Final Report

Plain English Version

1. The Fracking Inquiry released its Final Report on 27 March 2018.
2. The Final Report talks about the work done by the Inquiry. It talks about the problems with fracking and how those problems can be dealt with.
3. The Inquiry made 135 recommendations. The recommendations are listed in the Final Report.
4. This is a plain English summary of the key points in the Final Report.

Key points

5. In September 2016 the Government put a ban or 'moratorium' on fracking in the NT.
6. The Government said that the ban would stay until a team of experts told the Government what the problems with fracking are and how they can be dealt with.
7. The Inquiry was made up of the Honerable Justice Rachel Pepper, who is a judge on the New South Wales Land and Environment Court. Justice Pepper chaired a team of scientists who are experts in engineering, water, land, greenhouse gases, human health, Aboriginal culture and social impacts.
8. The Inquiry's job was not to tell the Government to remove the ban on fracking or to keep it.
9. The Government will decide whether to lift the ban on fracking now that the Inquiry is finished.
10. The Inquiry heard from lots of people that are worried about fracking.
11. People were mainly worried about water but there were also worries about the land, keeping communities and culture strong and protecting country.
12. The Inquiry has also heard from people that think there are benefits from fracking, like jobs and royalties.

What did the Inquiry do?

13. The Inquiry first met in December 2016. They met 12 times.
14. The Inquiry went to Moomba in South Australia and Mereenie in the NT to look at fracking of 'tight' gas. Tight gas is gas that is found in sandstone rock. Tight gas is not the same as shale gas but on the surface it has the same types of drilling equipment and trucks and sometimes but not always you have to frack to get the tight gas out. Fracking for tight gas has occurred at Mereenie.
15. The Inquiry released a *Background and Issues Paper* in February 2017. It mainly talked about the problems with fracking.
16. The Inquiry did 151 public hearings.
17. The Inquiry did 52 community forums. 37 of these were in regional and remote areas and 15 were in urban areas (Alice Springs, Tennant Creek, Katherine, Darwin).

18. The Inquiry went to Queensland to speak to people about their worries with coal seam gas (**CSG**). CSG is not the same as shale gas but on the surface it has the same types of drilling equipment and trucks and sometimes but not always you have to frack to get the CSG out.
19. The Inquiry visited some pastoral properties in the NT and spoke with pastoralists about their concerns.
20. The Inquiry released an *Interim Report* in July 2017 to update the community and get feedback.
21. The Inquiry asked ACIL Allen and Coffey to do some work on economic and social risks and published their reports.
22. The Inquiry released the *Draft Final Report* in December 2017 including 120 draft recommendations.
23. The Inquiry published 31 community updates to make sure people always knew what we were doing and how people could talk to us about their concerns.
24. The Inquiry got 1257 letters from people talking about fracking.

Where is the gas and where does fracking happen?

25. There is gas trapped inside very hard shale rock that is a long way underground (about 2-4 kms).
26. Gas companies drill a hole, also called a well, deep into the earth all the way to the shale rock.
27. Fracking is needed to get the gas out of the shale rock otherwise it stays there.
28. Fracking is where water and chemicals are pushed deep underground to crack shale rock and let gas flow to the surface.
29. Unlike CSG, fracking for shale gas is far away from any aquifer used for drinking or cattle.
30. Fracking for shale gas should not cause earthquakes or sinkholes.
31. The gas is used to create heat and electricity and in manufacturing to make things.

Where is the shale gas in the NT?

32. There is only shale gas in some parts of the NT. Shale gas is not everywhere.
33. Most of the gas is in the Beetaloo Sub-basin, which is around Daly Waters.
34. The scientists do not know very much about how much gas there is. More work needs to be done.The gas companies will have to do more drilling and fracking to know how much gas there is.

What will it look like when they develop the gas?

35. If the Government lifts the ban, the Inquiry thinks that 1-2 gas projects might happen in the next 5-10 years.
36. Any shale gas projects will probably happen in the Beetaloo Sub-basin first.
37. The gas industry thinks that there will be between 1,000 and 1,150 wells on 104-140 drill pads in the Beetaloo Sub-basin.

Well integrity

38. Gas wells need to be strong so that nothing can get out of the well. If the steel and cement around the well breaks, then gas, water and chemicals could leak out into the air or groundwater.
39. The Inquiry says that wells and groundwater must be checked and tested all the time to make sure there are no problems. If there are problems then the gas company has to fix the problem or pay to get the problem fixed. It is not up to the farmers or the community to pay for the gas companies' mistakes or accidents that happen.

40. The Inquiry made a lot of recommendations about how to ensure wells are strong and that nothing can excape from the wells. For example, the Inquiry said that there must be laws in place to ensure wells are strong and that tests should be done after the well is not used any more to make sure it does not leak (***Recommendations 5.1 - 5.4, 7.11*** and ***7.15***).

Waste water

41. Lots of water goes down a well to do fracking and when it comes back there are bad things in the water that you do not want in the groundwater or surface water.
42. The Inquiry says that the Government and gas companies need to get a good plan to get rid of the waste and wastewater. Until the wastewater can be removed, it must be stored in closed tanks (***Recommendations 5.5*** and ***5.6***).
43. The Inquiry says that the bad water should not be put back into the ground.
44. The bad water should also not be put in rivers or dams.
45. Plans need to be in place to make sure that none of the bad water spills anywhere. This includes on the areas where fracking happens and on roads when they move chemicals and waste water in trucks or by train (***Recommendations 7.12*** and ***7.14***).

Water supply

46. A lot of water is needed for fracking and there must be enough water for everyone, including farmers, Aboriginal people, plants and animals.
47. The gas industry will use between 2,500 and 5,000 megalitres each year in the Beetaloo Sub-basin. This is between 1,000 and 2,000 Olympic swimming pools.
48. The shale gas industry will most likely use groundwater. The Inquiry said that the gas industry should not be allowed to use surface water (this means rives, lakes and wetlands) (***Recommendations 5.17, 7.6, 7.19*** and ***7.20***).
49. The Inquiry says we need to know more about how much groundwater there is, which way it goes, how much new water comes in, and who uses it, before we take it out of the ground. Big studies over big areas must be done to help us learn about groundwater (***Recommendations 7.5*** and ***7.16***).
50. The Inquiry made a lot of recommendations to make sure that there is enough water for everyone (***Recommendations 7.1 – 7.20***).
51. Government needs to put good plans and laws in place to ensure water is properly managed and that there is enough for everyone (***Recommendation 14.18***).
52. The laws (the Water Act) needs to change so that gas companies need to get a licence to use water and to pay for the water (***Recommendation 7.1*** and ***7.2***).
53. Gas wells should not be closer than 1 km to a water bore (***Recommendation 7.11***).
54. Surface water, like lakes, rivers, streams or billabongs must not be used for fracking (***Recommendation 7.6***).

Water quality

55. The Inquiry looked at ways that the bad water from fracking can get into groundwater and how it can be stopped.
56. Some people told the Inquiry that fracking shale that is deep underground can cause bad water and gas to leak up into groundwater. The Inquiry thinks that this is very unlikely because of the very big distance between the shale and the groundwater (about 2-4 kms) and the special way the special cement and steel are used in the well (***Recommendation 5.7***).

57. The Inquiry heard that spills of bad water can contaminate good water, especially in the wet season/rainy season. The Inquiry says that this problem can be fixed with good planning, using strong storage tanks, and ongoing checking (***Recommendation 7.12***).
58. The Inquiry heard that companies sometimes put water that has already been used for fracking back into the ground after they have taken the bad chemicals out of it. The Inquiry says this should not be allowed (***Recommendation 7.9***).
59. The Inquiry heard that gas and bad water can come out of wells especially when they are very old. The Inquiry says that wells need to be made so that this does not happen. The wells must be checked for a very long time until we know they won't leak (***Recommednations 5.1, 5.2, 5.3*** and ***5.4***).
60. The Inquiry says that everyone needs to know what chemicals go into the wells and what chemicals come out of the well (***Recommendation 7.10***).

Land

61. The NT is a special place with lots of plants and animals that are not found anywhere else in the world.
62. We need to understand the plants and animals better before the fracking industry starts selling gas. This means doing a big study of all the plants and animals (***Recommendations 8.1, 8.6*** and ***8.10***).
63. There are special areas where fracking should never happen, like where people live, national parks, areas where plants and animals are protected, and places that are important to Aboriginal people (***Recommendations 8.1, 14.3*** and ***14.4***).
64. We need to know where weeds are and we need gas companies to stop them spreading (***Recommendations 8.2, 8.3*** and ***8.4***).
65. Government should look at helping Aboriginal land ranger programs to look after country (***Recommendation 8.9***).
66. Roads and pipelines could split up animal and plant families so the land used by the industry must be small and planned well and cleaned up when the gas company is finished (***Recommendations 8.7, 8.8, 8.11, 8.13, 8.14, 8.15*** and ***8.16***).
67. The gas industry might change current fire patterns. For example, roads can act as barriers to the spread of fire. We need to make sure the gas industry doesn't change how fire is used to manage country or cause bad fires (***Recommendation 8.5***).

Greenhouse gas emissions

68. Carbon dioxide and methane are gases that are released when gas companies drill and frack. These gases are called 'greenhouse gases', which means they cause climate change (global warming). Methane is a much worse (stronger) greenhouse gas than carbon dioxide.
69. Gas can also leak out of wells and pipes. Leaks can be reduced by 23% if good practices, including new technologies, are used.
70. Methane leaks from wells need to be checked to make sure none is leaking out. If there are leaks then the gas companies need to quickly fix it (***Recommendations 9.1 – 9.7***).
71. The greenhouse gas emissions from using shale gas to create electricity are better (by about 50%) than the emissions from coal. But the greenhouse gas emissions from shale gas are still more than the emissions from renewable energy, like wind and solar.
72. If fracking goes ahead Australia's greenhouse gas emissions will increase by about 4.5%. This is not good. The Inquiry says that if shale gas fracking goes ahead in the NT Australia's total greenhouse gas emissions can't go up so the NT Government and the Australian Government have to work together to reduce emissions elsewhere (***Recommendation 9.8***).

Public health

73. The Inquiry looked at chemicals that could enter the environment from fracking. These include chemicals that are put into the fracking fluid and chemicals that come up from underground.
74. The Inquiry thinks that chemicals used in fracking will not make humans or wildlife sick if they get into the environment. Methane is not toxic to humans.
75. The Inquiry is more concerned about toxic chemicals that come up from deep underground, such as benzene, ethylbenzene, toluene and xylenes (called 'BTEX') and radioactive materials that are found deep underground (called 'NORMs'). BTEX is not allowed to be put into fracking fluid but sometimes BTEX comes from underground. Sometimes NORMs can come up also.
76. The Inquiry thinks that big studies need to happen before fracking happens to make sure there are no health problems/no one gets sick (***Recommendations 7.4*** and ***10.1***).
77. The Inquiry thinks fracking should not occur less than 2kms from communities and other areas where people live, work and go to school (***Recommendation 10.2***).

Aboriginal people and their culture

78. Aboriginal people live in the areas where there is shale gas.
79. It is important that Aboriginal communities and Aboriginal culture and traditions are not worse off because of fracking. Sacred sites must not be damaged by fracking (***Recommendation 11.3*** and ***11.8***).
80. Aboriginal communities need to be given more and better information about the good and bad things about fracking. Interpreters must always be used where people don't speak English so they understand the full story (***Recommendations 11.2, 11.4, 11.5*** and ***11.6***).
81. Gas companies must to talk with custodians/traditional owners and the Aboriginal Areas Protection Authority before any fracking happens (***Recommendations 11.2*** and ***11.4***).
82. The law needs to be made stronger to ensure that underground sacred sites are protected from fracking. The Inquiry says that gas companies must have an Authority Certificate before any fracking happens to make sure sacred sites are safe (***Recommendations 11.1*** and ***11.3***).

Social impacts

83. The Inquiry asked an independent company called Coffey to help understand the impacts that fracking might have on communities and how they can be dealt with.
84. The Inquiry heard that the gas industry could have a big impact on communities in the Territory. The social impacts of fracking are things like lots of workers in high-vis clothing and more cars being around, more crime, more humbug, and problems from more royalty money.
85. The Inquiry says there needs to be a big study, called a social impact assessment (**SIA**), about how communities will cope if fracking goes ahead to make sure communities benefit. Government and industry need to work with communities to make sure they industry doesn't cause problems in the community and that the right services are there for people (***Recommendations 12.1 – 12.8 and 12.20***).
86. There could be a big impact on roads from all the gas company trucks and fly-in fly out (**FIFO**) workers. The Inquiry said that government and the gas industry should make sure roads are upgraded and stay safe so that people don't have accidents because of bad roads (***Recommendations 12.9*** and ***12.10***).
87. The Inquiry said that the gas companies should not cause problems for existing services, like health and housing services (***Recommendations 12.11, 12.12*** and ***12.13***).
88. The Inquiry said that the gas companies should work hard to make sure that local people and local businesses get jobs (***Recommendation 12.15*** and ***13.2 – 13.12***).
89. The Inquiry said that gas companies must form a relationship with the communities and earn a social licence to operate (**SLO**). A SLO means the community is ok with the gas companies being there (***Recommendations 12.15, 12.16, 12.17, 12.18*** and ***12.19***).

Economic impacts

90. The Inquiry asked an independent company called ACIL Allen Consulting to help it understand the money story of fracking. ACIL told the Inquiry that there will be jobs and royalties for government and Aboriginal people from fracking. It's hard to know how many jobs right now because we don't know exactly how much gas there is.
91. The Inquiry heard that the community is concerned that the benefits (royalties) of fracking won't go to the communities that are cloae to/affected by fracking. We want the Government to look at ways the communities can benefit (***Recommendation 13.1***).
92. The gas industry must work closely with Government and communities to make sure local people get jobs and local businesses get work (***Recommendations 13.2-13.12***).
93. The community is also concerned that the gas industry will be bad for other industries, like tourism operators, pastoralists and farmers. Gas companies and Government must work with other industries to make sure fracking does not cause problems for other industries (***Recommendation 13.11***).

Regulations (Laws)

94. The community does not trust the gas industry or the Government to protect the environment.
95. The best way to protect the environment is to have strong laws and a strong regulator with enough people and money to check up on the gas industry and make sure that it does the right thing.
96. There are lots of ways the law can be made stronger.
97. Information should be made available to the public so that everyone understands what's going on. This includes all environment plans that have been approved, the chemicals used in fracking and that come out of the ground, results of any tests, and any problems that might happen (***Recommendations 14.15, 14.16***).
98. The community should be able to have their say about fracking. The community should be able to have a say about what land is used by gas companies to make sure it's not land where fracking shouldn't happen. There might be sacred sites or important hunting areas that should be protected (***Recommendations 14.2*** and ***14.10***).
99. Gas companies should get an agreement with farmers and pastoralists (like traditional owners) before they do any fracking. The Inquiry thinks that pastoralists should (like traditional owners) be paid some money by the gas companies (***Recommendations 14.6 – 14.9***).
100. Gas companies must show that they have done the right thing and not damaged the environment in the past before the Government gives any approvals to do fracking (***Recommendations 14.12, 14.20*** and ***14.30***).
101. Government must make sure there is always enough money available to clean up and fix country they are no longer using or if a spill or a problem occurs. The gas companies should put money aside in a special fund to do this (***Recommendations 14.13*** and ***14.14***).
102. Gas companies need to look at how the project affects the whole region – not just the part where the project is (***Recommendations 14.19, 14.21*** and ***14.22***).
103. People that might be affected by the gas industry should be able to go to court and have a judge listen to their problems (***Recommendations 14.23, 14.24 14.25*** and ***14.27***).
104. It should be up to the gas companies, and not traditional owners and pastoralists, to prove in court that they *didn't* cause a problem, like water contamination. This is fairer than making traditional owners and pastoralists prove that the gas company *did* cause the problem (***Recommendation 14.32***).
105. The people that promote the gas industry in Government should be different from the people that have the job of making sure the gas industry does the right thing (***Recommendations 14.34*** and ***14.35***).

Big study on water, land, communities and culture

106. Before a big shale gas development goes ahead there needs to be a study done to get good information on land, water, and local communities (***Recommendation 15.1***).
107. We need to know this so that we can make sure a big fracking industry will not harm the environment and bring benefits to local communities.
108. The big study will probably take about 5 years, which is about how long it will take gas companies to get a big project up and running (***Recommendation 15.3***).

What should Government do next if it lifts the ban?

109. Government has to make a decision to lift the ban or ban fracking forever.
110. If the Government lifts the ban the Inquiry says that all of the recommendations need to be done. Some things have to be done before any fracking can happen. For example, the Government must have strong rules to ensure safe wells are made and water is protected (***Recommendation 16.1***).
111. Some things have to happen before a big production happens. For example, all the studies about the social, cultural and environmental impacts has to be finished. This is so that decisions about fracking are made using good information.
112. The Government will need to make sure there are experts to help with the hard task of getting the law and the science right (***Recommendation 16.3***).
113. The Government must make sure the community can continue to talk about their concerns about fracking and how those concerns can be fixed (***Recommendation 16.4***).