# Exhibit I



# Keith Higgins

# Traffic Engineer

#### September 6, 2018

Eric Cherniss Vistra Energy 6555 Sierra Dr Irving, TX 75039

Re: Moss Landing Battery Energy Storage Project (PLN180394) Traffic Assessment and Construction Transportation Management Plan (CTMP), Monterey County, CA

Dear Eric,

As you requested, this is an assessment of traffic issues associated with the Battery Energy Storage Project (Battery Project). The Battery Project is proposed to be installed in existing buildings at the Moss Landing Power Plant (Plant) located at the northeast corner of the State Route 1/Dolan Road intersection in Moss Landing, North Monterey County, California. The assessment addresses potential project traffic impacts associated with the operation of the Battery Project as well as its installation.

The study includes a summary of existing traffic conditions in the vicinity of the Project. Project long term and temporary construction traffic impacts are discussed and compared to other construction and maintenance projects at the Plant. Recommendations for Battery Project construction transportation management to minimize project traffic are also provided.

## A. Existing Traffic Conditions

#### 1. Regional Road and Highway System

Access to the Project vicinity is provided by State Route 1 (SR 1), Dolan Road, Castroville Boulevard, San Miguel Canyon Road, US 101 and State Route 156 (SR 156).

State Route 1 (SR 1, or Highway 1) represents the western boundary of the Plant site. It is a regional highway under Caltrans jurisdiction. It extends along the coast of Monterey County from San Luis Obispo County in the south through Santa Cruz County in the north, passing through Big Sur, Monterey, Seaside, Marina and Moss Landing. Highway 1 is a major commuter route and is also used extensively by tourists. SR 1 is a 2-lane rural highway between Merritt Street (SR 183) and Salinas Road. According to the Monterey County General Plan, 2008, as well as the "State Routes 1 and 183 Corridor System Management Plan", Caltrans, October 2011, the 2-lane section of Highway 1 through Moss Landing currently operates at Level of Service (LOS) F during peak hours. This is below its Caltrans level of service standard of C/D.

Dolan Road is a two-lane major roadway that represents the southern boundary of the Plant site. It extends from SR 1 on the west to Castroville Boulevard on the east. It provides direct access to the Project. It carries about 5,000 vehicles per day and operates at LOS B during peak hours. This is well within the Monterey County standard of LOS D.

Castroville Boulevard is a two-lane major roadway that extends from SR 156 on the southwest to San Miguel Canyon Road on the east. It carries about 8,400 vehicles per day, which is LOS C during peak hours. This is well within the Monterey County standard of LOS D.

San Miguel Canyon Road (County Road G-12) is a two-lane major roadway that extends from US 101 on the south to Hall Road on the north. It carries about 22,000 vehicles per day, which is LOS E during peak hours. This is below the County standard of LOS D.

US 101 carries about 84,000 vehicles per day south of San Miguel Canyon Road where it is a 6-lane freeway and operates at LOS C and 59,700 vehicles per day north of San Miguel Canyon Road where it is a 4-lane freeway and operates at LOS C/D during peak hours. It is at the cusp of the Caltrans level of service standard.

SR 156 is under Caltrans jurisdiction. In Monterey County, it extends from SR 1 on the west to US 101 on the east. It is a 4-lane freeway west of Castroville Boulevard where it carries about 33,000 vehicles per day at an acceptable LOS B. It is a 2-lane rural highway between Castroville Boulevard and US 101 where it carries about 31,000 vehicles per day at LOS F during peak hours. This is below the Caltrans LOS standard of C/D.

#### 2. Existing Plant Baseline Traffic Generation

The existing Moss Landing Power Plant employs between 30 and 60 workers. The number varies depending on activities such as minor maintenance that routinely occur at the site. The Moss Landing Power Plant had 280 employees in 1994 and 100 as recently as 1999. Increases occur during maintenance and repair operations, when as many as 420 workers were located at the Plant. These take place periodically throughout the year. The traffic associated with these activities are discussed in Section C.3.

## **B. Project Long Term Traffic Impacts**

As described above, several highways and roads in North Monterey County operate below Caltrans and Monterey County level of service standards during peak hours. However, the existing employees at the Moss Landing Power Plant will operate the Battery Project, thus requiring no increase in employment at the Plant. The Battery Project will therefore not increase existing Plant traffic generation. Occasional deliveries for the Battery Project can be scheduled to occur at off-peak hours. The Battery Project will not create any long-term traffic impacts. No traffic analysis of long-term traffic impacts is therefore required for the Battery Project.

## C. Project Installation Traffic Impacts

#### 1. Battery Project Installation Trip Generation

As described in the preceding section, the Battery Project will not result in any traffic impacts once in operation. However, the Battery Project will temporarily add traffic during its installation. It will require about 14 months to be installed, with peak activity for about 6 months. There will be a maximum of 420 workers (924 daily trips). This additional on-site employment and associated traffic is within the traffic generation that has regularly occurred at the Plant since 2002 for maintenance and operations.

The Battery Project construction traffic will also be accommodated by permanent off-site and on-site physical improvements constructed as a part of the 2000-2002 major construction project at the Plant. The following discussion compares the 2000-2002 construction project traffic characteristics to the proposed Battery Project construction traffic.

#### 2. Relation to the 2000-2002 Major On-Site Construction Project

Two power generating units (Units 1 and 2) were constructed in 2000-2002 that included 720 to 732 on-site construction workers for 2 months. Construction of Units 1 and 2 also overlapped with major on-site maintenance, Selective Catalytic Reduction (SCR) Project, Fuel Tank Farm Demolition, Oily Water Separator & Energy Management Center, and Combined Cycle Modernization construction. According to the "Duke Energy Moss Landing Transportation Management Plan", Figure 1, Higgins Associates, May 4, 2000, construction activities for these projects occurred over a 35-month period with over 420 construction workers on-site for 11 months. Two months had a total of over 700 employees. These were in addition to the 30 to 60 permanent employees working at the facility.

Permanent intersection improvements were constructed on the surrounding highway system to mitigate traffic impacts from this major construction operation. A comprehensive construction transportation management program was also implemented during the entire construction project to minimize off-site traffic impacts. Permanent on-site staging areas and parking lots were constructed as well.

The permanent intersection improvements are still in place. They serve the general public and continue to provide traffic mitigation for maintenance and operations projects at the Plant. The improvements implemented at the following five intersections are as follows.

#### a. SR 1 / Dolan Road

- i. Constructed the northbound SR 1 right turn lane.
- ii. Lengthened the southbound SR 1 left turn lane.
- iii. Added an exclusive westbound Dolan Road right turn lane.
- iv. Lengthened the southbound SR 1 acceleration lane for right turns from Dolan Road.
- v. Constructed widened shoulders along Dolan Road.
- vi. Improved sight distance on the southeast corner of the intersection.

#### b. Dolan Road / Plant Entrance

- i. Constructed an eastbound Dolan Road left turn lane.
- ii. Constructed a westbound Dolan Road right turn lane.
- iii. Improved the existing railroad grade crossing on Dolan Road.
- iv. Widened the shoulder along 2,200 feet of Dolan Road.
- v. Overlaid 2,200 feet of Dolan Road.
- vi. Improved the existing Plant entrance roads.
- vii. Improved the railroad grade crossings on the existing Plant entrance roads.
- viii. Relocated the Security Gate for more on-site queuing for entering vehicles.
- c. Castroville Boulevard / Dolan Road Elkhorn Road (two intersections)
  - i. Lengthened the westbound Castroville Boulevard left turn lane at Dolan Road.
  - ii. Constructed an eastbound Castroville Boulevard left turn lane at Elkhorn Road.
  - iii. Constructed an eastbound Dolan Road right turn lane at Castroville Boulevard.
- d. San Miguel Canyon Road (G12) / Castroville Boulevard
  - i. Lengthened the northbound San Miguel Canyon Road left turn.
  - ii. Constructed an eastbound Castroville Boulevard right turn lane.

The above improvements mitigated impacts from a 14-month long construction project with up to 732 workers (about 1,600 daily trips) and 420 or more workers for 11 months. By comparison, the Battery Project installation will only have a maximum of 420 workers on-site for a period of 6 months with a 14-month construction duration. The Battery Project will have about 58% as much peak construction traffic as the peak construction traffic that occurred in 2000-2002. The duration of its peak trip generation will occur for less than 43% of the duration of an equivalent or greater traffic volume that occurred during the 2000-2002 construction project for which the mitigations were implemented. It is also anticipated that a total of only six semitrailer truck deliveries will occur each day, compared to an average of 34 deliveries per day during the 2000-2002 construction project. These will take place at off-peak times. The mitigations implemented in 2000-2002 will adequately accommodate the temporary construction impacts from the Battery Project installation.

#### 3. Periodic Maintenance Employment and Traffic Activity (2000-Present)

Maintenance and emergency outage activities regularly occur at the Moss Landing Power Plant that involve relatively large numbers of construction workers. As recently as December 2016, the workforce for these activities totaled as many as 420 personnel per day. Power generation Units 6 and 7 were retired at that time. More recently, the peak maintenance employment has totaled 210 workers. Construction activities for the Battery Plant will be similar to what occurred through December 2016.

#### 4. Battery Project Construction Transportation Management Plan

The Battery Project installation will result in traffic generation similar to what has been regularly experienced during maintenance and emergency outage repair projects at the Plant. The level of impacts will be within what has been typically generated by these regularly occurring projects. The Battery Project will, therefore,

not represent a new project impact. It will result in traffic equivalent of any other maintenance project. However, to minimize Battery Project traffic as much as possible, a Construction Transportation Management Plan (CTMP) is recommended. The CTMP should include the following elements. Please find the Preliminary Construction Transportation Management Plan in **Appendix A**. These are essentially the same as the strategies successfully used in the much larger 2000-2002 construction project.

### D. Summary and Conclusions

The following are the main conclusions of this assessment.

- 1. When in operation, the Battery Project will add no employees and result in virtually no increase in traffic generation at the Moss Landing Power Plant.
- 2. The Battery Project will involve temporary construction that will result in temporary traffic increases on the nearby road and highway system. These increases will be at or below levels that routinely occur at the Plant due to maintenance and emergency outage repair activities.
- 3. The most recent major construction project occurred in 2000-2002 and involved almost twice as much traffic for twice as long as the Battery Project construction. The physical roadway mitigations implemented for the larger construction project at five nearby intersections are still in place and will accommodate temporary traffic increases from the Battery Project. In other words, temporary construction impact mitigation was implemented in 2000-2002 for on-site construction or maintenance activities that are equal to or less in size and duration than the 2000-2002 major construction project. This includes the proposed Battery Project.
- 4. A Construction Transportation Management Plan (CTMP) is recommended to reduce daily construction traffic. The CTMP should include carpooling, shift changes and major deliveries during off-peak hours, a cap of 420 workers, avoid using SR 1 and provide the authority for Monterey County to require the use of the CHP for traffic control if necessary. A Preliminary Construction Transportation Management Plan is attached in **Appendix A**.

The Battery Project will not create any long-term traffic impacts. Construction impacts will be temporary and consistent with traffic regularly generated by Plant activities. Construction Transportation Management Program strategies have been successfully employed on larger construction at the Plant and will reduce or eliminate peak hour construction impacts. No additional traffic analysis is therefore necessary.

If you have any questions regarding this evaluation, please do not hesitate to contact me.

Thank you for the opportunity to assist you with this project.

Respectfully submitted,

Keith B. Higgins, PE, TE

Keith B. Higgins

**Enclosure** 

# Appendix A

**Preliminary Construction Transportation Management Plan** 

# Vistra Moss Landing Battery Energy System Construction Transportation Management Plan (Preliminary)

The Vistra Moss Landing Battery Energy System (Battery Project) is proposed to be installed in existing buildings at the Moss Landing Power Plant (Plant) located at the northeast corner of the State Route 1/Dolan Road intersection in Moss Landing, North Monterey County, California. The Battery Project will temporarily add traffic during its installation. It will require about 14 months to be installed, with peak activity for about 6 months.

To minimize Battery Project traffic as much as possible we developed this Construction Transportation Management Plan (CTMP). This CTMP includes the same or similar strategies that were successfully implemented during previous and much larger construction projects from 2000-2002.

- 1. To reduce project traffic generation, encourage carpooling (i.e. with preferential parking, breakfast and lunch meal incentives, etc.).
- 2. To reduce traffic during morning and evening peak hours, schedule shift changes to occur at off-peak times.
- 3. To reduce project traffic generation, enforce a policy of one site entrance per day per vehicle thus restricting construction personnel from exiting the site for lunch or breaks.
- 4. To reduce truck traffic impacts, schedule deliveries of construction materials to off-peak hours.
- 5. To ensure that current traffic conditions on the roads near the site remain unchanged, when project construction and existing maintenance activities occur simultaneously, project construction trips will be limited to ensure that total combined daily construction/maintenance trips do not exceed the existing total of 420 per day.
- 6. To eliminate traffic increases on SR 1, prohibit the use of SR 1 for construction personnel and deliveries.
- 7. To ensure acceptable traffic operations at the project entrance, the Monterey County Public Works Department will have the discretion to require the use of California Highway Patrol (CHP) during Battery Project shift changes. It is highly unlikely this will be needed because traffic volumes generated by the Battery Project installation will be relatively low.

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