SDG&E September 27, 2011 Response
A. 10-06-007 South Bay Substation Relocation Project PTC
Energy Division Data Request 09 Dated September 20, 2011
SDGE-ED-009: Questions 1 & 2

1. **Avian Power Line Interaction Committee:** Please identify whether SDG&E has utilized measures to reduce the risk of collision for migrating birds along transmission and distribution lines similar to those proposed as part of the South Bay Substation Relocation Project. Please indicate whether measures such as those outlined in the Mitigating Bird Collisions with Power Lines Avian Power Line Interaction Committee (1994) would be feasible for the Proposed Project. Measures may include but not be limited to marker balls, bird diverters, or other line visibility devices placed in varying configurations.

   SDG&E Response:

   As an active member of the Avian Power Line Interaction Committee (APLIC), SDG&E designs and constructs its facilities in compliance with APLIC standards for transmission lines to reduce potential electrocution impacts to avian species. The new facilities associated with the Proposed Project will conform to these APLIC standards.SDG&E considers and incorporates additional measures to reduce risks to avian species based on the specific location and characteristics of a particular project.

   Because the Proposed Project (AIS design) would result in a net reduction of overhead structures and wires in the project vicinity, the project reduces overall collision risk. The reduction in facilities includes:

   - A net reduction of eight 69kV wood poles
   - Complete removal of three 138kV three-wood cable pole structures
   - Complete removal of five 138kV lattice towers and replaced with approximately 3,800 feet (0.7 mile) of underground facility
   - Undergrounding of approximately 1,000 feet of 230kV overhead facility and elimination of one steel cable pole

   In addition, the visibility of existing overhead conductor will be enhanced, which will reduce collision risk. SDG&E is replacing most of the existing 4/0 size copper overhead conductor to at least 636 ACSR/AW along the segment of transmission line from the existing substation location to the proposed new substation site. Because the 636ACSR/AW conductor is of a larger diameter conductor, it is more visible to avian species and therefore poses less of a collision risk. The 69kV wood pole replacement along this segment will be in-kind wood for wood with similar and APLIC consistent transmission standard configuration.

SDG&E September 27, 2011 Response
A. 10-06-007 South Bay Substation Relocation Project PTC
Energy Division Data Request 09 Dated September 20, 2011
SDGE-ED-009: Questions 1 & 2

As to the technological feasibility of marker balls, bird diverters, and other line visibility devices, diverters cannot be placed directly on transmission line conductor wire because the materials the diverters are made of cannot withstand the electrical corona and subsequent heating and therefore fail. However, diverters can be placed on transmission line static wires or directly on 12kV wire since they can withstand the level of heating associated with the smaller or no voltage on these wire elements. None of the 69kV transmission lines that are proposed in the project vicinity require static wires due to the reduced risk of lightning strikes because of location and facility height. Furthermore, there are adequate substation relay protective schemes incorporated into the 69kV transmission system already. The 230kV and 138kV converts to underground at the proposed substation location. Therefore there are no opportunities for the placement of diverters on the proposed transmission system.

SDG&E September 27, 2011 Response
A. 10-06-007 South Bay Substation Relocation Project PTC
Energy Division Data Request 09 Dated September 20, 2011
SDGE-ED-009: Questions 1 & 2

2. **Construction Schedule:** SDG&E provided a revised construction schedule in the data response submitted to the CPUC on September 8, 2010. Please provide an update of the anticipated construction schedule that includes the following project milestones:

    - Substation Grading and Site Development
    - Substation Below Grade Components
    - Substation Above Grade Components
    - 230 kV Loop-in
    - Substation electrical work, commissioning and testing
    - Energize Bay Boulevard Substation
    - 69 kV Relocation and Cutovers
    - 138 kV Extension
    - Decommission South Bay Substation

SDG&E Response:

The anticipated schedule at this time considering an estimated April 1, 2012 construction start date is as follows:

1. 04/12 to 10/12 – Substation Grading and Site Development (includes walls and access roads)

2. 09/12 to 3/13 – Substation Below Grade work (includes foundations, ducts, grounding and control shelter)

3. 01/13 to 10/13 – Substation Above Grade work (includes control shelter, structures, equipment, insulators and wires)

4. 2/13 to 12/13 – 230kV Transmission Line work

5. 04/13 to 11/13 – Substation electrical work, commissioning and testing

6. 1/14 to 12/14 – 69kV Transmission Line work

7. 09/13 to 12/13 – Loop in Tie Line 23042

8. 12/13 to 12/13 – Energize new 230kV Bay Boulevard Substation

9. 01/14 to 12/14 – 69 kV cutovers (length of time is dependent on outages) [1]

10. 01/14 to 06/15 – 138 kV Transmission Line work

11. 01/15 to 6/15 – Demolish South Bay Substation (depending on 69kV cutovers and Power Plant removal work)

[1] Activities in numbers 9, 10 and 11 could begin approximately three to six months earlier if outage coordination allows the cutovers to be completed sooner than 12/14.