Dear Jeanne and Chris

Thank You for inviting me to be a part of the panel and providing S&P an opportunity to comment on the Draft NJ Energy Master Plan. I have reviewed the draft of the EMP and the implementation strategies document but not the modeling report in as much detail. I found the conference call held recently to be very interesting and brought out some excellent points from various participants. In light of the points that I made during the call, I would like to talk about the big picture issues of the plan first and then make a few minor comments about each goal and its associated strategies.

1. **Power vs Transportation:** It is clear that the EMP focuses on the power and heating sectors only. However, in the context of Gov. Corzine's Executive Order 54 (EO), there is an economy-wide target for greenhouse gas (GHG) emissions by 2020. It is not explicitly stated in the document whether strategies are in place to produce the remaining reductions from the other sectors, the chief one being autos. In S&P's opinion, it is very important to understand from the very beginning exactly how much reductions are being expected from the auto sector and how these will be achieved, since autos constitute such a large share of emissions and any shortfall there will largely fall on the power and heating sectors. For one, as I explain below, the auto sector is relatively insensitive to a market price for carbon. Two, NJ has very few options to impact auto emissions, with state auto-tailpipe regulation being litigated in California and CAFÉ standards and cap-and-trade being at the federal level.

   Even a cap-and-trade approach is likely to produce only limited emission reductions from autos and will result in placing a disproportionate burden on the power sector. Since oil companies control neither the fuel efficiency of cars nor the driving habits and model preferences of drivers, they can at best indirectly affect such decisions by passing through costs of carbon allowances in the form of higher gasoline prices. But this is potentially a weak price signal. To take an extreme example, at a price of $100 per ton for CO2 credits, the price increase to consumers would only be about $1 per gallon of petrol (since about 100 gallons of gasoline burns to produce one ton of CO2). Given the track record of the last few years, drivers will likely absorb such an increase without major emission reductions.

   So at $100 per ton for carbon credits, auto emission reductions will depend on the extent to which consumers see higher gas prices as permanent and change their behavior, and on the extent to which automakers respond with less-polluting vehicles. However, a coal power plant produces 1 ton of CO2 per Mwh and $100/ton for CO2 credits will be very steep for the sector. Therefore from a policy perspective, the use of legislation that mandates higher fuel economy for autos, or greater use of biofuels etc. would be a key determinant of how much reduction is achieved from autos and how much is required from other sectors. We think it is very important that the final plan explicitly state how much of the emission reductions are expected from the auto sector.

2. **Federal Regulation:** Federal regulation is a near certainty in the next few years, although the details are very uncertain. It will also be useful to have a section in the final plan discussing how any federal plan may cause changes

in New Jersey's approach. Energy efficiency and renewable goals will remain but may need to be adjusted in consonance with federal legislation as will the push towards low-carbon resources and federal incentives for the same. There may also be areas of federal policy that will be of interest to NJ, such as reduction mandates and credit prices, use of offsets, LNG infrastructure, support for new nuclear etc.

3. **Scenario Analysis and Goal Priorities:** It is very understandable that NJ focused on the BAU scenario and one Alternate scenario that achieves the emission reduction objectives. However, we think the final plan can benefit from a discussion of goal priorities and perhaps analysis of one additional scenario. There are a number of objectives for the state here:
    - Reliability of power supplies
    - Limiting rate increases to customers
    - Meeting the EO's GHG reduction targets
    - Supporting NJ's economy – Green collar jobs, maintaining a business-friendly environment etc.

    The two scenarios presented in the plan effectively solves for objective #2 (and thus indirectly for objective #4) by calculating the cost to customers under each scenario subject to the constraint of objective #3. I am also assuming that objective #1 is a given since each scenario will solve for a system that has adequate power supplies. Objective #3 thus becomes a key variable and a driver of costs. In our opinion, the final plan should discuss how important each of the above objectives are and which may take precedence over the others.

    In this context, given the aggressive nature of Goal #1 on Energy Efficiency, we think it will be informative to all stakeholders if there is one other scenario run, examining what could happen if efficiency goals are not met. Given the goals are designed to reach the GHG target, this scenario should focus on one (given the modeling constraints and the numerous possibilities) alternate way of reaching the target and examine the impact on the economy (power rates and bills) under the alternative. The most likely scenario that would still achieve the GHG target would perhaps be a new nuclear power plant in NJ. The draft plan already mentions that the state is making preparations to examine how one could be built in the future.

4. **Capex Assumptions:** Capital cost assumptions on most technology types appear to be somewhat dated and as a result too low. This will be important because it would make energy efficiency an even more economical option in comparison with generation than in the current modeling effort. It is also important in gauging the impact on customer bills and the possible savings although the alternative scenario when compared with BAU. Costs have continued to rise sharply even in the last few months. Informal discussions with companies and construction contractors indicate the following range for these technologies:

    Supercritical pulverized coal - $2600-3000/kW
    Combined cycle - $1000-1400/kW
    Simple Cycle peaker - $700-1000/kW
    Wind - $2000-2400/kW

5. **The Future of existing assets:** The plan shows how, once energy efficiency, renewables and CHP are counted, only 54000 Gwh of energy is required from traditional sources. This amount is significantly smaller than the existing generation of NJ's power plants. Indeed the modeling report indicates a steep fall in imports from PJM but also lower in-state coal and gas fired generation. However, given that NJ BPU does not regulate these assets any more, it is possible that assets may continue to generate electricity and dispatch into other nearby states. This will be a feature every year of the plan through 2020. The state of New Jersey may need to incorporate this into how they calculate the state's emissions.

6. **Goals 1 and 2 – Energy Efficiency and Reducing Peak Demand:** There was considerable discussion about the achievability of these targets. It will be very useful to see how the proposed building codes and appliance standards compare with those of CA where such codes, along with utility efficiency programs, have enabled the state to keep per capita consumption flat since the 1970s while the US has grown about 50%. A comparison with CA will provide stakeholders with an indication of the magnitude of NJ's goal and the kind of strategies that maybe needed to get there. In this context, it will also be useful to study if there is a record anywhere in the world of achieving such reductions in two decades.

   Improving energy efficiency in 3.7 million existing buildings by 2020 involves a massive effort to address more than 300,000 buildings each year. Existing efforts have not only reached far fewer buildings but also targeted specific types of energy efficiency improvements rather than comprehensively improving energy efficiency of the whole building. Moreover, achieving this Goal will require the cooperation of many different parts of the NJ Govt, both state and local. Thus, the implementation strategy should lay out or atleast broadly indicate these responsibilities and timelines of various Govt and private bodies that will be involved in this effort.

   Inverted Tariff, Decoupling Tariff, advanced metering to enable a 'smart grid', allowing utilities to rate base efficiency investments, utility incentive programs to achieve efficiency targets and modifications to the BGS to incentivize slower demand growth will all have important credit quality effects as well as varying capital needs for utilities and power generators. Decisions on these issues, along with renewable portfolio standards addressed later, go to the heart of the regulatory framework for utilities and could have wide ranging impacts on credit quality. Below are a few characteristics (positive and negative) of utility regulation from a credit perspective.

   Characteristics Of Credit-Supportive Regulation
   - Consistency And Predictability Of Decisions
   - Timeliness Of Rate Orders
   - Use Of Forward-Looking Measures
   - Use Of Adjustment Clauses/Trackers
   - Pre-Approval Processes
   - Support During Times Of Stress

   Less Supportive Credit-Related Regulatory Characteristics
   - Prolonged Rate Cases Without Resolution (Regulatory Lag)
   - A Penchant For Prudence Disallowances

- Absence Of Pre-Approved Capital Expenditure Programs
- Historic Test Years
- State Interference With Commission Actions