reporting on substances in Table 2 by two years (1 July 2002).**

##### *Advantages*

- This option recognises fully the delay that has already occurred in the program through delay in publication of the handbooks.
- This option retains the intent of the original NEPM for a phase-in period in relation to the two lists of substances.
- This option would ensure that sufficient time is available for both reporters and jurisdictions to ensure that their reporting and administrative mechanisms were soundly tested prior to the introduction of the full list of 90 substances.
- Facilities could still be encouraged to report on the 90 substances on a voluntary basis.
- This option allows enough time to fulfil the expectation that a review of the transitional phase could occur before the expansion of the reporting list.

##### *Disadvantages*

- Requires going through the amendment process with its associated costs.
- This option could defer some benefits in terms of environmental outcomes arising from reporting on the full list of 90 substances for up to two years.
- The program would not proceed as originally planned in terms of reporting on the 90 substances.

**4.1.2 Do nothing.** The NEPM requires reporting on the expanded list of 90 substances for the third reporting year (1 July 2000 – 30 June 2001).

*Advantages*

- This option has the advantage that the program would proceed as planned in terms of reporting on the 90 substances, therefore no amendment to the NEPM would be required.
- Combustion sources and fuel storage are likely to be major sources of emissions. Facilities that have these activities will trip a number of Table 1 substances. Hence there is likely to be a much smaller number of facilities that only trip Table 2 substances. It is therefore possible that most reporters would already be reporting on the initial list, and the increase in effort may not be as substantial as for those who have no reporting requirement on table 1 substances.
- Facilities which will have to report on the extra 54 substances in Table 2 will still have had notice that they will be required to report on those substances from the third reporting year. It could be argued that they should be prepared for the introduction of the Table 2 list.

*Disadvantages*

- This option has the disadvantage that it ignores the delay in the program that has already occurred and does not allow the originally planned transitional stage to take place. This addresses none of the issues identified in the problem statement.
- Without a real transition phase, the program could lose the support of some industry sectors, resulting in fewer reporters, thus poorer quality data for the program overall.
- This option would introduce higher costs to first time reporting firms in the third year who have to deal with the 90 substances in their “learning phase” of reporting.

**4.1.3. Amend the NEPM to delay enforcement regarding reporting requirements for Table 2 only substances by one or two years.**

*Advantages*

- Advantages largely as for 4.1.2, although an amendment of the NEPM is still required.
- Allows for the retention of a phase in period for industry, should they choose to exercise it.
- This may phase in the larger reporting load for jurisdictions in a manageable way, if some facilities chose not to report on the basis of a delay in enforcement.

*Disadvantages*

- Requires going through the amendment process with its associated costs.
- Still puts considerable pressure on those industries which did not have handbooks published until late in 1999 or early 2000 to report on all of the relevant 90

substances in the third reporting year, with little or no experience in reporting to the program.

- This option could send a mixed message regarding the commencement of reporting on the full reporting list.
- Does not tackle the issue of allowing time for the Review to occur prior to the expansion of the program.

#### **4.1.4 Amend the NEPM to extend the commencement date for reporting on substances in Table 2 by one year (1 July 2001).**

##### *Advantages*

- A delay of one year recognises the delay to the program, but attempts to minimise the impact on the originally planned timetable. Hence the desired environmental outcomes of the program may be realised sooner than they would be if there were a longer delay in reporting on the Table 2 list.
- Facilities could still be encouraged to report on the full list of 90 substances on a voluntary basis. Some facilities have indicated that they may do so.

##### *Disadvantages*

- Does not allow enough time for Review to occur prior to the commencement of reporting on Table 2 substances.
- While it recognises the erosion of the phase in period (for industry and governments), this is only partially adjusted for with a one year postponement.
- The program would not proceed as originally planned in terms of reporting on the 90 substances.
- This option requires amendment to the NEPM with its associated costs.

#### **4.1.5 Amend the NEPM to make the commencement date for reporting on substances in Table 2 contingent on the outcomes of a Review of the NEPM.**

This option involves reporting on substances in Table 1 only, until NEPC considers the outcomes of a Review of the NEPM. Reporting on substances included in Table 2 but not in Table 1 would only come into effect after a decision of NEPC following the Review.

##### *Advantages*

- Similar to 4.1.4, but this option guarantees that the expectation of having a formal review prior to the program's expansion is met.
- This option recognises fully the delay that has already occurred in the program through delay in publication of the handbooks.
- This option retains the intent of the original NEPM for a phase-in period in relation to the two lists of substances.

- This option would ensure that sufficient time is available for both reporters and jurisdictions to ensure that their reporting and administrative mechanisms were soundly tested prior to the introduction of the full list of 90 substances.
- Facilities could still be encouraged to report on the full list of 90 substances on a voluntary basis. Some facilities have indicated that they may do so.

#### *Disadvantages*

- Requires going through the amendment process with its associated costs.
- This option could defer some benefits in terms of environmental outcomes arising from reporting on the full list of 90 substances for up to two years.
- The program would not proceed as originally planned in terms of reporting on the 90 substances.
- This option relies on the premise that the Review and any subsequent amendment of the NEPM will be carried out without delays from its anticipated schedule. Any such delays would impact directly on when the expanded program is adopted.
- This option gives stakeholders no certainty on the timing of reporting on the expanded program.

#### **4.1.6 Combined Environment Groups' submission**

A submission signed by 31 environment groups was received by Ministers in all jurisdictions following the NEPC meeting on 2 July 1999. This submission proposed an option requiring those industries whose handbooks were completed within the first reporting year to adhere to the original reporting timetable (reporting on 90 substances from 1 July 2000), while providing an extension of one year (1 July 2001) for those industries for which handbooks were not complete.

#### *Advantages*

- This option attempts to keep as closely as possible to the originally planned schedule, while making a one year concession for those without handbooks in the first reporting year.
- Desired environmental outcomes may be realised sooner than they would be with a longer delay in reporting on the Table 2 list.

#### *Disadvantages*

- While it recognises the erosion of the phase in period (for industry and governments), this is only partially adjusted for.
- Would be confusing for stakeholders because different transitional arrangements would apply for different industry sectors.
- May increase administrative costs to implementation governments as keeping track of different reporting obligations for different industry sectors would be very confusing.

- This option may introduce higher costs to first time reporting firms in the third year who have to deal with the 90 substances in their “learning phase” of reporting.
- Does not tackle the issue of allowing time for the Review to occur prior to the expansion of the program.

## 4.2 REASONS FOR THE PREFERRED OPTION

### **THE NEPC PREFERRED OPTION**

#### **4.2.1 Amend the NEPM to extend the commencement date for reporting on substances in Table 2 by two years (1 July 2002).**

Despite governments’ reluctance to alter the legislative instrument so soon after its inception, it was considered that some form of variation was unavoidable. How this amendment could be carried out was dealt with in terms of mechanism (what part of the NEPM to change) and timing (the length of the delay in reporting requirements).

In the previous analysis of advantages and disadvantages of each option, the assessment criteria applied was based on the extent to which the three problem issues were successfully addressed.

The option to delay the expansion to the longer list by two years (4.1.1) provided the most desirable solution to the problem because it allowed for all three aspects to be solved but still provided certainty as to the exact timing of the move to 90 substances. It honoured the originally intended phase-in arrangements by delaying the move to the larger program commensurate with the delays in the program’s establishment.

While there was merit in the smaller delays offered by options 4.1.4 and 4.1.6, neither was able to satisfy the expectation for expansion subject to the formal Review.

In attempting to keep good faith with both industry and the intentions of the NPI, a higher participation rate than might have been the case had action not been taken is expected. A better environmental outcome might reasonably be expected from a consolidated smaller program than from ineffective implementation of a prematurely imposed larger program.

It should be noted that facilities will still be encouraged to report on the full program; the list of 90 substances is not being removed – nor is the requirement for jurisdictions to enforce reporting on the 36 substances in Table 1, as originally envisaged.

## 5. IMPACTS OF THE PROPOSED VARIATION TO THE NEPM

Governments remain committed to the implementation of the NPI NEPM. The phase in of reporting on the Table 2 list of pollutants was based on a priority ranking of the substances by a Technical Advisory Panel established by NEPC Committee. A summary of the Technical Advisory Panel's findings is at Appendix A. The phase in period was provided for to allow for the smoother implementation of the NPI. The phase in period allows governments and industry to focus on a smaller list of higher priority substances in the first instance and develop mechanisms that will enable governments and industry to meet their obligations under the NEPM. The phase in also increases the likelihood of governments and industry providing high quality data as the reporting program matures.

The phase in period provided for in the original NEPM underestimated the time required to develop handbooks to assist industry to meet their obligations under the NEPM. The proposed variation to the NEPM would extend the phase in period for Table 2 substances by two years.

Sections 5.1 and 5.2 analyse the impact of the variation on the key costs and benefits identified for the original NPI NEPM (as summarised in Tables 5.1 and 5.2 in the original Impact Statement). In both sections, the costs and benefits originally identified are presented in *italics* followed by consideration of the impact of the proposed variation on them.

Section 5.3 addresses regional environmental differences as required by the NEPC Act.

### 5.1 KEY BENEFITS OF THE ORIGINAL NEPM AND THE IMPACT OF THE VARIATION ON THE REALISATION OF THOSE BENEFITS

- *The Measure will play an important role in meeting the goals of maintaining and, where appropriate, improving ambient air and water quality, reducing the release of hazardous wastes to the environment and expanding the re-use and recycling of materials.*

Substances were included in the final list on the basis that they represent a risk to the Australian community because the substance is hazardous and there is potential for exposure in the Australian environment. The goals of the NPI NEPM will be achieved through better management of existing and potential impacts of emissions to the environment, such as waste minimisation and cleaner production programs.

Collection and provision of information on the smaller list of higher priority substances will provide better information about substances with the highest risk of adverse environmental impacts. Where the NPI assists in the promotion of waste minimisation and cleaner production programs it is anticipated that these activities would be directed at the broad range of emissions and not restricted to substances on Table 1.

As the substances in Table 1 are likely to capture most reporters, Table 2 is not expected to greatly expand the number of facilities that would have to report.



The NPI is only one of a number of drivers of the adoption of waste minimisation and cleaner production practices and the rate of adoption of such practices will be gradual as behavioural and cultural change are involved.

For those facilities which are not currently required to report but would be required to report under Table 2 there will be a lower knowledge base, and perhaps less incentive for implementing waste minimisation and cleaner production activities for a further two years.

In summary, the delivery of better cleaner production outcomes will be somewhat reduced by the NEPM variation, but this will only be a marginal change and does not undermine the value of the NEPM in any significant way.

- *NPI will provide an improved information base of emissions and their impacts, enabling stakeholders to more effectively plan future developments and develop policies for environmental management.*

The variation allows a further two years for governments and industry to focus on a smaller list of higher priority substances and ensure that the mechanisms are fully developed to meet their obligations under the NEPM. The phase in also increases the likelihood of governments and industry providing high quality data as the reporting program matures.

Reporting on Table 1 substances will allow stakeholders to more effectively plan future developments and develop policies for environmental management by providing information about those NPI substances which pose the highest risk to human health and the environment.

The proposed variation to the NEPM will delay the provision of information on Table 2 substances. This delay will somewhat reduce the benefits of NPI for planning policy development in the future.

- *NPI will allow more robust public debate resulting from improved community access to information about influences on the environment, enabling more informed involvement in planning, development and policy debates.*

Reporting on Table 1 substances will provide substantial information for robust public debate because the community will have improved access to information about those NPI substances which pose the highest risk to human health and the environment.

Some Table 2 substances are the subject of public debate and the variation may delay the availability of relevant information that could inform debate about those substances.

- *NPI will provide an improved ability for the community and all governments to identify areas of serious environmental degradation and subsequently develop programs and strategies to address those problems.*

Reporting on Table 1 substances will improve the ability of stakeholders to identify areas of serious environmental degradation caused by those substances that represent the highest risk of adverse human health or environmental harm. The variation

increases the likelihood of governments and industry providing high quality data upon which to develop strategies to address those problems.

The two year delay in reporting on substances in Table 2 may delay the identification of areas of environmental degradation, resulting from emission of Table 2 substances, and subsequently strategies to address those problems. However this would be expected to be only a marginal change and does not undermine the value of the NEPM in any significant way.

- *The NPI program involves a recognition that such information is an important public good which would not otherwise be publicly available in a comprehensive and integrated fashion that ensures that it is able to be used by all sectors of the community.*

Governments remain committed to the public good of making NPI information about emissions publicly available.

- *Members of the community (individuals, industry and governments) will have an improved ability to assess the impact which their own activities have on the environment, and promote more careful consideration of the environmental impacts of their actions.*

Members of the community will have an improved ability to assess impacts in respect of those NPI substances which pose the highest risk to human health and the environment. Typically, changes in behaviour are gradual and consequently the delay in availability of information about the less common substances may not significantly affect the overall rate of change.

- *NPI will provide improved information to the community about the sources and effects of substances on the environment. This should lead to a number of changes in behaviour and markets as the community is able to assess the true impact of particular activities and the consumption of particular goods and services.*

NPI will provide improved information about the sources and effects of those NPI substances which pose the highest risk to human health and the environment.

The proposed variation to the NEPM will delay the availability of information on a number of substances which represent a risk to the Australian community because the substance is hazardous and there is potential for exposure in the Australian environment. Typically, changes in behaviour and markets are gradual and consequently the delay in availability of information about the less common NPI substances may not significantly affect the overall rate of change.

- *NPI will empower members of the community to reward firms which are good environmental performers, and identify firms which are poor environmental performers. This will lead to improved economic and environmental outcomes.*

Community members will be empowered to reward firms which are good environmental performers because Table 1 contains those NPI substances which pose the highest risk to human health and the environment. This benefit will be slightly restricted for the 2 years in which list 2 reporting is delayed.

## 5.2 KEY COSTS OF THE ORIGINAL NEPM AND THE IMPACT OF THE VARIATION ON THE COSTS OF THE NEPM

The consideration of cost impacts associated with the variation to the NEPM is undertaken using the framework of the key costs identified in the original Impact Statement for the NPI NEPM. Costs related to the variation to the NEPM fall into two categories:

- a) the costs of undertaking the amendment process to the NEPM. These costs are incurred only by member governments of NEPC; and
- b) the costs associated with deferral of the introduction of the Table 2 only substances.

The latter costs can be largely expected to be deferred in line with deferral of the reporting requirements associated with Table 2 only substances. However, this deferral of costs is not complete for a number of reasons.

- *Financial impacts on reporting facilities as identified in the original NEPM Impact Statement.*

Costs are not likely to be deferred in proportion to the numbers of substances on the respective lists as the Table 1 list is likely to capture most reporters.

The original Impact Statement states that “the number of facilities that will be required to report can be estimated as a function of the thresholds applied and to a certain extent the size of the list. It is expected that once a reporting list becomes larger than the 25 – 40 substances commonly used in Australia, then the numbers of returns that could be expected on substances over this number falls dramatically. This is a reflection of the Australian industry base, the types of manufacturing that take place, and the types of substances handled. It is therefore expected that this means that the number of substances on a reporting list beyond 25 to 40 substances will have little additional impact on the total number of facilities required to report...” (p.21).

However, there will be reduced reporting costs for firms which have either a reduced number of substances on which they are obliged to report, or a delay in their obligation to report if they only use or emit list 2 substances. Further cost savings to industry could occur due to the fact that those substances unique to Table 2 which do not have emission estimation techniques outlined in the handbooks, could result from the delay of laboratory costs that might have been required for reporting purposes.

- *Costs faced by governments include administering the collection of information from reporting facilities, estimation of aggregated emissions (from sources other than reporting facilities), verification of data provided, development of the information presentation systems, and provision of the NPI to the community.*

Costs to government are not likely to be deferred in proportion to the numbers of substances on the respective lists. There could, however, be expected to be a reduction in costs associated with data entry, validation as well as assessment of alternative emission estimation techniques, where such techniques are not provided in handbooks for substances unique to Table 2.

Any deferral of a small proportion of the overall development costs (related to deferral of the Table 2 only substances) is therefore not likely to reduce to any significant extent the costing for the program over a number of years.

Costs to governments associated with gathering aggregated emissions data are not affected by the proposed variation to the NEPM.

Costs to governments of presentation of the data and provision of information to the community are not likely to be affected to any significant extent by the proposed variation to the NEPM.

Overall, there could be some savings from the variation to the NEPM, if the deferral of reporting on the Table 2 only substances facilitates better implementation and testing of the various administrative and communication systems. The savings could result from avoidance of the costs of remedial action that may be incurred as a consequence of the effective omission of the transitional phase of the program.

- *Some facilities will face costs to assess whether reporting is required under the NEPM. The extent of these costs is unknown, but is expected to be small in the vast majority of cases.*

Facilities will be required to assess whether reporting is required under the NEPM. It is considered unlikely that a facility would look only at the Table 1 substances and not assess at the same time whether it was going to have to report in the future on any of the Table 2 substances. It is therefore assumed that there will be few facilities that will face these initial assessment costs only in relation to the Table 2 substances.

- *Reporting facilities may face additional costs as part of the process of verification of data provided to jurisdictions. Although a process for verification is yet to be determined, it is anticipated that these costs would be minor except in cases where facility reports are found to be inadequate or misleading.*

Costs to industry of verification activities would not be expected to change substantially because levels of jurisdictional resourcing for these tasks is independent of the NEPM variation.

- *Jurisdictional governments will face additional costs if they choose to provide further information to the NPI database. Such information could include ambient monitoring information and more sophisticated modelling of aggregate emissions.*

The proposed variation will have no impact relating to the above point.

- *Stakeholders will incur some costs in nominating and justifying nominations for amendments to the reporting list contained in the Measure. These costs are expected to be small.*

The proposed variation will have little or no impact relating to the above point. Some costs may be incurred by stakeholders in providing submissions to this amendment process.

- *Where variations of the NEPM's reporting list are recommended, governments will face costs through the funding of the NEPC process to vary the NEPM.*

The cost of undertaking this NEPM variation process is incurred by the member governments of NEPC. The cost of any further amendments to the NEPM, arising for example from the review of the NPI, would also be incurred by those governments.

- *Stakeholders will incur some costs in applying to have their reports treated confidentially. Jurisdictions will face costs in assessing claims for commercial confidentiality.*

There is not expected to be a significant number of claims for commercial confidentiality. Therefore it is expected that there will be only marginal deferral of costs in relation to costs of claiming commercial confidentiality.

### 5.3 REGIONAL ENVIRONMENTAL DIFFERENCES

Sections 15 and 17 of the NEPC Act require that in any development of a NEPM or variation to a NEPM, regional environmental differences must be taken into account.

The Impact Statement for the original NPI NEPM discussed the issue of regional environmental differences (pp. 9 -11) and indicated that given that the NPI NEPM proposed to provide information on emissions rather than information about the receiving environment, it could be argued that any regional environmental differences are not relevant to the NEPM. Nevertheless it went on to consider broader questions of aspects of the NEPM, such as the substances to be included, the thresholds and the collection of information on emissions from smaller, diffuse and mobile sources.

In as much as the deferral of plant, animal and human health and environmental benefits occurs from the variation, that can be seen as a cost to the community. Some local communities may have benefits deferred as information is not available in relation to emissions in their area. This impact is specific to the variation to the NEPM. As the listing of substances in Table 1 was developed based on hazard and exposure, most priority pollutants are covered by that listing. However it is possible that emissions of substances which are only on the Table 2 list are of concern in a particular community, where other pollutants are not emitted. This point was recognised in the original Impact Statement which noted that "the number of substances on a reporting list beyond 24 to 40 substances will have little additional impact on the total number of facilities required to report but significant impact in relation to the identification of hazardous emissions in local regions".

The issues mentioned in the above paragraph are similarly not a regional environmental difference, but rather an information availability difference.

In terms of the requirements of the Act, there are no specific regional environmental differences that relate specifically to the variation to the NEPM.

## **6. IMPLEMENTATION**

### **6.1 PROPOSED DATE FOR VARYING THE NEPM**

The NEPC Acts set out in detail the processes for making and varying NEPMs. These processes includes a statutory consultation period of minimum duration on a draft NEPM and Impact Statement.

In the case of this proposed variation to the NPI NEPM, in September 1999 NEPC approved a proposal that contemplates varying the NPI NEPM in May 2000. This timing recognises that the scope of the variation to the NEPM is necessarily limited and acknowledges that, when developed, a draft variation and Impact Statement will be released for public consultation for the statutory two month period.

The NEPM, as varied, will require implementation through the NPI implementation instruments established in participating jurisdictions. The time taken to achieve variations to these instruments will depend on the nature of those instruments. Where principal legislation needs to be passed through Parliament, parliamentary business priorities and other factors will have an effect. If a regulation or other non-parliamentary instrument is appropriate, there may be compulsory assessment and consultation procedures at jurisdictional level. It is anticipated variation processes for jurisdictional instruments will commence in May 2000 and be completed as soon as practical thereafter.

There are no transitional arrangements required in relation to the variation.

### **6.2 NPI DATA REPORTING SCHEDULE**

The following table provides a schedule for data expected in the first five years of the NPI program. The table incorporates columns indicating the data that would be available with and without the variation to the NEPM.

### NPI DATA REPORTING SCHEDULE

Reporting Year	Dates	Substances - no variation to NEPM	Table 2 Reporting Requirements	Substances - with variation to NEPM	Table 2 Reporting Requirements	Number of sectors reporting
1 <sup>st</sup> year	1 July 1998 – 30 June 1999	36	Voluntary*	36	Voluntary*	23 part year
2 <sup>nd</sup> year	1 July 1999 – 30 June 2000	36	Voluntary*	36	Voluntary*	Approx. 76 - 36 full year, 40 part year
3 <sup>rd</sup> year	1 July 2000 – 30 June 2001	90	Mandatory No penalties	36 <b>Amended NEPM commences</b>	Voluntary*	Approx. 76 full year, 4 part year
4 <sup>th</sup> year	1 July 2001 – 30 June 2002	90	Mandatory	36	Voluntary*	Approx. 80 full year
5 <sup>th</sup> year	1 July 2002 – 30 June 2003	90	Mandatory	90	Mandatory No penalties	Approx. 80 full year
6 <sup>th</sup> year	1 July 2003 – 30 June 2004	90	Mandatory	90	Mandatory	Approx. 80 full year

Note - reporting on Table 1 remains the same for both options ie mandatory with no penalties for years 1 and 2 and mandatory thereafter

\* “Voluntary” means not formally required but encouraged.

## APPENDIX A

### Executive Summary of Technical Advisory Panel Report

#### *Introduction*

The Technical Advisory Panel to the National Pollutant Inventory was formed in March 1997 to recommend substances for inclusion on the National Pollutant Inventory.

The Panel met nine times during March and April 1997 and has produced a report. The Panel provides this report for consideration but expects that the Panel will be able to fine tune various aspects of the report during May, and also be given the opportunity to revisit the report after it has been considered during public consultation. Some cautions on the use of this report are provided in certain sections of the report.

#### *Criteria for substance selection*

Consistent with its terms of reference at [Appendix I](#), the Panel has developed criteria for selecting comprehensive substances to the reporting list.

The criteria are detailed in Chapter 2 but can be summarised as:

- Environment effects - evaluating acute toxicity, chronic toxicity, persistence, and bioaccumulation of a given substance to arrive at a score on its effect on the environment;
- Human health effects - evaluating acute toxicity, chronic toxicity, carcinogenicity, and reproductive toxicity of a given substance to arrive at a score on its effect on human health; and
- Exposure - evaluating the potential release in Australia (both from point and diffuse sources) and the bioavailability of a given substance to arrive at a score for exposure.

A detailed approach integrating these three sets of criteria has been developed by the panel, and then applied to a comparative assessment of risks to Australia posed by substances under consideration.

#### *Substances*

The Panel has considered a wide range of substances during its deliberations.



The Panel excluded substances on which extensive action was already underway:

- banned in Australia or Tabled for phase-out. However, the Panel sounds a note of caution that should the withdrawal of any such substance be delayed or should a substance still be suspected of use despite withdrawal, then it should be included in the master list of substances. For this reason the Panel has left many of these substances in the list so that their relative ranking is clear. In general, these are substances which have been comparatively recently withdrawn or are still being phased out. They are italicised in Appendix III;
- ozone depletors; and
- greenhouse gases.

At the direction of the National Environment Protection Council Committee, the Panel has considered agricultural and veterinary substances. Only 20 such substances have so far been included in the comprehensive list (these were drawn from the EC source list). The Panel believes that the scoring system developed for the master list does not always translate well to agricultural and veterinary substances and needs further consideration. These and other issues associated with agricultural and veterinary substances will be discussed in more detail in Chapter 4.

Overall the Panel has considered 420 substances against its criteria so far. This comprehensive list of substances and their assessment are appended to this report at Appendix III. Due to the deletion of duplications etc there is now 396 substances on the comprehensive list

### *A Reporting List*

The panel recommends to the National Environment Protection Council that the substances listed at Appendix II comprise the initial reporting list for the National Pollutant Inventory.

All substances on the master list were scored against each criterion described above and then these scores were used to generate a number which approximated the risk that substance poses in Australia. This risk is expressed as:

$$\text{Risk} = \text{Hazard (Environment + Health)} \times \text{Exposure}$$

Hazard identification of nominated substances was the first step in the risk assessment process undertaken by the Panel. Through the application of the above paradigm to all substances on the master list, the Panel derived an estimate of risk under identified exposure scenarios. This paradigm for risk assessment is based on accepted scientific principles and is recognised and used by, among others, Standards Australia, the US National Research Council, and the European Community.

In the risk assessment undertaken, the Panel considered and weighed all the relevant and available evidence, acknowledged the assumptions and uncertainties inherent in the process, and presents the results in a clear, transparent, and usable format.

The risk scores thus generated were used to rank the substances. The Panel then applied its professional judgement and expertise, and recommends inclusion in the

reporting list of those substances which scored 3 or higher. In doing so the Panel recognises that there is no firm technical basis for drawing the line at that score rather than another; the NEPC may choose to issue a shorter or longer list. Nevertheless, the Panel considers that cutting off at that point captures those substances released in Australia which represent real risks to human health or the environment.

The Panel cautions that these scores should be considered only in the context of generating the NPI reporting list. They are not to be applied in other contexts. Further, the Panel has provided a detailed and transparent breakdown of the methodology used so that others using differing methodologies can compile their own list if they so choose.

More detail on how this final list was arrived at is provided in Chapter 2, which deals with rankings of the substances. Details of each substance's hazard and risk can be viewed at [Appendix III](#), for which explanatory notes are provided.

### *Thresholds*

The Panel has recommended threshold quantities for reporting based on amounts of substances handled, rather than amounts of substance released or number of employees as a trigger for reporting. Quantity handled thus serves as a proxy for an amount released. The Panel has drawn heavily on the overseas experience. Both the US and Canadian emission inventories, which have been in operation for some years, have similar threshold systems to the one proposed by the Panel.

### *Recommendations*

The Panel recommends that the Committee:

1. accept the risk based criteria developed by the Panel, detailed in Chapter 1;
2. accept the list of substances, provided at [Appendix II](#), as the draft reporting list to be released as part of the draft National Environment Protection Measure for the National Pollutant Inventory;
3. note the inherent limitations of any system which attempts to accurately characterise risk in a simple uni-dimensional 'score';
4. acknowledge the timing and information constraints under which the Panel laboured and agree that the Panel should further refine the scores allocated and also revisit the report after it has been scrutinised by the community; and
5. release the master list at [Appendix III](#) as part of the public consultation process.

### **Note:**

Refer to complete Technical Advisory Panel report for the above appendices. Appendix II of the Technical Advisory Panel Report is the NPI reporting list and is Table B of the Measure