PREFACE

KEY RECOMMENDATION

The terms of reference provided a logical sequence for the Inquiry to assess the future baseload electricity generation requirements of New South Wales, and the most efficient means for ensuring that the required investment funds would be forthcoming at the appropriate time. On the basis of submissions made to the Inquiry, together with expert consultant reports, I have determined that there is a need to be prepared for additional investment in baseload from 2013-14. Further, the most efficient means of providing for baseload is to improve the commercial and policy signals used by the private sector when investing in generation capacity in New South Wales. My key recommendation, therefore, is that the Government of New South Wales divests itself of all State ownership in both retail and generation. The process leading to this recommendation is outlined below, and covered in depth in the main body of this report.

Background

A **baseload** power plant is one that provides a steady flow of power regardless of total power demand by the grid. These plants are designed to run continuously throughout the year except in the case of repairs or scheduled maintenance, and provide the bulk of the electricity needs of New South Wales. Baseload plant can usually only operate within an output band and can take a significant amount of time to start up. In New South Wales, at this time, baseload power plants use coal as fuel. Fluctuations, peaks, or spikes in customer power demand are handled by smaller and more responsive types of power plants.

Over recent years the nature of baseload has changed. Peaks in electricity demand have been accentuated, particularly in summer, and this trend is expected to continue. Thus there has been a requirement for additional “peaking” capacity, largely to provide for changing commercial and residential usage patterns in New South Wales, rather than baseload. In addition, electricity produced from some “renewable” technologies enters and leaves the system in significant quantities, but intermittently, essentially substituting for baseload. To overcome the intermittency, therefore, flexible back-up plant is required. This is likely to become more of an issue for New South Wales as additional renewable energy enters the system, driven by Government programs and policies designed to encourage investment in renewable technologies.
Hydro and open cycle gas turbines (OCGTs) are the main providers of peak supply in New South Wales. Gas can also be used as a baseload fuel in combined cycle gas turbine (CCGT) plants. The modular nature, lower capital cost, and lower carbon dioxide ($CO_2$) emissions of CCGT plant is increasingly viewed as a more flexible and environmentally sensitive option to coal-fired plant for baseload. However, uncertainties regarding the price of carbon and the availability and price of gas combine to make a choice between coal and gas for the next baseload station a very complex issue.

**The National Electricity Market**

The National Electricity Market (NEM) was established in 1998 to provide a competitive wholesale market for the supply of electricity in New South Wales, Queensland, South Australia, Victoria, the Australian Capital Territory and, in 2005, Tasmania. Prior to the NEM, these States all had centrally planned electricity supply which were often characterised by over-investment in generating capacity due to the lack of market-based price signals. As a result, capital expenditure was allocated in a sub-optimal manner, effectively at a real cost to taxpayers and electricity consumers. The subsequent deregulation, or liberalisation, of electricity markets was not unique to Australia, and many other market-based economies were implementing their own competitive models during the 1990s.

The NEM is a compulsory gross pool market. Generators bid to supply the market with specific amounts of electricity at fixed offer prices for half-hour periods throughout the day. During dispatch, prices are calculated at five minute intervals and then averaged over the half-hour trading interval for settlement purposes. There is a price cap of $10,000 per megawatt hour, and a price floor of negative $1,000. Retailers purchase in the pool market, but the eventual price paid by them will depend on what hedging contracts that they have in place to give them their desired degree of price stability. Various market regulations exist to ensure security and reliability in the NEM.

The NEM permits electricity to be traded over State borders, subject to physical transmission constraints. Queensland transmits considerable quantities of baseload power to the NSW market. New South Wales and Victoria draw power from the Snowy Mountains Hydro-electric Scheme. Whilst it would be possible for any future increase in NSW baseload requirements to be met with additional imports, the ongoing transportation of electrical energy over long distances results in significant energy losses, and development of interstate generation in support of NSW load is only financially sensible where there are substantial differences in fuel costs. Considering NSW prospective coal seam methane resources and large coal reserves, there is a strong likelihood that NSW generators will be able to obtain fuel at least similar or even lower costs than generators in other jurisdictions, leading to increased NSW generation and reduced interstate energy flows in the medium term.
Does NSW need new baseload supply and when does it need it?

New South Wales continues to experience a declining rate of growth of electricity consumption. For the next decade, growth is projected to average 1.8 per cent per annum as compared with 2.5 per cent per annum over the past decade. This has been largely due to the impact of energy efficiency improvements and the public’s growing awareness of environmental impacts, both of which are expected to continue. However, despite expected lower rates of growth in future electricity demand, electricity supply and demand forecasts indicate that the State needs to be prepared for additional baseload power supply by 2013-14.

Some submissions to the Inquiry have argued that the need for new baseload supply will occur later than 2013-14. They have asserted that enhanced levels of energy efficiency, higher levels of supply from existing generators, renewable technologies, and additional sources of distributed power suggest that this date can be extended significantly into the future. Other submissions have contended that only peaking and intermediate plant is required over this timeframe.

There is no doubt that the effects of a range of NSW Government measures for mitigating environmental degradation, and specifically climate change, has produced significantly enhanced levels of energy efficiency in New South Wales. Whilst these measures are analysed in depth in the main body of this report, it is worth noting that the NSW Greenhouse Gas Reduction Scheme, a forerunner of the proposed national emission trading schemes and one of the first mandatory greenhouse gas emissions trading schemes in the world, has been a major factor in making CCGT technology competitive with coal in New South Wales through the issue of NSW Greenhouse Gas Abatement Certificates (NGACs).

On balance, I have decided to recommend a risk-averse approach and focus on the 2013-14 timeline. Depending on the technology, the lead-time for planning and building a new baseload power plant ranges from five to seven years, so the process has to begin now. The cost to the State of not being prepared in time is large relative to the cost of investing, with hindsight, a little earlier than may have been required. Further, being prepared today does not prevent delay in the future if the time horizon for additional baseload requirements moves outwards, possibly due to those factors outlined in the above paragraphs. However, it should be noted that current demand management and energy efficiency initiatives are already factored into the forecast of NSW electricity consumption, so it must be new initiatives (such as carbon trading and changes in current consumption patterns) that will alter the picture.
Is it essential that the NSW Government fund the new supply?

Ultimately the electricity consumer pays for the new supply through electricity prices. In turn, price levels will be determined by both the competitive structure of the market and the efficiency of investment decisions of the generators.

Historically, the Government has ensured the State’s security of generation supply through ownership of, and investment in, power stations, but the establishment of the national energy market during the 1990s has created a competitive market structure that forces commercial disciplines on investment decisions in new generation capacity.

In current day dollars, the cost of new investment in generation capacity in New South Wales over the next 10 to 15 years is expected to be in the vicinity of $7 billion to $8 billion. The rather wide range reflects a number of market uncertainties, including the timing and quantum of the investment decision, which itself is determined by rates of growth of demand, new sources of large loads, and recent significant price increases for power station components.

In regard to just the required investment in new generation, approximately half could be funded by the State-owned generators, with the balance coming from the Government through either increased borrowing, higher taxes or reprioritising other Government expenditure programs. However, additional debt funding, particularly for investment in assets that rely on market-determined revenues, may have an adverse impact on the State’s AAA credit rating. Given the importance of New South Wales maintaining its AAA credit rating, such an outcome is undesirable, whilst the latter two options are unnecessary. This issue is discussed in depth in the Report.

Given these consequences, I have focused on two key issues: (i) how much would the Government need to invest and fund in total in the State’s electricity industry, and (ii) is it appropriate that the Government fund this investment.

On the first point, Government investment in new generation capacity will mark the continued involvement of Government in the State’s now competitive electricity retail and generation markets. Rightly or wrongly, due to the market perception it creates, Government participation in these competitive markets is either ‘all in’ or ‘all out’. The current arrangement in New South Wales will ultimately lead to Government funding nearly all, if not all, investment in the State’s electricity industry over the next 10 to 15 years.
The total investment necessary for Government to remain an active and successful participant in this industry, however, is not limited to the capital cost of new generation plant. The Inquiry found strong evidence that the State-owned retail businesses will struggle to remain viable without significant additional capital to adjust their business model to suit the competitive environment in which they operate. The capital cost of ensuring their competitive viability is in the range of $2 billion to $3 billion.

As well, the impending carbon price may necessitate additional future investment in carbon reduction technologies. This could involve funding of about $3 billion to $4 billion to retrofit some existing power stations over the next 10 to 15 years.

In total, future industry participants could expect to fund some $12 billion to $15 billion worth of investment in order to ensure compliance with regulatory requirements and commercial competitiveness. The question for Government is whether this is a sensible investment for it to undertake given competing demands for Government funds and the opportunity cost in terms of other Government activities that this investment would entail.

This investment would be additional to Government investment in the State’s electricity transmission and distribution networks, which alone is estimated to be around $10 billion over the next four years.

While I recognise this investment, or at least most of it, should earn a rate of return, it is the Government’s preference that if it is not essential for Government to fund this investment then it does not do so.

On the second point, as explained in depth in the Report, I conclude that Government funding, in place of private sector funding, is not essential to allow Government to ensure security of supply or achieve appropriate price, social or environmental outcomes from the State’s electricity industry.

**What are the realistic technological options to deliver new baseload by 2013-14?**

The most technologically advanced, commercially viable options currently available for the next tranche of baseload generation in New South Wales are CCGT and Ultra-supercritical Coal (USC). A CCGT plant has lower capital costs than USC technology, a shorter construction period, and about half the level of CO₂ emissions per unit of power generated. However the relative fuel cost advantage of coal over gas has, in the past, given coal a distinct commercial advantage for system baseload.
Given the lower carbon emissions footprint of gas, a carbon price could reverse this outcome provided the degree of fuel switching stimulated by the carbon price did not offset this advantage by way of higher gas prices. Depending on the carbon price signal, and government policies and support, the technology for subsequent investment cycles of baseload power plants may involve low carbon emissions technologies, such as carbon capture and storage. Depending on relative fuel prices at that time, these technologies may alter the relative costs of gas and coal-fired technologies again.

Emerging baseload technologies, such as geothermal and solar thermal will not be commercially available by the time new baseload is predicted to be required, but clearly have potential for future additions to baseload, particularly in a carbon constrained environment.

Carbon capture and storage (CCS) is viewed as the major enabling technology to counteract climate change. Coal is in plentiful supply, has minimum problems with energy security for most countries, and is relatively cheap. Although capture technologies have been used since the 1970s for CO₂ capture in other industries, applications on the scale of baseload power stations are only just entering the pilot stage.

Currently costs are very high and there is a corresponding lack of practical experience regarding its technical feasibility, particularly with regard to underground storage of the gas. Whilst CCS is unlikely to be commercially viable for the next tranche of baseload plant in New South Wales, such plant could be made “carbon capture ready” and potential CO₂ reservoirs could be identified in order to retrofit when the market determines it to be appropriate.

Nuclear power is a viable enabling technology but, despite its relatively good history on safety, has environmental and nuclear proliferation issues that would invariably cause long development delays due to public and political scrutiny in Australia. In addition, the regulatory environment for enabling Australia to become self-sufficient at all stages of the nuclear fuel cycle does not currently exist. Nuclear power would also require a significant carbon price in order to compete with coal or gas for baseload. It should be noted, however, that in his speech to the NSW Parliament on 9 May 2007, the Premier, the Hon. Morris Iemma, MP stated ‘there will be no consideration of nuclear energy for NSW whatsoever’.
Ultimately the choice of the appropriate technology, both current and prospective, is an investment decision that private sector businesses must address on a purely commercial basis. Utilising plant components or designs which are unproven, or have demonstrated poor reliability, or are at an early stage of development pose an unacceptable risk, given the high reliability requirements of the electricity supply system. The level of maturity can impact on both system reliability and the ability to finance a project. Providers of finance for power projects are risk-averse and an unproven technology would generally find it difficult to find financial support.

**Why is there a lack of private sector investment in generation in NSW?**

In comparison with the other mainland States in the NEM, private sector investment in the electricity sector in New South Wales is minimal. The State owns the vast majority of both electricity generation assets, including baseload generation capacity and electricity retail customers. It is also the owner and operator of the State’s electricity transmission and distribution networks.

The private sector will invest in generating capacity when wholesale prices and market-related conditions point to a decision based upon commercial criteria. They are investing over long time horizons and therefore need confidence on the efficacy of the market they are entering. The predominance of publicly owned businesses in New South Wales, however, gives rise to a number of factors and uncertainties that inhibit private sector investment in the generation sector. This is particularly the case for additions to baseload, where there is the perception that investment behaviour of State owned generation is not subject to the same capital market disciplines as the private sector.

Investment occurring earlier than warranted by market signals, could give rise to excess capacity and hence a devaluation of generation assets. Since additions to baseload involve large, lumpy investments, the State generators with their portfolios of generating assets could adjust capacity accordingly. However, a financial penalty would be imposed on taxpayers through higher costs resulting from an inefficient investment decision. But a new private generation entrant, without a portfolio of assets, could well be left stranded with costly surplus capacity. Investment in peaking plant is less of a problem, since its modular, smaller nature reduces the size of the investment at risk and gives it a much greater flexibility in responding to changing prices and other market-related conditions.
If the Government is not going to finance and own baseload supply, what needs to be done to ensure that the private sector will build it in a timely manner?

A generator will build new baseload plant to meet anticipated increases in demand and to optimise the value of their portfolio of generation assets. There are a number of commercial incentives, such as “first mover” and owning least cost generation, which will encourage owners of generation to invest in a timely manner in new baseload. Under the realistic assumption that new technology will be more cost-effective than existing technology, both in terms of energy output and emissions of CO₂, a new baseload plant would force, now higher cost, competing baseload plants lower down the merit order. In other words, the new plant would force older plant to reduce output with corresponding adverse impacts on their cash flow.

However, there are a number of commercial and policy issues that are relevant for private sector investment in electricity generation. The following actions are required to address these issues.

1. Uncertainties surrounding the implementation of a national carbon pricing and trading scheme must be minimised.

2. The market structure facilitates the desire of private sector investors for a relatively stable revenue stream, which can be obtained by vertical integration of generators and retailers or investment by portfolio generators which have existing plants.

3. Site access and planning processes should have the greatest degree of transparency and faster processing.

4. The NSW Government should not invest in electricity generation or retailing.

What will happen to electricity prices if generation and retailing are sold to the private sector?

The wholesale electricity market has exhibited relatively high price volatility and, more recently, dramatic increases in prices due to a number of factors, including the prolonged drought which has constrained power production due to a shortage of cooling water at some inland NSW baseload power stations.
Currently the NSW Government mitigates the risk of this volatility flowing through to regulated retail prices through the Electricity Tariff Equalisation Fund (ETEF), but ETEF will be phased out by 2010. Market-based price hedging mechanisms will then be required to replace it. The private sector is increasingly managing this risk through vertical integration (i.e. owning both retail and generation assets). However this would not be an option for New South Wales if the retail sector were privatised whilst generation remained in State ownership. The retailers could hedge through investing in peaking capacity, but the generators would be exposed to downside wholesale price volatility. To minimise the State’s exposure to wholesale market risk, therefore, both retail and generation would need to be transferred to the private sector.

It is impossible to anticipate the future direction of electricity prices, particularly as the imposition of a carbon trading regime in Australia is imminent. However, provided a competitive environment exists, then I would anticipate that prices would be lower than they would in a market dominated by Government owned companies. It should be noted, that the effectiveness of competition in New South Wales will be reviewed by the Australian Energy Market Commission in 2009 with the objective of considering whether retail price regulation should be removed.

**What impact will a national carbon trading scheme have on baseload investment decisions in the private sector?**

It appears inevitable that a carbon emissions ‘cap-and-trade’ scheme will be operating at a national level in Australia commencing no later than 2012. The intention of introducing such a scheme is to allow the market to determine the least cost method for achieving a designated emissions ‘cap’. The level of the cap is determined on the basis of scientific knowledge regarding the damaging impact of carbon emissions on the planet, in combination with the estimated cost of mitigating such impacts. Basically, such a scheme is designed to place a price on carbon which drives changes in consumer purchasing behaviour and producer investment behaviour towards low-carbon technologies. Since the nation’s carbon emissions cap would be fixed, total emissions would be restricted to a maximum of the cap but at an emissions trading price which is determined by the market for permits.

The creation of a national emissions trading scheme involves the design of a complex market structure that must encompass all major carbon emitters whilst simultaneously protecting Australia’s energy-intensive export industries from competitors not themselves subject to a carbon price regime.
In the context of the electricity sector and current technology options, the price of carbon permits will play a critical role in determining the relative competitiveness of coal and gas-based technologies after the scheme is introduced. Whilst existing generators are likely to receive emissions permits to cover some or all of their emissions based upon historical levels, new investments will need to have permits to cover all of their emissions. Thus future investors in electricity generating plant in New South Wales must factor in the cost of carbon in assessing their commercial viability. With CCGT plants producing approximately half the CO₂ emissions of USC plants, the cost of carbon will be a major element in the choice of investment technology for baseload.

At present, a number of key commercial parameters relating to a national carbon trading scheme are uncertain. Briefly, these are:

- the national emissions targets and associated dates for achieving such targets are vague
- the proposed carbon emissions cap for the electricity sector, and its transition path, are unknown
- the criteria for allocation of free emissions permits to current emitters has not been specified
- the penalty price for non-compliance has not been set.

The high level of emissions market uncertainty tends to favour CCGT technology given its lighter carbon footprint, but other uncertainties surrounding capital and relative fuel costs will also be major determinants of the choice of technology. In addition, it is important to consider both plant and system emissions when assessing the carbon footprint of new baseload investment. For example, to the extent that a new coal-fired baseload power station induces retirement of existing older coal-fired plant, additional output could be achieved with, potentially, a lower net level of carbon emissions per unit of system generation output.

At least in theory, an emissions trading scheme should ensure the required outcome, viz: national emissions do not exceed the national cap in the target year(s). In practice, if the cap is very stringent, then complementary measures are likely to be required to ensure that the transition path does not impact unduly on economic activity. For example, a 60 per cent reduction in CO₂ emissions by 2050 (the State’s declared target) will require rapid penetration of (non-nuclear) low CO₂ emission technologies that are currently neither technically nor financially viable, which would be a challenging requirement given the 30+ year existence of a power plant built today. The technology options and scenarios for meeting the State target are addressed in the Report.
If gas is the preferred fuel for new baseload, are there sufficient gas supplies available?

There is a requirement for a high degree of certainty that gas supplies and delivery infrastructure will be available to New South Wales, as required, to meet an expected increase in investment in CCGT technology. The market will deliver it if undistorted price signals are evident. There are sufficient gas resources in the Eastern States to support long-term gas-fired generation capacity additions in New South Wales. These are predominantly located in South East Queensland and offshore Victoria (the Gippsland and Otway Basins). In addition, the potential exists for significant (coal seam) gas supply from within New South Wales.

Current NSW gas prices ($3-$4/GJ) reflect the “stranded” nature of the resource in the Eastern States. If there is potential for this resource to be exported as Liquefied Natural Gas (LNG), then the domestic price could be expected to parallel North-West Shelf gas prices (currently around $8/GJ delivered from Western Australia to New South Wales by pipeline or $10-$13/GJ as LNG). Gas supplies from Western Australia and/or the Northern Territory, either by pipeline or LNG, are therefore too expensive on a delivered basis to render CCGT competitive with coal plant in New South Wales. Additional investment in an adequate and reliable NSW gas transmission network will be required to meet rising gas demand.

What is the role of government in investment in infrastructure?

Governments seek to influence infrastructure investment for a number of reasons. First, private markets may not supply some goods where there is no well-defined market for the individual, such as street lighting, so government provision may be necessary. Second, some services may provide benefits to society over and above those that accrue to the individual. These external benefits, or positive externalities, are often cited to justify spending on public education and public health. Finally, the existence of natural monopoly, i.e. when the minimum efficient size of plant is so large relative to market size that the market can support only one supplier (e.g. electricity transmission lines), may also warrant intervention.
Essentially, therefore, government expenditure on infrastructure is an opportunity cost issue. In other words, Government investment on infrastructure that can be adequately provided by the private sector, such as power generation, is at the expense of investment in other infrastructure requirements (e.g. policing, education and transport) that may not attract adequate levels of private investment or may not provide basic levels of service across all communities in New South Wales. Thus government ownership should ensure an adequate level of security of supply of these services. Since electricity generation and retail operate in a competitive market, there is no rationale for Government ownership based upon any inability of the private sector to provide a secure supply at competitive prices.

**What options are available to the NSW Government?**

**Retail Sector**

There are currently three State owned retailers in New South Wales: EnergyAustralia, Integral Energy and Country Energy. They compete against each other and against private sector retailers. They combine retailing with maintenance of the distribution network but, unlike their private sector competitors, own only limited generation assets to manage risk and optimise returns. Without major changes to their business models, it is very likely that their customer base will erode as the result of competition from private retailers.

In the event that the Government decides not to divest itself of the retail businesses, then additional investment in the range of $2 billion to $3 billion would be required to move the State-owned retailers onto a more equal competitive footing with their private sector competitors.

One option for an investment profile could, comprise of $1 billion to $2 billion to develop an upstream gas position by either acquiring an upstream gas company or by investing in gas exploration, and in excess of $1 billion to develop a portfolio of generation assets (peaking, intermediate and potentially baseload). There would appear to be little value in spending taxpayers’ money on transforming the State retailers into viable commercial entities in a competitive market where the private sector can provide the same service unfunded from the public purse. It is, therefore, my recommendation that the value of the retail assets of these three businesses should be realised now with their transfer to the private sector rather than remain State owned.

Transferring the retail businesses by themselves to the private sector, however, will not be sufficient to ensure the likelihood of investment in baseload, although it would encourage timely investment in peaking plant. Retailers focus not on the level of wholesale and retail prices, but the margin between them and ensuring that they have sufficient and timely capacity. Investing in peaking plant gives a retailer a hedge against price volatility, whereas investing in baseload would simply reduce the average wholesale price of electricity across the market, thus benefiting its competitors and new entrants in addition to itself.
Generation Sector

The three State-owned generators, Macquarie Generation, Delta Electricity, and Eraring Energy compete with both public and privately owned generators across the NEM. In the absence of private sector investment in baseload, the NSW Government would be forced to allocate capital to support expansion of one or more of its generators.

Under private ownership of generation, multiple projects might proceed as private sector participants attempt to gain a competitive advantage over each other. In addition, private ownership of current generation assets would enable additions to be made to a portfolio of generation assets, thus reducing the lumpy nature of baseload investment by retiring or winding back old plant. However, under State ownership this could be considered an irresponsible way of investing NSW taxpayers’ money if the State-owned generators competed against each other in this manner.

Privatisation of both the electricity retail and generation sectors would offer the opportunity for companies to become vertically integrated (i.e. own both a retail and a generation business) thus allowing them to adopt more cost-efficient outcomes. Whilst vertical integration would also be possible under Government ownership, subject to ACCC agreement this ensures that the State has to finance and build additional baseload power plants and would in all likelihood deter private sector investments in all but peaking plant. Again, there is no rationale for Government to be involved in a competitive market.

Under current market conditions, I consider that the private sector is very unlikely to invest in baseload generation in NSW. On the basis of the evidence gathered in the course of this Inquiry, I conclude that the most efficient way of addressing this problem is for the transfer of both retail and generation assets to the private sector. This would permit market-based electricity prices to send appropriate price signals to encourage the timely take up of investment and to facilitate the benefits of vertical integration of retail and generation for NSW consumers.

In the event that the Government does not wish to sell generation, then appropriately structured long-term leasing of current generation assets should be considered as a viable alternative. The State would retain ownership of the assets, with operational and commercial control by the private sector. A sufficiently long lease would provide an incentive to maintain the commercial life of the asset, and to invest in emission reduction technologies such as CCS. This option would be consistent with the Premier’s statement in Parliament on 9 May 2007 that ‘there will be no sale of electricity generation, transmission or distribution’.
Again, consistent with the Premier’s statement in the previous paragraph, sale of retail and sale or lease of generation would not include the sale of the high-voltage transmission and the low-voltage distribution (the so-called “poles-and-wires” business) networks, which can remain in public ownership without affecting incentives for private sector investment in generation.

In summary: how can timely investment in new generation consistent with the State’s AAA credit rating be ensured?

2. Divest or lease the State’s generation businesses: Macquarie Generation, Delta Electricity, and Eraring Energy, including their development sites.
3. Ensure efficient, timely, and co-ordinated development application and environmental planning processes for generation stations and new resources of fuel, such as coal and coal seam methane projects.
4. Commence the process of obtaining development approval for the development sites of existing generators.
5. The Commonwealth should design a set of guiding principles to reduce some of the uncertainties regarding the impact of the introduction of emissions trading on investment in the electricity generation sector and to facilitate the adoption of ultra low CO₂ emissions technologies. Specifically, as soon as possible it should:
   - Establish the economy-wide greenhouse gas emissions caps and associated time frames
   - Establish the penalty price for non-compliance
   - Announce the criteria upon which emissions permits will be allocated
   - Announce trade – exposed exemptions.

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