

DOCKETED

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| Docket Number: | 08-AFC-09C |
| Project Title: | Palmdale Energy Project (Formerly Palmdale Hybrid Power Plant) - Compliance |
| TN #: | 210185 |
| Document Title: | Palmdale Energy LLC's Supplemental Response to CEC Staff Data Request 46 |
| Description: | N/A |
| Filer: | Marie Fleming |
| Organization: | DayZen LLC |
| Submitter Role: | Applicant Representative |
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INTRODUCTION

Attached is Palmdale Energy, LLC's supplemental response to California Energy Commission Staff (Staff) Data Request 46 for the Palmdale Energy Project (PEP) Petition For Amendment. For context the text of the Data Request precedes the Data Response.

SOCIOECONOMIC RESOURCES (46)

Data Request 46

Please provide the construction workforce by month during the 25-month construction period. If possible, please also present the construction workforce by trade (e.g. boilermaker, electrician) and month.

Response to Data Request 46

Palmdale Energy LLC provided a spreadsheet in Response to Data Request 46 on November 30, 2015. Staff correctly identified an error in the spreadsheet in calculating the average monthly workforce. The average workforce based on a 25 month schedule is 371 workers and the maximum is 710. The reason the monthly totals for the combined cycle staffing differed slightly from the result of summing the values for a month is the values in the cells, while displayed as integers, were not in all cases integers. The *Total* line from the spreadsheet presents an integer value resulting from the summing of the non-integer monthly values, this resulted in slight discrepancies between the sum of the monthly values and the *Total* values on the spreadsheet.

A correct spreadsheet is provided in Appendix Supplemental DR-46 attached.

**APPENDIX SUPPLEMENTAL DR-46
CONSTRUCTION WORKFORCE BY SKILL**

PEP Construction Workforce by Skill

| Manpower by Trade/Project Element | M 1 | M 2 | M 3 | M 4 | M 5 | M 6 | M 7 | M 8 | M 9 | M 10 | M 11 | M 12 | M 13 | M 14 | M 15 | M 16 | M 17 | M 18 | M 19 | M 20 | M 21 | M 22 | M 23 | M 24 | M 25 | M 26 | M 27 | | |
|---|-----------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|------------|------------|-----|---|
| Construction - Combined-Cycle Component | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Welders | 7 | 7 | 17 | 17 | 26 | 39 | 51 | 64 | 73 | 73 | 73 | 73 | 64 | 51 | 51 | 43 | 43 | 34 | 30 | 17 | 13 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Carpenters, Bricklayers and Masons | 9 | 9 | 17 | 17 | 26 | 30 | 43 | 51 | 51 | 60 | 51 | 51 | 51 | 43 | 34 | 26 | 17 | 17 | 13 | 9 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Electricians | 11 | 17 | 17 | 17 | 30 | 30 | 30 | 43 | 56 | 64 | 64 | 64 | 56 | 56 | 51 | 34 | 34 | 26 | 26 | 17 | 17 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | |
| Ironworkers | 0 | 6 | 6 | 11 | 11 | 21 | 31 | 41 | 51 | 51 | 51 | 41 | 41 | 31 | 31 | 21 | 21 | 21 | 21 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Laborers | 9 | 17 | 17 | 26 | 26 | 26 | 26 | 47 | 55 | 60 | 51 | 51 | 51 | 43 | 34 | 26 | 26 | 17 | 17 | 17 | 17 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | |
| Millwrights | 2 | 2 | 2 | 6 | 6 | 11 | 11 | 11 | 26 | 26 | 26 | 22 | 22 | 22 | 17 | 13 | 13 | 9 | 9 | 9 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Equipment Operators | 9 | 17 | 26 | 26 | 26 | 26 | 34 | 43 | 51 | 51 | 43 | 43 | 43 | 43 | 43 | 34 | 26 | 26 | 17 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | |
| Plasterers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 7 | 6 | 6 | 6 | 4 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Painters | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 9 | 9 | 9 | 9 | 7 | 7 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | |
| Pipefitters | 7 | 7 | 14 | 21 | 21 | 34 | 43 | 43 | 51 | 51 | 51 | 41 | 41 | 34 | 34 | 28 | 28 | 21 | 21 | 16 | 16 | 11 | 4 | 4 | 4 | 4 | 0 | 0 | |
| Sheetmetal Workers | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 | 4 | 9 | 9 | 9 | 9 | 9 | 6 | 6 | 6 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sprinklerfitters | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 7 | 7 | 7 | 7 | 11 | 11 | 11 | 11 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 0 | 0 | |
| Surveyors/Designers | 4 | 4 | 4 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 6 | 6 | 6 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | |
| Insulation Workers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 | 17 | 17 | 17 | 17 | 17 | 17 | 26 | 26 | 26 | 26 | 26 | 26 | 17 | 17 | 17 | 17 | 17 | 0 | 0 | |
| Supervisors, Planners, etc. | 9 | 17 | 26 | 34 | 43 | 51 | 60 | 68 | 68 | 68 | 60 | 51 | 43 | 43 | 34 | 26 | 22 | 22 | 22 | 17 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | |
| <i>Subtotal</i> | 67 | 103 | 146 | 184 | 230 | 283 | 344 | 439 | 517 | 548 | 514 | 481 | 460 | 417 | 381 | 318 | 297 | 255 | 231 | 166 | 135 | 98 | 71 | 71 | 71 | 0 | 0 | 0 | |
| Construction - Pipelines (Gas, Water Supply, Etc.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unskilled Labor | | | 0 | 0 | 0 | 0 | 28 | 28 | 28 | 28 | 42 | 42 | 42 | 42 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Welders | | | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pipefitters | | | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Equipment Operators | | | 0 | 0 | 0 | 0 | 9 | 9 | 9 | 9 | 14 | 14 | 14 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Foremen | | | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Supervisors, Etc | | | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| <i>Subtotal</i> | | | 0.0 | 0.0 | 0.0 | 0.0 | 48.0 | 48.0 | 48.0 | 48.0 | 72.0 | 72.0 | 72.0 | 72.0 | 72.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Construction- Transmission Lines | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General Foremen | | | 3 | 6 | 4 | 4 | 6 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Foreman | | | 14 | 14 | 8 | 8 | 12 | 8 | 2 | 12 | 16 | 10 | 0 | 4 | 13 | 16 | 11 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Leadman | | | 19 | 19 | 4 | 4 | 4 | 5 | 6 | 4 | 0 | 1 | 4 | 20 | 20 | 20 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Journey Lineman | | | 20 | 32 | 36 | 36 | 51 | 32 | 8 | 12 | 36 | 18 | 0 | 0 | 30 | 40 | 34 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Apprentice Linemen | | | 8 | 14 | 16 | 16 | 18 | 8 | 2 | 4 | 12 | 6 | 0 | 0 | 6 | 8 | 10 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Groundman | | | 16 | 19 | 20 | 20 | 17 | 10 | 12 | 12 | 12 | 15 | 8 | 8 | 14 | 16 | 10 | 8 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Equipment operators | | | 24 | 36 | 28 | 28 | 33 | 26 | 18 | 23 | 28 | 17 | 12 | 24 | 36 | 40 | 28 | 24 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Cement Truck Drivers | | | 18 | 18 | 0 | 0 | 0 | 0 | 0 | 12 | 8 | 0 | 0 | 20 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Welders | | | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Mechanic | | | 4 | 4 | 4 | 4 | 6 | 4 | 1 | 3 | 4 | 3 | 0 | 0 | 3 | 4 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Skilled Laborers | | | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 16 | 8 | 0 | 0 | 0 | 28 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Carpenters | | | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| <i>Subtotal</i> | 0 | 0 | 167.0 | 197.0 | 120.0 | 120.0 | 147.0 | 97.0 | 50.0 | 102.0 | 124.0 | 70.0 | 24.0 | 76.0 | 182.0 | 208.0 | 110.0 | 84.0 | 24.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | |
| Total | 67 | 103 | 313.0 | 381.0 | 350.0 | 403.0 | 539.0 | 584.0 | 615.0 | 698.0 | 710.0 | 623.0 | 556.0 | 565.0 | 635.0 | 526.0 | 407.0 | 339.0 | 255.0 | 166.0 | 135.0 | 98.0 | 71.0 | 71.0 | 71.0 | 0.0 | 0.0 | | |